

**THE EXTENT TO WHICH TECHNICAL AND VOCATIONAL EDUCATION
AND TRAINING INSTITUTIONS PREPARE THEIR GRADUATES FOR THE
LABOUR MARKET IN KENYA**

**BY
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DECEMBER, 2021

DECLARATION

Declaration by the Student

This Master of Education thesis is unique to me, and it has never been submitted for an award at another university. Without the author's or the University of Eldoret's permission, no part of this work may be duplicated.

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Declaration by the Supervisors

With our agreement as University supervisors, this Master of Education thesis has been submitted for examination.

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DEDICATION

Eldredge, Einstein, and Blaise, as well as my University of Eldoret colleagues, are all honored in this dissertation. They will find this research work to be a significant source of inspiration in their quest for knowledge and wisdom. They will be blessed by God.

ABSTRACT

Education's objective is to prepare pupils for a lifetime of learning. Today's education is built to allow teachers to convey knowledge and skills to students, as well as for students to become knowledgeable and capable of applying what they've learned over time. Kenya's present curriculum and educational goals are well-defined if followed to the letter. Teachers and students in the classroom, in general, use an academic system rather than a dual system to address the needs of people and groups that are subsets of society as a whole. This study sought to determine how well TVET colleges prepared their graduates for the employment market. Because in the large sample area, this study focused on institutions in the Nairobi and Rift Valley regions. This study adopted a survey research methodological approach and a simple random sample technique to pick 80 TVET graduates, 18 Heads of Department (HoDs) from TVET institutions, and two TVET Authority Research and Development Officers. Each of the questionnaire's six sections contained research. The data was gathered utilizing a structured interview schedule and a validated questionnaire by the two supervisors. The data was then assessed both descriptively and inferentially.. According to the findings, trainees' training experiences do not match those encountered in the labor market. Trainers, as well as training rooms and facilities, were all deficient in TVET institutes. It was revealed that there were few well-established procedures for coordinating industrial attachments for both trainers and trainees between public TVET colleges and enterprises. It was also discovered that government initiatives in TVET institutions have had little impact on skill development strategies. As a consequence of the research, it was determined that graduates of TVET education programs are not adequately prepared for the labor market. The researcher recommends that TVET institutions continue to update their infrastructure, that TVETA establish policy guidelines on the provision of relevant quality education programs, and that the government intervene by issuing a policy guideline for TVET institutions and industries collaborations on industrial attachments, as well as ensuring adequate provision of modern infrastructural facilities, quality, and equitable access to educational opportunities.

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LIST OF ACRONYMS

ANOVA	Variance Analysis
AT	Apprenticeship Training
CBET	Competency-Based Education and Training
CDACC	Curriculum Development Assessment and Certification Council
CTE	Career and Technical Education
ELR	Employer of Last Resort
GoK	Government of Kenya
HoDs	Heads of Department
ILO	International Labour Organization
KESSP	Kenya Education Sector Support Programme.
LIWA	Linking Industry with Academia
NCEOP	National Committee on Educational Objectives and Policies
NPE	National Policy on Education
NVTI	National Vocational Training Institute
NVTISP	National Vocational Training Institute Strategic Plan
OE	Occupational Education
OECD	Organization for Economic Co-operation and Development
PWG	Permanent Working Group

QA	Quality Assurance
RVIST	Rift Valley Institute of Science and Technology
RVTTI	Rift Valley Technical Training Institute
SPSS	Statistical Package for the Social Sciences
TE	Technical Education
TIQUET	Totally Integrated Quality Education and Training
TVET	Technical and Vocational Education and Training
TVETA	Technical and Vocational Education and Training Authority
UNESCO	United Nations Educational, Scientific and Cultural Organization
VET	Vocational Educational and Training
VT	Vocational Training
WBL	Work-Based Learning

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CHAPTER ONE

INTRODUCTION TO THE STUDY

1.1 Introduction

This chapter covers the following topics: background, problem statement, purpose, aims, research questions, significance, limitations, assumptions, scope, conceptual basis, and operational definitions of words.

1.2 The Study's Background

Technical Vocational Education and Training (TVET) is a sort of specialized education aimed at improving students' technical skills, personal qualities, cognitive knowledge, attitudes, and work habits in order to better prepare them for the workforce (Winer, 2000 & Oni, 2007).

The following definition of TVET was agreed upon by UNESCO and the International Labour Organization, according to Badawi (2013): "A broad term that refers to aspects of the educational process that include, in addition to general education, the study of technologies and related sciences, as well as the acquisition of practical skills, attitudes, understanding, and knowledge related to occupations in various sectors of the economy and society" (on page 284).

This can only be accomplished through a well-organized training system, in which institutions for teacher education, for example, prepare instructors to carry out actual teaching tasks in accordance with the Vocationalization of Education concept. It is hoped that by teaching students and providing them with practical skills, they will be able to

find work more easily and become more productive after graduating from this system. TVET should improve learners' talents and raise their employability wherever it is actively sought and developed (Maclean, 2011). When a country struggles to make technical progress despite adopting TVET, objective policy retrospection and research are required.

The goal and purpose of TVET in Kenya, according to research performed by the Kenya Education Sector Support Program (KESSP), are as follows: (2005-2010), is to involve all key stakeholders in building a complete national skills curriculum. It was realized that training needed to include industry-specific employment requirements. The content of the training was to be decided by the private sector. Young people might benefit from additional workplace training (GOK, 2005).

In addition to poverty reduction, effective TVET implementation could be used to address social isolation in locations where the bulk of people cannot afford higher education, as well as a solution to youth unemployment in overcrowded job markets. Furthermore, according to Maclean (2011), TVET may play a variety of roles in promoting economic development and social progress, Upgrading conventional education, empowerment, economic creation, and poverty alleviation, and skill development provided it is strategically placed. In a country where adolescent restlessness is common, TVET is ideal for assisting teenagers and adults in becoming self-sufficient and self-reliant. It is beneficial to those working in the sector in terms of skill upgrading, lowering high employment turnover, and reducing the risk of obsolescence (Okolocha, 2012).

Countries all over the world are seeking to apply strategies that will increase the employment opportunities for both young men and women, as well as corporate productivity. Both of these objectives necessitate a firm foundation of fundamental skills, as well as access to education and training opportunities, as well as the desire, ability, and support to pursue possibilities for lifelong learning.

1.3 Statement of the Problem

In practically every country on the earth, unemployment is a major issue. In 2017, Kenya had an 11.5 percent unemployment rate (UNESCO – UNEVOC TVET nation profiles, November 2018). TVET could be used to combat social exclusion in areas where the bulk of people cannot afford higher education, as well as a solution to youth unemployment in overcrowded job markets (ETF, 2005). Furthermore, correctly placed TVET has the ability to contribute to economic growth, social development, traditional education, empowerment, wealth creation, poverty reduction, and skill development in a variety of ways (Maclean, 2011). TVET is a viable choice for supporting adolescents and adults in becoming self-sufficient and self-reliant in a country where adolescent restlessness is common, and TVET benefits industrial workers in terms of skill upgrading, high employment turnover, and obsolescence concerns. The goal of this study was to see how well TVET institutions train their graduates to fulfill society's growing demand for young workers.

1.4. Objective of the Study

1.4.1 Main Objective

The main purpose of the study was to see how well TVET colleges equip their graduates to meet society's growing demand for youth employment.

1.4.2 Specific Objectives

The study in particular:

- i. Evaluate the value of TVET graduates' education in terms of labor market needs.
- ii. To evaluate the TVET institutions infrastructural challenges in knowledge and skills provision.
- iii. Determine the degree and efficacy of industry-TVET partnership in equipping graduates with the necessary information and skills through training.
- iv. To establish the government interventions for successful skills development strategy through the TVET institutions.

1.5 Research Questions

The following questions were prepared in order to attain the aforementioned goals:

- i. Is it true that TVET education that graduates received relevant to the labor market's needs?
- ii. What are infrastructural challenges in the TVET institutions in their provision of knowledge and skills?
- iii. To what extent and effective is the collaboration between industries and vocational education and training institutes to provide training that equips graduates with the necessary skills?

- iv. What are the government interventions for a successful TVET institution-based skills development strategy?

1.6 Significance of the Study

Technical and vocational education and training (TVET) aims to help people achieve self-employment, economic independence, and job creation through short or long-term training. TVET refers to any type of education with the primary purpose of preparing students for gainful employment in a single or set of occupations, or for the training of entrepreneurs.

As a result, the goal of this research was to see how well TVET colleges prepared their graduates to fulfill society's growing labor market needs. In this fast-changing world, it is critical to establish and implement technical and vocational skills training programs that provide chances for youngsters to develop their talents and innovate for the country's long-term growth.

1.7 Assumptions of the Study

Any important fact that is supposed to be true but has not been proved constitutes an assumption. This validates the investigation, and as a result, the findings and conclusions should be understood accordingly.

The following were the study's required fundamental assumptions:

- A country that provided TVET programs had a low rate of youth unemployment.
- In Kenya, a higher percentage of students who completed their secondary school education went on to technical and vocational institutions.

1.8 Scope and Limitations of the Study

The purpose of this research was to see how effectively graduates of technical and vocational education training (TVET) in Kenya are prepared for work. The study's design required a large amount of data in order to make broad generalizations, which was one of the study's major flaws. This was not possible due to a lack of funds and time, as well as the data collection method used. For the study, only nine public TVET institutions were considered. The study had a tiny sample size, and the results were more speculative than definitive.

1.9 Conceptual Framework of the Study

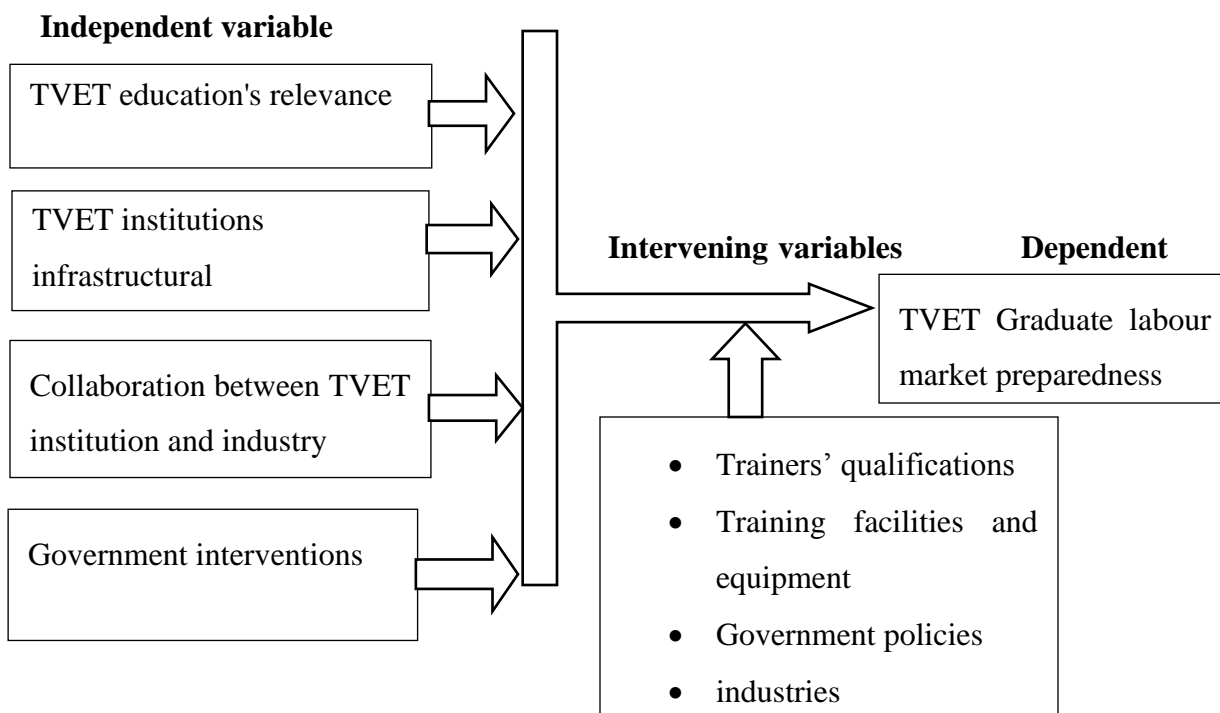


Figure 1: Conceptual Framework of this Study (Source: Author, 2020)

As a result of the research, a conceptual framework was created. The relationship between TVET institution and TVET Graduate labor market preparation was depicted in

Figure 1's conceptual framework. The graph depicted the link between the study's variables. The Relevance of the education received from TVET institutions, TVET institutions infrastructural Challenges, Collaboration between TVET institution and industry and Government interventions were the independent variables. The TVET Graduate labour market preparedness was the dependent variables. Trainers' qualifications, training facilities and equipment, Government policies, industries were the intervening variables in the study.

1.10 Operational Definition of Terms

Basic/foundation skills - The literacy and numeracy skills required to find work that pays well enough to meet basic necessities.

Core work skills - The capacity to learn and adapt, read, write, and compute well, listen and communicate effectively, think creatively, and solve issues independently are all important skills.

Labour market - The labor market - often known as the labor supply and demand - is the supply and demand for labor, with employees supplying the supply and employers supplying the demand.

Professional or personal skills - Work-related personal characteristics including honesty, integrity, and work ethic.

TVET graduates – the students who completed TVET program courses at the sampled technical and vocational training institutes.

Self-employment – Making money from one's own business, trade, or profession rather than from an employer's set pay or compensation.

TVET Institutions – are Technical Training institutions (TTIs) that are accredited to offer vocational and technical skills to trainees.

Vocational or technical skills - To complete specific activities or tasks, specialized skills, expertise, or know-how are required.

Relevant education – ELR programs are structured and grounded on an education curriculum that combines well-coordinated knowledge-based and competency-based elements.

Government interventions – These are formalized government regulations established in support of relevant education training programmes offered by the TVET institutions.

Infrastructural challenges – restrictions on updating training equipment, facilities, workshops, and structures in order to establish a favorable teaching and learning environment.

TVET Institution and Industry collaboration – This is a closed linkage between the TVET institution and the industries as the world of work in support of practical training, Equipment and tool donations, staff exchange programs, and student and staff placement on work experience attachments are all examples of ways to help.

1.11 Summary

This chapter described the findings of the research. In the problem description and abstract, the title of the study, its purpose, main objectives, and research questions, the investigation's location, the technique and research design approaches used, what was established, and the worth of the research study were all mentioned.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section covers the literature review for this study. The chapter's main topics include a review of previous research (such as educational reforms in Kenya, TVET as a key to addressing employment issues, and a German-style Apprenticeship-based TVET system), as well as a summary and gaps that this study will cover.

2.2 Review of the Past Studies

2.2.1 TVET and Quality Assurance

TVET is a sort of specialized education that strives to empower students by developing their technical abilities, personal traits, cognitive knowledge, attitudes, and work habits in order to better prepare them for job or self-employment after graduation (Winer, 2000, Oni, 2007). UNESCO and the International Labour Organization have agreed on the following definition of TVET, according to Badawi (2013): "A broad phrase that refers to all components of the educational process that involve students, aside from general education, the study of technologies and allied sciences, as well as the acquisition of practical skills, attitudes, understanding, and knowledge linked to vocations in various areas of the economy and social life, are all important." (page 284).

Technical Education (TE), Vocational Training (VT), Vocational Education and Training (VET), Technical and Vocational Education and Training (TVET), Occupational Education (OE), Apprenticeship Training, and Technical and Vocational Education and Training (TVET) (AT) are all terms used in educational research to describe TVET

(Wahba, 2010, Ladipo et al., 2013). The Ministry of Education has consistently expressed its commitment to TVET in the National Policy on Education (NPE) because of the potential for poverty eradication, job creation, sustainable development, and achieving the Transformation Agenda (Oweh, 2013; Ladipo et al, 2013).

Quality Assurance (QA) refers to government-designed performance measures for evaluating educational institutions' performance in order to ensure that learning outcomes meet the demands of each society (Igborgbor, 2012; Onyesom & Ashibogwu, 2013). The approaches, processes, and standard systems in place to support and assure the successful delivery of educational services are referred to as quality assurance (Kontio, 2012). Quality assurance is also regarded as a powerful weapon in policy circles. "A tool that allows policymakers to estimate national educational needs, investigate creative approaches to solving problems, and assess the efficacy of policies and tactics" (Asian Development Bank, 1996, p. 1.). Based on the aforementioned, a strong quality assurance program should focus on essential components such as access/participation, funding, relevance, and TVET quality (King, 2011; RECOUP, 2011). Effective monitoring and assessment of TVET supply, demand, and financial concerns may help to better measure the relationship between the four variables above and TVET (King & Palmer, 2008; King, 2011).

Input, output, process, and result indicators are all examples of quality assurance indicators (Borden, and Bottrill, 1994; Burke et al., 2002; Warglien and Savoia, 2006). Quantitative input and output indicators are employed. The input indicators are used in quality assurance to examine the human, financial, and physical resources available in formal education systems. Because of their quantitative nature, input indicators are

limited in their capacity to evaluate quality without substantial interpretation. In quality assurance, output indicators are used to assess concrete results produced in the learning environment, as well as the infrastructure and instructional materials employed to attain the stated outcomes. Output indicators have the fault of simply representing numerical value and ignoring the quality of the numbers displayed. The quality of the procedures used in schools to provide educational programs, activities, and services is assessed using process indicators. The process indicators look at how the educational system works in a specific setting and can be used to compare school quality between and within schools. Institutions and policymakers use outcome indicators to assess the quality of educational objectives, academic activities, and the influence of service delivery on quality assurance. In contrast to output indicators, which provide numerical data, outcome indicators provide qualitative assessments about complex processes (Borden, and Bottrill, 1994; Burke et al., 2002; Warglien and Savoia, 2006).

Funding, access/participation, quality adequacy, and relevancy of TVET program are four quality indicators that could be used in quality assurance (ETF, 2012). Learning resource inputs, instructional process, teacher capacity building, effective management, monitoring and evaluation, and high-quality learning outputs are among the six quality indicators included in Ayeni's list (2012). According to Cheung (2001), there are seven areas that are usually targeted for improvement. Teaching and learning enhancements, curriculum enhancements, evaluation enhancements, classroom environment enhancements, school management enhancements, and teacher education enhancements are among them. As previously stated, the goal of QA can be separated into two categories: (a) using standard assessments to determine the relevance of the learning

experience to the needs of students, the community, and society as a whole; and (b) using standard assessments to determine the relevance of the learning experience to the needs of students, the community, and society as a whole.

Since independence, Kenya has benefited from technical vocational education and training (TVET). Reforms were made before to its inception to make education and training more relevant to all areas of the economy. The 1964 Ominde report placed a strong emphasis on practical courses and connecting education to career opportunities. The significance of a large supply of talented, trained, and experienced workers for economic development was emphasized in the 1965 Session Paper No. 10 on African Socialism and its Application to Planning in Kenya (Republic of Kenya, 2005). Despite recent advancements in education and training access, retention, quality, completion rates, and gender parity, the TVET industry continues to face problems, such as a dearth of TVET facilities and restricted access to specialized teaching and learning resources. High-quality TVET programs, in terms of quality and relevance, generate a strong link between taught skills and labor market demands, resulting in graduates who are more employable.

The majority of TVET reforms are driven by continental and national challenges. In 2005, the government issued Session Paper No. 1 with the purpose of ensuring that TVET provides and promotes lifelong education and training for self-sufficiency, and in 2007, as part of its Plan of Action for the Second Decade of Education, the African Union adopted a TVET policy framework (2006-2015). To address these concerns, the government released Sessional Paper No. 14 of 2012 (now Sessional Paper No. 2 of 2015), which recommends three categories for education and training: basic, TVET, and

university. By providing skills that are transferable to the workplace and self-employment, the TVET sub-sector aspires to promote human and economic development. Human resources must be commercial products.

As a result, quality assurance is critical across the TVET system, and it should be included into every aspect of the qualifying process. Prior to 2013, the Ministry of Education, Science and Technology's Directorate of Technical Accreditation and Quality Assurance was responsible for the quality assurance of TVET institutions in Kenya, which was mostly delegated to the ministry's institutions. However, because of Kenya's fragmented TVET system, training quality varies greatly from one institution to the next, as well as poor curriculum design and delivery, resulting in training that falls short of the expected level of quality and relevance. Furthermore, the TVET industry is fragmented and disorganized.

As a result, standardizing the quality and relevance of training across all TVET institutions was crucial to maintaining program uniformity and coordination. The fragmentation of TVET institutions, on the other hand, remains a problem, with a number of institutions in other line ministries failing to comply with the TVET Act and Session Paper No. 2 of 2015. Despite the fact that these statutes should have been updated in accordance with the TVET Act and the Kenya Constitution of 2010, some have used them as excuses for not complying. Those that have not yet complied continue to train and give non-standardized internal tests, resulting in a wide range of certifications depending on the type and degree of certification. TVET reforms and, as a result, Vision 2030 implementation have been hindered by institutionalized law-breaking. As TVETA, we will work diligently to guarantee that every training provider follows the provisions of

the TVET Act. <http://www.standardmedia.co.ke/article/2000203422/let-us-standardize-vocational-training/>

2.2.2 Educational Reforms in Kenya

The Ominde Commission (1964); the Gachathi Commission (1976), also known as the National Committee on Educational Objectives and Policies (NCEOP); the Kamunge report (1981); and the Mackay report (1984), also known as the Presidential Working Party on Kenya's Second University; The Presidential Working Party on Kenya's Second University's Mackay Report; Both the Report of the Commission of Inquiry into the Educational System and the Report of the Commission of Inquiry into the Educational System, both published in 1984, are worth studying (Kenya, 1999). According to Mwiria (2002), the plan documents cited above outline six ambitious overall vocationalization targets, including:

- i. Increased training options for the growing number of school dropouts in order to better prepare them for self-sufficiency and self-employment through the development of practical skills and attitudes;
- ii. Promote relevant education and training for Kenya's overall economic development as well as for specialized industries such as agriculture, industry, and commerce;
- iii. Personal development through vocational entrepreneurship skills training;
- iv. Increased formal and informal sector production of skilled craftsmen, technicians, and technologists;

- v. Instilling competencies that promote creativity, communication, cooperation, innovation, and problem-solving abilities in students, as well as providing information on scientific and technological trends, skills, and ideas, as well as the development of life-long skills that allow learners to better adapt to their work and home environments by instilling competencies that promote creativity, communication, cooperation, innovation, and problem-solving abilities.; and
- vi. Student preparation for post-secondary educational institutions and universities.

Because it underlined the need of combining education with the obligation of teaching, the Koech report was a breakthrough moment in Kenyan education:

...a core of generic abilities to aid graduates in better communicating, working in teams with less supervision, accessing new ways of doing things using information technology, and encouraging entrepreneurship education, which has become critical for people in paid jobs or self-employment... as well as the ability to be creative and imaginative, as well as an inherent desire to solve problems... Kenya is a country in East Africa (Kenya, 1999).

The number of students enrolled in technical and vocational training colleges will expand from 180,000 to 3.1 million, according to the government's newest plan. The scheme, which will be announced at a meeting between Ministry of Education officials chaired by CS Amina Mohamed and Deputy President William Ruto tomorrow, aims to enroll one million students every year. According to the suggestion, "To do so, we'll enlarge all existing institutions, create new ones in each of the 290 constituencies, and then equip them with critical industrial equipment." In national polytechnics and vocational colleges, there are now 98,000 students enrolled, with 82,000 students enrolled in technical vocational centers. The government intends to enroll 110,000 students in 11 national

polytechnics, 1.4 million in 280 technical and vocational schools, and 1.6 million in technical vocational centers, according to the new program.

To reduce youth unemployment, the government is focusing on the provision of technical skills. Dr Dinah Mwinzi, the Principal Secretary for Technical and Vocational Education and Training (TVET), said at the start of the hands on the Future National TVET Conference in Nairobi that the government is emphasizing practical training to increase young employability in both the public and private sectors. The government allocated Ksh2.5 billion to TVET institutes in the current fiscal year, with an increase predicted in the next budget. With strong linkages between industry and academia, the government has switched to demand-driven skill development.

A conference is being held by the Permanent Working Group on TVET to spark people's interest in technical and vocational education. It will be followed by the Kenya Skills Show on Friday and Saturday. Since its inception in 2014, the Kenya Permanent Working Group on Technical and Vocational Education and Training (TVET) has grown to encompass over 100 public and private entities involved in the TVET ecosystem.

According to TVET Authority Director General Dr Kipkurui Langat, the country's TVET policy is to produce well-trained and globally competitive workers. Dr. Langat noted, "Quality TVET delivery is crucial, especially in engineering and science-based courses, which are critical catalysts for industrial growth." In the last two and a half years, the authority has registered and licensed 589 TVET institutions, he said. TVETA is working with the Curriculum Development Assessment and Certification Council (CDACC) and the Linking Industry with Academia (LIWA) to develop Competency-Based Education

and Training (CBET) curriculum, which involve assessing trainees based on their ability to do specific jobs.

2.2.3 TVET Is Key to Dealing with Employment Problem

Ghanaians have long felt that Technical and Vocational Education and Training (TVET) is solely for the less gifted and second-class citizens, according to Bright Wireko-Brobby, the Deputy Minister for Employment and Labour Relations. He emphasizes the government's focus on vocational and technical education as the most effective way for dealing with the unemployment problem. According to him, TVET is a gateway to the world of work that also aids in poverty alleviation, school dropout reduction, and assisting the teeming youth in securing decent jobs. The minister made the comment at the closing ceremony of the National Vocational Technical Institute (NVTI) management meeting held at Ho in the Volta Region.

The Volta Regional Minister, Dr Archibald Letsa, who was the Chairman for the occasion said the current government was committed to making sure that issues concerning TVET] and NVTI are given the needed attention.

Dr Letsa said, “The only way to move the country forward is to give technical and vocational education the needed attention and priority.” The Executive Director of NVTI, Mawusi Nudekor Awity, in her welcome address, said the Institute is reshaping itself to assist in the fulfilment of President Nana Akufo-Addo’s dream to industrialize the country. She said TVET has been underestimated and little support is given to these key institutions, a situation she said was unfortunate. Mrs. Mawusi Nudekor Awity has therefore called on government to resource NVTI to enhance training of the youths in the country. She was hopeful that the National Vocational Training Institute Strategic Plan

(NVTISP) will provide a roadmap for that NVTI in the quest to make NVTI centers of excellence in vocational training nationwide. According to her, the NVTISP is formulated to advance, uphold and strengthen the mission statement, vision and core values which will translate the idea of the Institute into tangible outcomes.

The Nationwide Vocational Training Institute (NVTI) was formed under Act 351 of 1970 to coordinate all areas of vocational training, including apprenticeship, on a national level. According to the Act, the purpose of NVTI is to provide apprenticeships, in-plant training, and training programs for industrial and clerical workers, as well as to educate instructors and officials. It also has the responsibility of providing vocational assistance and career development in the workplace, as well as developing training standards and implementing effective trade testing and certification rules and programs.

2.2.4 German-Style Apprenticeship-Based TVET System

The proportion of time spent acquiring broad abilities in the classroom versus time spent learning job-specific skills in the workplace varies by country. In a German-style "dual" system, theory is taught in educational institutions, while practical skills are developed through an apprenticeship at a firm. The German system has long been admired around the world. This technique has been connected to a decreased rate of youth unemployment in the past. This association does not have to be due to a causal relationship between the type of system and graduate employability, although it is widely assumed to be. Switzerland, Austria, and Denmark are the only countries that have succeeded in imitating the German system (Piopiunik & Ryan, 2012).

The most difficult part of establishing the dual system is persuading a company that participation in the apprenticeship program will benefit them in the long run. In reality, the employer may oppose the apprenticeship arrangement due to the high cost of training. This is the case because trainees must be watched and expensive technology must be used. In addition, following graduation, trainees may be poached by other organizations. This is a classic coordination problem in which every company would benefit if the training increased everyone's skills. Every organization, on the other hand, wants that the training be performed by someone else. As a result, the overall training provided falls short of socially acceptable standards.

Issues of coordination are, of course, at least part of the case for autonomous TVET institutes over employer-provided training. Although institutional or public TVET attempts to address this coordination problem, it is difficult to completely avoid it when firm-based training is required – the coordination problem resurfaces in a new form.

According to recent company surveys (OECD, 2012), to match labor market demands, occupation-specific skills are no longer sufficient; 57 percent of enterprises in nine countries reported that they were unable to find qualified entry-level personnel (Mourshed et al., 2012). In-demand skills are becoming increasingly important in the workplace. The essential areas of competence necessary in today's workplace are as shown in Table 2.1.

Table 2.1: Workplace Competencies

Type of skill	Definition
Basic/foundation skills	The literacy and numeracy abilities necessary to obtain work that pays enough to cover basic needs. These skills are also necessary for future education and training, as well as the learning of further vocational, professional, and core work skills that will improve one's chances of securing a good job.
Vocational or technical skills	To accomplish certain activities or tasks, specialized skills, expertise, or know-how are required.
Professional or personal skills	In the job, personal qualities such as honesty, integrity, and work ethic are critical.
Core work skills	Ability to learn and adapt; ability to read, write, and compute proficiently; ability to listen and communicate effectively; ability to think creatively; ability to solve problems independently; ability to manage oneself at work; ability to interact with coworkers; ability to work in teams or groups; ability to handle basic technology; as well as the ability to lead and be led.

Source: ILO, 2013

While the skills covered in different national approaches to identifying core skills have a lot in common, the names used to define them varies a lot. Table 2.2 includes some of the names that are most regularly used to define this type of ability in today's environment.

Table 2.2: Commonly used terms to describe key competencies

Country/Region/Organization	Core Skills
Australia	Skills that are universal
France	Skills that can be transferred
Germany	Qualifications Required
Latin America	Competencies at work
New Zealand	Skills that are required
Singapore	Enabling abilities are essential.
Switzerland	Skills that are required

Source: ILO, 2013

2.2.5 Employer of Last Resort (ELR) Programs as a Long-Term Solution to Involuntary Unemployment

Unlike the Keynesian school's conviction that full employment causes inflation and its wage rigidity principles, Austrian school economists have boldly asserted that full employment may be attained without inflation if governments serve as the monetary authority (Palley, 2001). Furthermore, proponents of the Austrian school of thought "feel that ELR would address both the price (low wages) and quantity (unemployment) difficulties that have previously plagued decentralized labor markets" (Palley, 2001). To put it another way, according to the Austrian ELR school of thinking, involuntary unemployment can be eliminated if the government offers public sector jobs to job searchers who are ready, willing, and able to work at a socially decided minimum wage

(Wray, 2007; Harvey, P. 2000; Palley, 2001; Kaboub, 2007; Tcherneva, 2012). To put it another way, raising the price of goods and services while the economy is fully employed, according to the Keynesian school of thinking, will lead to inflationary pressures. However, through monetary (lower interest rates) and fiscal policy (pump priming or stimulus package), stimulus packages or active government participation (priming the pump or a stimulus package) can help to reduce unemployment by stimulating aggregate demand (deficit spending)." Even if Keynesian demand management was successful in achieving full employment, it would be environmentally detrimental," according to Forstater (2004), an Austrian scholar, Manufacturing green products, employing cleaner technology, and identifying and adopting alternative energy are all hampered by the fact that competition forces businesses to make decisions based on private cost estimates." To put it another way, the Austrian school of thought thinks that to transform current capitalist economies into sustainable last-resort employers, a thorough sustainability program is essential, (2004, Forstater). According to Austrian economists, using deficit spending to create jobs through ELR programs is not inflationary. According to the Neo-Chartalism hypothesis, money put into the economy by the government will be repaid to the government in the form of tax receipts. Furthermore, boosting the economy would have multiplier effects, causing it to grow even faster. Palley and his coworkers, 2001. The ELR School of Thought, according to Tcherneva (2012), 1) it meets endlessly elastic labor demand; 2) it serves as a buffer stock; 3) it helps to moderate inflationary situations; and 4) it works in loose labor markets; 5) Aids in the maintenance of social, political, and health stability; 7) fosters human resource development and activation; 8) protects social value; 9) is unaffected by

global trade imbalances and currency depreciation; and 10) costs the government between 1 and 5% of GDP.

2.2.6 Unemployed Youth Retraining Centers are the currency of Technical and Vocational Education and Training (TVET)

Around fifty full-fledged Technical and Vocational Education and Training (TVET) programs have existed in Ethiopia since 2002. TVET institutions' main goals were to: a) Improve global competitiveness; b) Addressing urban joblessness; c) Addressing constraints in creating competent workforce; d) Creating paths for providing relevant labor market information; and e) Linking TVET students to the skills needed by the economy and allowing them to start their own businesses. Ethiopian TVET programs were created to serve as regional technological transfer hubs, giving skilled personnel to MSEs (medium-sized enterprises) as well as management consulting to local businesses (Mitchell, W. F & Wray, L. R. 2005).

Given these goals, it's reasonable to conclude that the TVET schools were pursuing a worthwhile goal. Despite this, due to a lack of technology and practical support, TVET programs have struggled to provide new skills development values to their students. Ethiopia's current TVET programs must be fully updated and reoriented to bridge the skill gap for new labor market opportunities and to meet ELR plans as a result of the mismatch between demand for and supply of people. Ethiopian TVET institutions should encourage ELR students to participate in community service and creative work (Mouzakitis, 2010). These initiatives can help businesses quickly resolve skill shortages. Learners may be able to expand their options for employment at a cheap cost. Young

people who obtain a combination of classroom and workplace education are 30 percent more likely to find work, according to the International Labour Organization (2009). According to the Manpower Group (2012), ELR training-to-employment success includes more than fundamental course knowledge and technology literacy: a) be skill-based, with learners trained for specific professions; b) be based on a strong employer commitment to explain the trainee's abilities in terms of the job's requirements; and c) be based on a strong employer commitment to clarify the trainee's capabilities in terms of the job's requirements. 3) Allow ELR professionals to collaborate on coaching and job retention with other experienced workers; and 4) clearly detail post-employment counseling and mentoring support for the learner. Finally, before to starting work, TVET colleges must provide ELR candidates with fast-track retraining courses that include both academic and practical learning.

2.2.7 Employment in the Workplace and Vocational Education and Training

The primary goal of TVET is to provide students with the necessary skills to enter the labor market. Graduates gain a set of skills that enable them to be marketable in sectors and find work. Graduates have more opportunity to attain well-paid and productive occupations as a result of skill generation, this raises their standard of living (Netherlands Initiative for Higher Education Capacity Development, 2010). Both soft and hard skill development, according to Karki (2011), have a significant positive link with employment. There is also a link between skill development and a productive workforce, according to King and Palmer (2008).

A productive and skilled person has access to the labor market for respectable employment, resulting in economic growth, thanks to the chain effect. When TVET is correctly implemented, human resources become more skilled, and the labor force becomes more productive.

Throughout the financial crisis, TVET has been critical in restoring economic stability as a platform for providing jobs and revenue in both the formal and informal sectors (Netherlands Initiative for Capacity development in Higher Education, 2010). TVET aids developing countries in improving employment possibilities, particularly in rural areas. TVET is being used to integrate teenagers in disadvantaged parts of Cambodia so that the country might prosper economically. South Asian countries with high unemployment rates, such as Pakistan, Nepal, Bangladesh, and Sri Lanka, rely significantly on foreign work for survival. As a result, TVET programs with a focus on skills could assist young people prepare for global work while also integrating them into the local job market (Martinez-Fernandez & Choi, 2012). Formal training has reduced unemployment, according to Tan and Chandrasiri (2004), and there is a strong positive association between the TVET sector and the labor market in Sri Lanka, with a higher return on investment in training and a smoother transition from school to work. Individuals can switch between multiple careers within the industry rather than committing to one for the rest of their lives, allowing them to be more adaptable in coping with changing events and settings, because competency-based training is important in TVET in more developed economies. Workers have been able to develop more than just knowledge, expanding their employment options, whereas in impoverished nations, because of a

mismatch between courses and the labor market, workers have been unable to develop more than just knowledge, limiting their employment opportunities, TVET still has a terrible reputation, as well as a scarcity of materials, making work possibilities more difficult to come by (Netherlands Initiative for Higher Education Capacity Development, 2010). Consequently, in undeveloped and emerging nations where general education graduation rates are low, a strong policy-driven TVET system is extremely important.

TVET can help to reduce unemployment and fulfill the Millennium Development Goals if it focuses on industry-driven curricula. In terms of new technology and innovation in industries that are accessed by affluent countries, the potential labor force in developing countries has a significant knowledge gap, and soft skills, as well as training and expertise transfer through TVET, can be ways to bring technical uniformity (Netherlands Initiative for Higher Education Capacity Development, 2010). When TVET is combined with updated curricula and appropriate resources, it creates a powerful combination, it not only generates a competitive workforce in developing nations that is globally competent and has a good chance of finding fairly compensated work, but it also develops a competitive workforce in developed countries that is globally competent and has a good chance of finding properly paid job. However, by improving quality and cutting costs, it also advantages multinational corporations and consumer markets in rich countries who consume goods and services produced in developing countries, whether in the textile or information technology industries. As a result, skill development in underdeveloped countries encourages FDI, which brings in the necessary technology and capital to grow the economy (Kurtishi-Kastrati, 2013).

2.2.8 Self-employment as a result of TVET

According to a study conducted by the German Federal Ministry for Economic Cooperation and Development (BMZ) in 2005, the number of self-employed people is rising as a result of a growing workforce, more competition, and limited job opportunities in government.

Working people who are having trouble finding jobs that require a particular skill level, Employees in both the commercial and public sectors have the option of relocating to a region with better opportunities or beginning their own small or medium businesses. Skills development and TVET, according to King and Palmer (2008), are a way of improving labor market or self-employment employability while also increasing production. Both TVET and VET have the goal of increasing livelihoods, employment, as well as self-employment.

In nations like Germany and Austria, low rates of youth unemployment have been discovered. Due to a lack of suitable job prospects, central European countries such as Ireland and Spain faced over 50% unemployment, while Greece had over 50% unemployment. TVET programs are linked to self-employment and apprenticeship programs, preventing people from traveling inside the European Union and forcing them to do so (UNESCOUNEVOC, 2013). As a result, in order to address the needs of such a productive population, TVET is critical in fostering self-employment. The French government not only encourages continued vocational education, such as programs for those who want to start their own business or work for themselves, but it also works to reduce taxes and financial costs for small firms and self-employed persons (UNESCOUNEVOC, 2015).

TVET programs incorporated into national strategic plans can help improve self-employment and economic growth in developing and emerging economies with high unemployment rates. TVET had previously been accepted by Bangladesh's national employment policy as a tool of self-employment empowerment (Tansen, 2012). Due to the high frequency of self-employment and unorganized forms of employment, as well as a lack of counseling services, CTEVT and ADB have devised a "skill for employment" program as a strategy to promote poverty reduction in Nepal's informal sector (Kafle, 2007). In Nepal, a few programs provide enterprise-based vocational training (Lamichhane, 2013). Entrepreneurship classes are also seen as important in encouraging people to establish their own companies. In impoverished countries, entrepreneurship classes in both formal and informal TVET institutes encourage people to work for themselves (UNESCO-UNEVOC, 2006). The Nepalese labor market, which is marked by a scarcity of skilled workers for the domestic market, a scarcity of job possibilities, and an increasing number of young people leaving the nation without the skills needed for acceptable foreign work, has increased public awareness of the importance of working for oneself, whether it's through family companies or self-employment (Pant, 2008).

The informal sector in developing nations is rapidly expanding, with minimal entry requirements and small-scale operations, as well as a lack of records, regulations, recognition, and security (Onwe, 2013). In African countries, there is a sizable informal economy (Palmer, 2009; Department of human resource science and technology division of human resource and youth, 2007). According to Palmer (2009), TVET is critical for the development of self-employment in Ghana, as the country strives to coordinate

organizations involved in skill training and self-employment, and focuses on the formal sector to channel the majority of economic activity for private sector growth. For more than a decade, the relevance of self-employment in the informal sector has been acknowledged. According to the ILO (1998), informal economies in developing countries provide more self-employment options than formal economies, and training is a valuable tool for workers in the informal market. TVET in Ethiopia, according to Broussar and Tekleselassie, has aided in the promotion of self-employment by customizing courses to meet the needs of both industry and trainees. As a result, graduates have been able to create their own Micro and Small Businesses (2012). Micro and Small Enterprises (MSEs), which account for the majority of the informal economy in Ethiopia, have been recognized by the government. TVET has aided in the resolution of one of the country's most pressing economic issues by offering important sources of employment and job development.

2.3 Preparation of TVET Graduates for the Labor Market by TVET Institutions

The necessity for people working in the economy to be educated how to create with new technology is becoming more apparent, as well as the relationship between technological progress and the quality of human intervention. In addition to the minimal minimum of schooling or occupational training, educational institutions must provide training for scientists, innovators, and senior executives. According to the World Bank, the capacity of TVE institutions to generate qualified young people who can enter the labor market rapidly has an impact on their reputation.

2.3.1 Relevance of TVET curricula and programs to labor market requirements

TVET curricula must be revised to accommodate new instructional and delivery strategies. Existing teachers must be retrained, and future teachers must be prepared to teach in an environmentally sustainable manner, with a focus on and provision of high-quality alternative teaching techniques. Curricula must be updated and integrated to incorporate both well-coordinated knowledge-based and competencies-based materials, as well as market requirements assessment and methodology, to be suited for ELR programs. The main goal of TVET is to provide students with the skills they need to get into the workforce. Graduates develop a set of abilities that enable them to find work in a variety of fields. Graduates have a better chance of getting well-paying, productive jobs as a result of skill development, this raises their standard of living (Netherlands Initiative for Higher Education Capacity Development, 2010). Both soft and hard skill development, according to Karki (2011), have a significant positive link with employment. According to King and Palmer, there is also a link between skill development and a productive workforce (2008). Because of the chain effect, a competent and skilled person can find acceptable work in the labor market, resulting in economic growth. Human resources become more skilled and the labor force becomes more productive when TVET is properly implemented.

TVET programs can be made relevant to labor market needs by establishing a demand-driven, competency-based curricula design system. This framework ensures that industry is involved in the development of curricula, ensuring that TVET graduates have skills that are applicable in the workplace. In order to ensure the formation of industry-relevant TVET systems, demand-led, competency-based approaches of building curriculum are critical.

2.3.2 Infrastructural Challenges in TVET Institutions

School facilities, according to Adeboyeje (2000) and Emetarom (2004), are the physical and spatial enablers of teaching and learning that help students achieve better results. The infrastructure of schools serves as a foundation for effective teaching and learning. All of the infrastructure and material resources utilized to support the delivery of high-quality education are referred to as teaching facilities. The critical physical and organizational structures required for the institution's proper operation are referred to as infrastructure (Bakare, 2009). Textbooks, laboratory equipment, computers, seating, electricity, and other technical and vocational facilities all contribute to high-quality education (Omotayo, et al., 2008). The provision, adequacy, utilization, and administration of educational facilities are all important factors in ensuring a high-quality and standard institution of learning. According to Akinsolu (2004), a sound and well-run educational program cannot be achieved with inferior and poorly maintained school infrastructure. According to numerous publications, school facilities are physical resources that aid in effective teaching and learning. Classrooms, labs, workshops, libraries, equipment, consumables, electricity, water, visual and audio-visual aids, tables, desks, seats, a

playground, storage space, and restrooms are just a few of the items on the list. In order to create a favorable teaching and learning environment for quality output fit for productive employment and dignified labor, TVET institutions must update infrastructure and modernize training equipment, facilities, workshops, and buildings. Practical learning environments should resemble the eventual work environment that students will likely enter after completing training; laboratories and workshops that simulate real-world work settings can assist students in succeeding, and it is this physical environment that will properly prepare students for employment (Cutshall, 2003).

2.3.3 Industry and TVET Institutions Collaborating Together

Collaboration with industry and educational institutions is becoming increasingly crucial in many emerging countries, such as Kenya. The International Organization for Technical Education and Vocational Training's international proposals for improving technical education and vocational training systems frequently mentioned increased linkages between training and the job market. Industrial connection was identified to be the most obvious relationship; among the primary challenges affecting TVET and industry partnership were a lack of initiative on the part of TVET institutions and a poor reaction from enterprises. Through activities such as equipment and tool donations, staff exchange programs, and student and staff placement on work experience attachments, technical institutions should maintain close ties with industry to build support for enhanced practical training.

2.3.4 Government Interventions

Under the Education Act, the Kenya Institute of Education (KIE) was established and given the authority to produce curricula (Cap 211). Through its management council, which is made up of TVET stakeholders, the Kenya Institute of Education (KIE) incorporates industry into the curriculum development process (Ngerechi, 2003; Wanjala, 1995; Atchoarena and Delluc, 2002). According to the Kenya Education Sector Support Program (KESSP) 2005-2010, the following are the goals and purposes of TVET in Kenya:

- Stakeholder participation in the development of a national skills training strategy.
- Establishing structures and providing incentives to encourage business sector participation in TVET growth in order to increase access. Increased access to TVET through loans and bursaries, with a focus on marginalized groups like female students and physically disabled individuals.
- The Technical, Industrial, Vocational, and Entrepreneurship Training Authority (TVETA), a national coordinating organization for TVET institutions, would be established to provide enough programming as well as effective administration and governance.
- Funding for the renovation of public TIVET institutes to ensure high-quality training.

Finally, government funding via capitation, HELB, and other subsidies will encourage more students to enroll in programs and provide adequate training facilities in these institutions to ensure effective and efficient training.

2.4 Summary and the Study's Role in Filling the Gap

All of these topics are concerned with the country's provision of technical or vocational training and skills. They cover CBET as a style of provision, workplace performance, provision patterns, and policy challenges, as well as the fitness of TVET graduates for the labor market. Despite multiple studies in Kenya looking into the role of TVET institutions in raising the number of trained employable workers in various sectors, the unemployment rate remains high. The goal of this study was to see how well these TVET institutions prepare graduates for the labor market as a way to combat Kenya's high unemployment rate.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter covers the methodology, data collection methods, and data analysis for the project. The research approach is discussed. Following that is a list of the target population, sample technique, and research instruments. The final component of this chapter discusses consistency measurements (i.e., validity and reliability).

3.2 The Research Design

A research design is a set of data gathering and analysis criteria that attempts to strike a balance between study goal relevance and procedural economy. The importance of research design is that it ensures that all research operations flow smoothly, resulting in research that is as efficient as possible, providing the most knowledge with the least amount of effort, time, and money. Constructionism is the study's epistemology. There is no objective truth waiting to be discovered, according to constructivist epistemology. Truth and purpose emerge in and out of engagement with the reality of our environment. Without a mind, there is no meaning. Various people may come up with different interpretations even when dealing with the same issue (Crotty, 1998). The purpose of this form of research, according to (Creswell, 2003; Punch, 2013), is to rely as much as possible on the participants' views of the conditions being examined. The researcher will use the perspectives of the participants to determine the current situation in terms of industrial attachment programs, research, and development in this study, collaboration between TVET institutions and industry has resulted in new technologies and training

equipment, as well as the TVETA quality assurance acts on TVET institutions. The survey research method was used in this study. A survey is a method of gathering information on a population's present situation in relation to one or more attributes (Mugenda, 2003). A survey method can assist you in determining the research problem and developing hypotheses for this investigation. Researchers can also use it to find study populations from a small group of people (Fowler, 2002).

3.3 Area of Study

The research was conducted in Nairobi and the Rift Valley, which are home to the majority of public TVET institutions. In addition, the number of TVET courses available in these areas has greatly expanded. Three institutions from the Nairobi region (NYS Engineering Training Institute, Railways Training Institute, and Nairobi Technical Training Institute) were chosen, as well as one from each of the Rift Valley towns (RVIST, RVTTI and Masai Technical Training Institute). The researcher was able to see how well TTI's Technical Vocational and Education Training prepared graduates for the job market through the analysis.

3.4 Target Population

The target population refers to the entire set of units for which the study data will be utilized to generate references (Dempsey, 2003). The target population is the group of people who will benefit from the findings of the study. Purposive sampling has the following benefits, according to (Sharma, 2017): 1) It gives the researcher permission to extrapolate generalizations from the sample under study; 2) It also allows the researcher

to use a variety of non-probability sampling techniques. A total of 135 people were requested to participate in the survey.

3.5 Sampling and Sample Size Determination

Choosing the right survey sample size is a difficult process in most circumstances. If the sample size is too small, the results may not correctly reflect the entire population. Due to cost and time constraints, a large sample size may make the survey impractical to undertake. The universe's nature, whether homogeneous or heterogeneous; the number of suggested classes, whether many or few; the study's nature; the types of sampling; the accuracy standard and acceptable confidence level; and the financial resources available, according to (Kothari, 2004).

The following formula was used to provide a good estimate of the sample size:

$$n = \frac{q}{1 + \frac{(q-1)}{N}}$$

Where n is the required sample size.

The target population's size is denoted by the letter N.

$$q = \frac{(Z^2 P(1-P))}{d^2}$$

The standard normal deviation for a certain confidence level is represented by the letter Z.

The letter P stands for the estimated percentage of the target population who possesses the attributes that are being evaluated. In this situation, the expected threshold of statistical significance is $P = 0.5$, $d = 0.05$.

"In management research, the standard levels of confidence are 95 percent (0.05: $Z = 1.96$) or 99 percent (0.01: $Z = 2.57$).\" (Taherdoost, 2017; Mugendi, 1990).

The intended population size will be around 135 people with a 95 percent confidence level and a 5% sample error. As a result, we determined the sample size as follows:

$$q = \frac{((1.96)^2(0.5)(1 - 0.5))}{(0.05)^2} \cong 384$$

$$n = \frac{384}{1 + \frac{(384 - 1)}{135}} \cong 100$$

This 100-person sample was divided into three groups;

- Institutions' Academic Heads of Department – 18 respondents
- The Research and Development officers for public TVET institutions from the regulatory Authority- TVETA – 2 respondents.
- The available graduates from the public TVET institutions – 80 respondents.

3.6 Sampling Techniques

A sample methodology, sometimes called a sample design, is a way of selecting a sample from a population. It refers to the researcher's approach or procedure for selecting items for the sample (Kothari, 2004).

There are two methods for sampling (Cohen & Holliday, 1979, 1982, 1996; Schofield, 1996). The researcher must decide whether to use a probability sample (also known as a random sample) or a non-probability sample (also known as a purposive sample).

3.6.1 Snowball sampling

Purposeful sampling is used to find the first participants with the desired features. Until the researcher has the number of cases he requires, the few identified people name others who they know have the required criteria (Mugenda & Mugenda, 1990). This was conducted since the sample members (graduate students) are a secret group that the researcher couldn't reach. It's a non-random sampling strategy that uses a few instances to entice others to participate in the study, hence increasing the sample size. Small, closed, and difficult-to-reach organizations, such as secret societies and inaccessible professions, benefit from this method (Breweton & Millward, 2001).

3.6.2 Systematic Random Sampling

Choosing every i th item in a list is sometimes the most practical technique of sampling (Mugenda & Mugenda, 1990). This sort of sampling is referred to as systematic sampling. This form of sampling incorporates an element of unpredictability by using random integers to determine the unit with which to begin.

Simple random sampling has been updated in this version. It requires selecting people from a population list methodically rather than at random. If a sample of 100 people from a population of 2,000 is required, for example, every 20th person can be chosen. The selection's beginning point is determined at random (Cohen, Monion, & Morrison, 2005).

This strategy was used to identify sample public TVET institutions and their Heads of Departments in each municipality. A meeting with the two Research and Development Officers at TVETA headquarters was also scheduled using purposeful sampling.

3.7 Data Collection Instruments

The researcher designed the apparatus that was utilized to obtain the required information. The questionnaires and structured interview schedule for primary data, as well as literature from the library, the internet, and other publications, were employed in this research project. Secondary information.

3.7.1 Primary Data

Data that is acquired for the first time and has specific qualities are the most relevant (Fowler, 2002).

i. Structured Interview Schedule

These interviews are done utilizing a predetermined set of questions and highly standardized recording techniques. A structured interview follows a set of guidelines, with the interviewer asking questions in a defined order and format (Kothari, 2004). The TVETA Research & Development Officers were interviewed using the Structured Interview Schedule.

ii. Questionnaire

Questionnaires are preferred by Dempsey (2003) because they allow respondents to express a considerable quantity of their opinions regarding the research topic. A questionnaire consists of a series of closed-ended questions as well as a list of all possible responses from which respondents select the one that best describes their situation. The survey includes five Likert scale questions. The respondents were handed the questionnaire, which they were supposed to read and comprehend before writing their comments in the area provided on the questionnaire. The responders were required to provide their own responses to the questions. Questionnaires were administered to eighty

(80) TVET graduates and eighteen (18) HoDs who were accessible at the time of the research.

3.7.2 Secondary Data

Secondary data is information that has been acquired and statistically processed by a third party in the past (Mugenda & Mugenda, 1990; Kothari, 2004).

- Secondary data was collected from the library, the internet, and TVETA authority's publications to identify number of registered public TVET institutes in Kenya, Nairobi and Rift Valley region in particular.
- Institute student records were examined to identify telephone numbers of registered students and graduates in two years' time.
- Institute admission records were explored to identify numbers of graduate students.

3.8 Data Collection Instrument Validity and Reliability

3.8.1 Validity of the Instruments Used to Collect Data

The amount to which facts and theory support the interpretations of test scores provided by planned test uses is referred to as validity (Wadsworth, 2006; Nachmias & Nachmias, 1996). The data collection devices must have a high level of legitimacy and trustworthiness. The information chosen and included in a data collection instrument must be connected to the need or gap identified in order to be considered genuine (Koul, 1992). Like any other instrument, the questionnaire's design aims to eliminate bias as much as feasible (Cohen, Manion & Morrison, 2000). The supervisors inspect the gadgets and make recommendations for how to improve the final designs.

To examine the extent to which TVET colleges educate graduates for the Kenyan labor market, the researcher used criterion related validity. The researcher utilizes a measure to examine the subject's behavior in a specific context for criteria related validity.

3.8.2 Data collection instrument reliability

The degree to which the same instrument produces accurate findings for the same persons at different points in time is referred to as reliability (Wadsworth, 2006; Creswell, 2005). In many disciplines of study, the precision with which hypothesized variables are dimensioned is a test in and of itself. When variables are difficult to evaluate, dimension accuracy difficulties arise in applied research. Most research employs reliability and items analysis to build reliable measuring scales, Current rates should be modified, and the dependability of scales that are presently in use should be investigated. Sum scales, which are scales made up of multiple individual measurements, are designed and evaluated in this way, it is advantageous to have reliability. The scale's dependability is determined by the correlations between the numerous the scale's components or measures, rather than the variation of the items. Cronbach's Alpha, the most prevalent sort of consistency reliability coefficient, was used in this study. The instrument's Cronbach's Alpha coefficient was found to be 0.76, indicating that it is dependable.

3.9 Ethical and Logistical Considerations

Considering the study's ethical and practical challenges improves the investigation's goal, (Makau & Akaranga, 2016). (Mugenda & Mugenda, 1999) state that "these are aspects that the researcher should be aware of prior to starting the research," resulting in a high-quality study while saving the researcher time, energy, and money. The National

Commission for Science, Technology, and Innovation gave its approval to the study of the researcher (NACOSTI), allowing him to collect data in TVET institutions and TVETA offices in Nairobi and the Rift Valley. A researcher must choose appropriate techniques and data collection methods, effectively communicate and interpret research findings, and present material in a logical order (Makau & Akaranga, 2016). Before being utilized to collect data at TVETA headquarters and other TVET institutions, the questionnaire was pre-tested at Masai technical training institute and NYS engineering training institute, and study participants were picked at random.

The researcher requested that the respondents not reveal their identities in the poll, which ensured their anonymity. All sources utilized in the study's literature building were cited to avoid research fraud and plagiarism. This thesis was created after the data was analyzed and presented. The researcher kept track of all acceptable values during the investigation.

3.10 Data Analysis

The data was evaluated qualitatively and quantitatively using the Statistical Package for the Social Sciences' SPSS Statistics 17.0 tool (SPSS). SPSS is a statistical tool that allows you to link at least one dependent variable with one or more independent variables (which can be discrete or continuous) (Tabachnick & Fidel, 2001). Additionally, the conceptual framework's latent variables, which describe dependent relationships inside each variable in the framework, aid with route analysis. This helps to create a graphical framework that shows how the dependent, independent, and moderating elements "fit" together (Byrnes, 2006).

In this study, the researcher choose to employ inferential analysis over descriptive analysis. Inferential statistics are used to make population inferences based on sample data. Inferential statistics are concerned with determining the likelihood that the results acquired from a sample will be comparable to the results predicted from the complete population.

3.11 Summary

The research design, study region, target population, sampling and sample size estimation, data collection instruments, data collection instrument reliability and validity, and data analysis are all covered in this chapter. Systematic random sampling and snowball sampling were used to determine the sample size. Data was gathered through structured interviews and questionnaires. The validity and reliability of the instrument were assessed using internal consistency (Cronbach's alpha index). The data was then analyzed using descriptive and inferential statistics.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS, INTERPRETATION AND DISCUSSION

4.1 Introduction

This chapter employs a descriptive survey approach to synthesis empirical data and variable findings in order to determine how well TVET colleges prepare graduates to meet society's growing demand for young employees. The study's goal was to determine how TVET graduates felt about the value of their education in terms of labor market demands. Evaluated the TVET institutions infrastructural challenges in knowledge and skills provision. The necessity for collaboration between industry as a source of hands-on experience and TVET universities in providing training to equip graduates with the necessary skills was assessed. Established government involvement through TVET institutions for a successful skills development plan.

The response rate of the participants is presented first in the analysis. The findings and outcomes of the respondents' backgrounds were provided. Finally, a description of the variables in the study was provided. This was accomplished through the use of descriptive and inferential statistics.

4.2 Response Rate

The number of completed and returned questionnaires is used to calculate the response rate (Yin, 2009). This figure is expressed as a percentage of the total number of target surveys that were sent out. There were 93 good responses out of a total of 100. This resulted with a response rate of 93 percent. According to Mugenda & Mugenda, a 50 percent response rate is normal, a 60 percent response rate is good, and a response rate of

more than 70 percent is excellent for survey research (2003). According to Creswell (2012), a response rate of 75% or above is necessary for meaningful generalization of the target group. Peytchev (2013) noted that a low response rates provide biased results. For sample representation of the target population and valid applicability of the findings, evidence of a high return rate was sufficient in this study. On the basis of this claim, the 93 percent response rate in this scenario is outstanding. Table 4.1 shows the overall response rate.

Table 4.1

Response Rate

Respondents	Expected Number of Respondents	Total (N)	Response Rate (%)
Institutions' Academic Heads of Department	18	16	89
Research and Development officers for public TVET Institutions from the regulatory Authority- TVETA	2	2	100
Graduates from the public TVET institutions	80	75	94
Total	100	93	93

Table 4.1 shows that 93 (93%) people participated in the study. A total of 18 questionnaires were issued to academic heads of departments at the universities, with 16 being returned, representing an 89 percent response rate. Another 80 questionnaires were sent out to graduates of public TVET institutions, and 75 of them were returned, representing a 94 percent response rate, while two interviews were performed with TVETA's Research and Development officers for public TVET institutions. This equated to a 100% response rate.

4.3 Background Information of the Respondents

The researcher began by looking at the demographic data, which included the gender, age, degree level, and entrance qualification of the respondents. This was done to make sure that the respondents were a good representation of the research topics. Table 4.2 presents a summary of the findings.

Table 4.2: Personal Information of the graduates

Personal information	Frequency	Percentage
NYS Engineering Training Institute	14	20%
Railways Training Institute	14	20%
Nairobi Technical Training Institute	14	20%
RVIST	14	20%
RVTTI	14	20%
Gender		
Male	50	67%
Female	25	33%
Age		
15 – 20	6	8%
21 – 25	42	56%
26 – 30	21	28%
31 – 35	6	8%
Graduation Level		
Artisan	6	8%
Craft certificate	13	18%

Diploma	46	62%
Higher Diploma	10	12%
Entry Qualifications		
STD eight (8)	3	4%
Form IV	53	70%
Certificate	13	18%
Diploma	6	8%
Total	75	100

This study involved respondents from each of the technical institutes; NYS Engineering Training Institute, Railways Training Institute, Nairobi Technical Training Institute, RVIST and RVTTI. The findings indicated that 50 (60%) of the graduate respondents were male. A further, 42 (56%) were aged between 21-25 years while 46 (62%) had Diploma. The other 53 (70%) respondents were Form IV leavers. This chapter employs a descriptive survey approach to synthesis empirical data and variable findings in order to determine how well TVET institutions equip graduates to meet society's growing demand for youthful employment.

Table 4.3: Personal information of Heads of Department

Gender	Frequency	Percentage
Male	13	80%
Female	3	20%
Age		
25 – 30	1	2%
31 – 35	3	22%
36 – 40	8	52%
41 – 45	2	12%
46 – 49	1	6%
Over 50	1	6%
Professional Qualification		
Dip Tech. Ed	1	4%
HND level	3	18%
B.Ed. Tech. Ed	9	60%
BSC.	3	18%
Experience in Current Position		
0 – 5 years	1	5%
5 – 10 years	4	25%
Above 10 years	11	70%
Total	16	100

Thirteen (80 percent) of the respondents were male academic department heads in TVET colleges, according to the findings. Additionally, 8 (52%) were between the ages of 36 and 40, with 9 (60%) having a Bachelor of Education in Technology Education. The remaining 11 respondents (70 percent) had over ten years of experience. This demonstrates the reliability of the data on how well Kenyan technical and vocational education and training institutions prepare graduates for the job market because it was

representative and could be utilized to draw inferences about the study variables. Sass (2007) and Ladd (2008) back this up by stating that, on average, newly hired teachers have limited experience, which hinders them from doing as well as those who have worked in the field for a long time. The amount of years spent as employees influences their performance by determining their experience and exposure to various job obstacles, endurance, and mitigations. Clark et al. (2009) postulate that there exist significant positive relationships between employees working experience and their performance.

4.3.2 Relevance of the Education Graduates had received in Relation to the Needs of the Labour Market

This study investigated the relevance of the education graduates received in relation to the labor market needs by interviewing respondents about the relevance of training in the labor market and the employment of TVET Graduates in the labor market.

Table 4.4: Employment of TVET Graduates in the Labour Market

Statements	Mean	Standard deviation
TVET institutions prepare graduates ready for labour market.	4.32	0.14
The training experiences acquired match those found in the labour market.	4.39	0.33
Majority of the TVET graduates are absorbed in the labour market within two years after graduation.	4.65	0.01

A majority of graduate respondents disagreed that TVET institutions prepare graduates for the labor market, with a mean of 4.32 and a standard deviation of 0.14, and a majority disagreed that the training experiences obtained match those found in the labor market, with a mean of 4.39 and a standard deviation of 0.33. With a mean of 4.65 and a standard deviation of 0.01, a large minority of respondents believe that the majority of TVET graduates are integrated into the labor market within two years of graduation. In practically every country on the earth, unemployment is a major worry. Kenya, in particular, is one of the countries in the world with a global unemployment rate of more than 40%. TVET could be used to counteract social isolation in locations where higher education is out of reach for most people, as well as an antidote to youth unemployment in overcrowded job markets (ETF, 2005). As a result of skill development, graduates have a better chance of landing well-paying and productive jobs, it improves their standard of living (Netherlands Initiative for Higher Education Capacity Development, 2010). According to Karki (2011), both soft and hard skill development have a substantial positive relationship with employment. According to King and Palmer, there is also a link between skill development and a productive workforce (2008). Because of the chain effect, a competent and skilled person has access to the labor market for respectable work, resulting in economic growth. When TVET is correctly implemented, human resources become more skilled, and the labor force becomes more productive.

Table 4.5: Training Relevance in the Labour Market

Statements	Mean	Standard deviation
The skills and experience in training prepare the graduate well for the labour market.	4.65	0.36
Training equipment match those found in the industry.	4.22	0.21
Your technical skills enable you to make efficient use of the equipment.	4.56	0.11

A large number of graduate respondents disagreed that training skills and experience prepare them well for the labor market, with a mean of 4.65 and a standard deviation of 0.36, and a large number disagreed that training equipment matches those found in the industry, with a mean of 4.22 and a standard deviation of 0.21. With a standard deviation of 0.11 and a mean of 4.56, a high proportion of respondents dispute that their technical skills allow them to utilize the equipment efficiently. TVET, according to Maclean (2011), It can help economic growth in a variety of ways if it is correctly positioned, social advancement, Improvements in conventional education, empowerment, wealth development, poverty alleviation, and skill upgrading. In a world where adolescent restlessness is frequent, TVET is well adapted to assisting youths and adults in becoming self-sufficient and self-reliant , while TVET is beneficial to those working in the field in terms of skill upgrading, lowering high employment turnover, and reducing the risk of obsolescence (Okolocha, 2012). There is also a link between skill development and a productive workforce, according to King and Palmer (2008). Because of the chain effect, a productive and skilled person has access to the labor market for respectable work,

resulting in economic growth. When TVET is correctly implemented, human resources become more skilled, and the labor force becomes more productive.

Table 4.6: Employment of TVET Graduates in the Labour Market

Statements	Mean	Standard deviation
TVET institutions prepare graduates ready for labour market.	4.33	0.45
The training experiences acquired match those found in the labour market.	4.62	0.18
Majority of the TVET graduates are absorbed in the labour market within two years after graduation.	4.31	0.21

A majority of TVET academic Heads of Department disagreed (Average of 4.33 and 0.45 standard deviation), that TVET institutions educate graduates for the labor market, and a majority disagreed that the training experiences acquired match those found in the labor market (Average 4.62, standard deviation 0.18). A sizable minority of respondents' dispute that the majority of TVET graduates are incorporated into the labor market within two years of graduation, as evidenced by a mean of 4.31 and a standard deviation of 0.21. If enthusiastically pursued and encouraged, TVET can help learners develop their abilities and increase their employability (Maclean, 2011). When a country fails to grow technologically despite using TVET, objective policy retrospection and research are required.

TVET in Ethiopia, according to Broussar and Tekleselassie, through tailoring courses to meet the needs of industry and trainees, has contributed in the promotion of self-employment, enabling graduates to establish their own Micro and Small Businesses

(2012). Many remittance-dependent countries in South Asia require TVET programs to provide the necessary skills to those seeking work overseas or on the local market. The encouragement of self-employment has been made in rich economies by TVET and policies aimed at reducing unemployment and supporting small and medium-sized firms, but it is more prevalent in poor countries.

Table 4.7: Training Relevance in the Labour Market

Statements	Mean	Standard deviation
The skills and experience in training prepare the graduate well for the labour market.	4.67	0.18
Training equipment match those found in the industry.	4.28	0.12
The curricula meet the labour market needs.	4.91	0.39
The syllabi are taught by subject specialist completely	4.39	0.81

A majority of academic Heads of Department in TVET institutions disagreed that training skills and experience equip graduates well for the job market, with a mean of 4.67 and a standard deviation of 0.18, and a majority disagreed that training equipment matches that found in industry, with a standard deviation of 0.12 and a mean of 4.28. With a standard deviation of 0.39 and a mean of 4.91, a vast majority of respondents' curricula do not match their labor market needs. Topic specialists extensively teach the syllabi, having a standard deviation of 0.81 and a mean of 4.39. According to the Kenya Education Sector Support Program (KESSP) report, the goals and objectives of TVET in Kenya (2005-2010) are to engage all key stakeholders in the development of a comprehensive national skills curriculum. It was recognized that there was a need to link training to work requirements particular to the industry. With the help of the commercial sector, the theme

of this training had to be decided. For young people, training in the workplace would become more relevant.

Developing countries have emphasized the importance of TVET and have incorporated it into their policies and development strategies. Bangladesh's national skills development policy categorizes the TVET system into four categories; 1: Ministry-provided public training; 2: private or commercial training institutes. More than half of the illiterate workers will be helped by non-governmental organizations (NGOs) and industry-based institutes (IBIs) (Tansen, 2012). Youths take part in training programs in order to develop their skills. The National Planning Commission of Nepal (Nepal, 2010) has announced its objectives for improving and extending employment skills. Gajurel (Gajurel, 2011). Despite the fact that TVET is more expensive than general education, it is regarded as more productive since it produces employable skills, which has important implications for job growth (Neupane, 2011).

4.3.3 TVET Institutions Infrastructural Challenges in Knowledge and Skill Provision

Researchers established a link between curriculum and facility design, suggesting that students' social and academic outcomes are influenced by their physical learning environment. Improved training equipment, facilities, workshops, and buildings, as well as updated infrastructure, contribute to the construction of a suitable teaching and learning environment for exceptional output that is ready for productive employment and acceptable remuneration. These are intended to simulate the work setting in which students will be placed once they have completed their training.

Table 4.8: TVET Institution Infrastructural Challenges in Knowledge and Skill Provision

Statements	Mean	Standard deviation
There are spacious staffrooms for the trainers	4.16	0.32
Training rooms are adequate and are filled with training equipment.	4.28	0.66
Workshops and laboratories are equipped with modern and functional equipment and machines.	4.16	0.76

A majority of graduate respondents disagreed that the training rooms are adequate and filled with training equipment, a mean of 4.16 and a standard deviation of 0.32 show this, and a significant number disagreed that the trainer staffrooms are spacious, a mean of 4.28 and a standard deviation of 0.66 show this. A large majority of respondents disagree that the workshops and labs are equipped with modern and functional equipment and machines, with a mean of 4.16 and a standard deviation of 0.76.

Table 4.9: TVET Institution infrastructural Challenges in Education and Skill Provision

Statements	Mean	Standard deviation
There are spacious staffrooms for trainers	4.16	0.16
Training rooms are adequate and are equipped with training equipment.	4.43	0.43
Workshops and laboratories are equipped with modern and functional equipment and machines.	4.22	.22
Workshop are spacious enough to handle practical.	4.39	0.39

The majority of TVET academic department heads disagreed that there were large staffrooms for the trainers, with a standard deviation of 0.16 and a mean of 4.16. Despite the fact that the majority of respondents disagree that the training rooms are adequate and supplied with training equipment (a mean of 4.43 and a standard deviation of 0.43), the majority of respondents believe the training rooms are adequate and equipped with training equipment. Many respondents disagree that workshops and laboratories are equipped with modern and functional equipment and machines, with a mean of 4.22 and a standard deviation of 0.22, and many respondents disagree that workshops are spacious enough to handle practicals, with a standard deviation of 0.39 and a mean of 4.39. Employer surveys, according to the OECD, imply that job-specific skills are no longer adequate to meet labor market demands (2012). In a study of companies from nine nations, 57% indicated they couldn't find the competent entry-level workers they required. In-demand talents are becoming increasingly important in the workplace. According to UNESCO-UNEVOC, Due to a skills deficit, potential workers are having trouble finding work in the labor market (2013).

4.3.4 Collaboration between industries, which provide hands-on experience, and TVET colleges, which provide training to prepare graduates with the necessary skills.

Table 4.10: Collaboration in Industrial Training and Placement between TVET Institutions and Industries

Statements	Mean	Standard deviation
All trainees who are pursuing an industrial attachment will be placed.	4.54	0.43
The public TVET institutes and the private sector work together.	4.39	0.21
The TVET trainees will obtain the necessary practical skills during their attachment time.	4.82	0.65
TVET training receives enough practical training from industry.	4.31	0.32
Skilled personnel in industry supervise trainees to offer specialized training.	4.11	0.39

As evidenced by a mean of 4.54 and a standard deviation of 0.43, the majority of graduate respondents disagree that all trainees pursuing industrial attachments are placed, and a large number of respondents disagree that public TVET institutions and industries collaborate, as evidenced by a mean of 4.39 and a standard deviation of 0.21. With a mean of 4.82 and a standard deviation of 0.65, this study is a success, a significant majority of respondents doubt that TVET trainees can acquire the requisite practical skills in the amount of time they are exposed to them. The majority of respondents disagree that industry provides adequate practical training for TVET training, as proven by a mean of

4.31 and a standard deviation of 0.32, as evidenced by a mean of 4.11 and a standard deviation of 0.39, as evidenced by a mean of 4.11 and a standard deviation of 0.39, many argue that qualified professionals in industry oversee trainees to give specialized training. This research backs up the conclusions of Okolocha (2012), who found that collaboration between industry and educational institutions is a serious concern in many developing countries, including Kenya. Increased ties between training and the job market were frequently noted in the International Organization for Technical Education and Vocational Training's international recommendations for enhancing technical education and vocational training systems. According to Matamande et al., (2013), industrial attachment has become an important component of training as companies want fully trained trainees since it provides a platform for assimilation of theory into reality. Specialized skills that are blended between theoretical classroom and industry-based training are required in the workforce. As a result, cooperation between Technical Training Institutions and the job market are becoming increasingly important.

Table 4.11: Collaboration in Industrial Training and Placement between TVET Institutions and Industries

Aspects of Motivated Inspiration	Mean	Std. Deviation
All trainees who are pursuing an industrial attachment will be placed.	4.63	1.148
The public TVET institutes and the private sector work together.	4.58	1.215
The TVET trainees will obtain the necessary practical skills during their attachment time.	4.61	1.213
TVET trainees receive enough practical instruction from industry.	4.65	1.097

Skilled personnel in industry supervise trainees to offer specialized training.	4.63	1.110
Trainers have acquired the necessary modern practical skills.	4.32	0.344
Trainers must be attached to increase the quality of instruction in practical course units.	4.212	0.543

A significant number of academic Heads of Department (HoDs) in TVET institutions disagreed (mean of 4.63 and standard deviation of 1.148) that all trainees pursuing industry attachments find work, and a considerable number disagreed that public TVET institutions and businesses collaborate (mean of 4.58 and standard deviation of 1.215). A mean of 4.65 and a standard deviation of 1.097 attest to this. The majority of participants do not believe that industry provides appropriate practical training to TVET trainees, and many more do not believe that the duration of attachment is long enough for TVET trainees to obtain the requisite practical skills. The majority of respondents disagreed that industry employees monitor trainees to give specialized training, with a mean of 4.63 and a standard deviation of 1.110, and a majority disagreed that trainers had acquired the necessary modern practical skills, with a standard deviation of 0.344 and a mean of 4.32. With a mean of 4.212 and a standard deviation of 0.543, a large majority of participants disagreed that trainers were needed to increase the quality of instruction in practical course units. The most pronounced link between TVET and industry, according to Mauzakitis (2010), is industrial attachment; a lack of initiative on the part of TVET institutions and a negative response from industry are two of the most significant problems facing TVET and industry relationship. In order to elicit aid from industry in the form of equipment and tool donations, staff exchange programs, and student and staff

placement on work experience attachments, technical institutions should establish tight ties with the workplace. Ezeali and Esiagu (2009) define training as "the structured, coordinated development of knowledge, talents, and attitudes required by an industrial worker to master a certain condition or perform a specific task within the context of an organization."

4.3.5 Government Interventions for Successful Skills Development Strategy through the TVET Institutions

To do so, the government promises to help with infrastructure and human resource capacity development, to promote sound governance, to increase training quality and assurance, and to create incentives for industry connection and engagement in TVET. The Government expects concerted and supportive efforts from all stakeholders in the Kenyan TVET sector, to ensure the successful implementation of this TVET Policy, as well as the broader education and training system.

Table 4.12: Government Interventions for Successful Skills Development Strategy through the TVET Institutions

Statements	Mean	Standard deviation
The Government funds the establishment of workshops and laboratories equipment in TVET institutions.	4.23	0.23
The Government employ qualified trainers in TVET institutions.	4.45	0.43
The Government facilitates equality and access to training to all students in the country.	4.11	0.11

The vast majority of graduate respondents, with a mean of 4.23 and a standard deviation of 0.23, reject that the government sponsors the establishment of workshops and laboratory equipment in TVET colleges. A high majority disagreed that the government enables equality and access to training for all students in the country, with a standard deviation of 0.43 and a mean of 4.45, and a large number disagreed that the government employs qualified trainers in TVET institutions, with a standard deviation of 0.11 and a mean of 4.11. The government, according to Tcherneva (2012), should develop regulations for links, which should include (1) anticipating and reporting on industry skill shortages and human resource supply and demand; (2) establishing industry training strategies, including skill grading for specific jobs; and (3) collaborating in the development of curricula. (4) to monitor student and worker recruitment, particularly in regions where there is a specific skill deficit or those in need; (5) to establish preparations for staff training and vocational skill assessments; (6) to establish and run vocational schools or vocational training institutions independently or in collaboration with others; (7) to supervise the recruitment of students and workers, particularly in areas where there is a specific skill shortage or those in need; (8) to assist in the delivery of training and provide resources; and (9) to distribute TVET policy information to various industry sectors.

Table 4.13: Government Interventions for Successful Skills Development Strategy through the TVET Institutions

Statements	Mean	Standard deviation
The Government funds the establishment of workshops and laboratories equipment in TVET institutions.	4.26	0.35
The Government employs qualified trainers in TVET institutions.	4.15	0.18
The Government facilitates equality and access to training to all students in the country.	4.28	0.32

A large number of academic Heads of Department in TVET institutions disagree that the government funds the establishment of workshops and laboratory equipment in TVET institutions, A high majority disagree that the government employs qualified trainers, as demonstrated by a mean of 4.26 and a standard deviation of 0.35. Many people questioned whether the government ensured equality and access to training for all students in the country, as evidenced by a mean of 4.28 and a standard deviation of 0.32. According to the Austrian ELR School of thought, the government can eradicate involuntary unemployment by hiring persons who are willing and able to work at a socially set minimum wage in the public sector (Wray, 2007; Harvey, P. 2000; Palley, 2001; Kaboub, 2007; Tcherneva, 2012). To put it another way, the Keynesian school of thought holds that raising the price of goods and services while the economy is fully employed will result in inflationary pressures. Implementing a stimulus package (also known as "pump priming"), as well as fiscal (deficit expenditure) and monetary (lower interest rates) actions to boost aggregate demand, can help to reduce unemployment.

4.3.6 Structured Interview Schedule with TVETA Research and Development Officers

The researched recorded from the TVET authority that all public TVET institutions are registered under TVET act and the registrations were done based on the capacity of an institution to offer a given TVET programme at that particular time. The TVETA Research and Development Officers monitor the courses offered by TVET institutions in terms of; their employability, economic effectiveness, equality and equitability and cost efficiency both to trainees and the TVET institutions.

The officers suggested that for improvement of the TVET institutions to prepare the graduates for the labour markets; the government has to provide equity and quality education to all trainees, modern and up to date infrastructures must be provide, the industrial stakeholders should be involved in training curriculum development and the institution to conduct tracer studies for their graduate to make the follow-up on the employability and relevancy of the courses offered to their trainees.

4.4 Multiple Regression

To examine if the independent factors had an effect on the dependent variable, multiple regression was used. To accomplish so, four variables were regressed against the dependent variable, graduate preparedness for the labor market through TVET institutions: educational relevance, infrastructure issues, industry participation, and government interventions. This section was designed to determine if the multiple regression equation could be utilized to describe the impact of technical and vocational education and training on graduate labor market readiness through TVET institutions.

Table 4.14: Model summary

Model	R	R square	Adjusted R square	Std. error of the estimate
1	.807 ^a	.651	.649	.56860

- a. Predictors: (Constant), educational relevance, infrastructure issues, industry collaboration, and government actions.

There is a positive association between technical and vocational education and training components and graduate labor market readiness through TVET institutions, according to the statistics, with a R of 0.807.

Without the constant variable, relevance of education, infrastructural challenges, industry collaboration, and government initiatives explained 64.9 percent of the change in graduate readiness to the labor market, according to the adjusted R square of 0.649. Factors not included in the model can account for the remaining percentage.

Relevance of education, infrastructural restrictions, industry participation, and government activities account for 65.1 percent of graduate labor market preparation, according to the coefficient of determination (r-squared) of 0.651.

Table 4.15 summarizes the ANOVA findings on aspects of Technical and Vocational Education and Training, as well as graduate preparation for the job market through TVET institutions.

Table 4.15: ANOVA results

Model		Sum of squares	df	Mean square	F	sig.
1	Regression	85.206	4	21.302	65.888	.000 ^b
	Residual	135.787	87	1.561		
	Total	220.993	91			

a. dependent variable: Graduate preparation to the labour market

b. Predictors: (Constant), Relevance of the education, infrastructural challenges, collaboration between industries and government interventions

In the analysis of variance, a p-value of 0.000 was achieved (ANOVA). As a consequence, there was a clear link between graduate labor market readiness and technical and vocational education and training at a 95% confidence level. The F statistics of 65.888 show that the collection of factors had a considerable impact on graduate preparation for the job market at TVET colleges.

This indicates that X1 = Educational Relevance, X2 = Infrastructure Challenges, X3 = Industry Collaboration, and X4 = Government Interventions are significant predictors of graduate labor market preparation through TVET institutions, and that the model is significantly fit at a 95% confidence level.

Table 4.16: Model Coefficients

Model	Unstandardized coefficients		standardized coefficients		
	B	std. error	beta	t	sig.
1 (Constant)	1.653	.129		12.835	.000
Relevance of the education	.140	.047	.186	2.994	.003
Infrastructural challenges	.144	.055	.183	2.621	.009
Collaboration between industries	.104	.049	.135	2.120	.035
Government interventions	.173	.044	.210	3.941	.000

a. Dependent Variable: Graduate preparation to the labour market

Education has a coefficient of 0.140, infrastructure concerns have a coefficient of 0.144, industry collaboration has a coefficient of 0.104, and government initiatives have a coefficient of 0.173, according to Table 4.16. The model that was constructed based on the coefficients was as follows: Graduate labor market preparedness = 1.653 + 0.140 Education relevance + 0.144 Infrastructure challenges + 0.104 Industry collaboration + 0.173 Government interventions.

According to the regression's beta coefficients, all of the variables tested had a positive link with graduate labor market preparation. All four factors tested were statistically significant and had positive beta coefficients, according to the findings.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The goal of the study was to see how well TVET institutions educated graduates to meet the increased demand for youth employment in society. The study's goal was to determine how TVET graduates felt about the value of their education in terms of labor market demands. It assessed the infrastructural obstacles that TVET institutions face in providing knowledge and skills. The study examined the necessity for collaboration between industry as a source of hands-on experience and TVET universities in providing training to equip graduates with the necessary skills. It developed government initiatives through TVET institutions to ensure a successful skills development strategy.

This chapter examines the precise objectives, as well as the gathered data and statistical treatment of analysis, and assesses and interprets the results to determine their meaning. The research questions and objectives are intimately linked to the conclusions.

5.2 Summary

5.2.1 Relevance of trainees' education to labor market needs

According to the data, many graduates disagree that TVET institutions educate graduates for the labor market, and the majority disagree that the training experiences acquired match those found in the labor market. The majority of TVET graduates are incorporated into the labor market within two years of graduation, according to a vast percentage of respondents.

With a mean of 4.65 and a standard deviation of 0.36, a large majority of graduate respondents disagree that training equipment is comparable to that used in industry. A sizable number of users disagreed that their technical abilities allow them to utilize the gadget effectively.

The majority of academic Heads of Department in TVET institutions disagreed that TVET institutions prepare graduates for the job market, and that the training experiences received mirror those encountered in the labor market. The majority of TVET graduates are incorporated into the labor market within two years of graduation, according to a vast percentage of respondents.

A considerable number of academic Heads of Department in TVET institutions argued that training skills and experience adequately prepare graduates for the labor market, and the majority disagreed that training equipment is comparable to that used in industry. A large number of the respondents disagreed that the curricula meet the labour market needs. The syllabi are taught by subject specialist completely.

According to the TVET authority's Research and Development Officers, all of Kenya's TVET institutions are registered, but the quality of training and preparation of trainees for the labor market remains a concern.

5.2.2 TVET institutions infrastructural challenges in knowledge and skills provision

A considerable number of graduate respondents disagreed that there were enough qualified trainers, and the majority disagreed that the training rooms were suitable and loaded with training equipment, according to this survey. The workshops and laboratories

are not supplied with modern and functional equipment and machines, according to a substantial percentage of respondents.

Many academic Heads of Department in TVET institutions disagreed that there were enough trained trainers, and the majority disagreed that the training rooms were adequate and equipped with training equipment. Many respondents disagreed that workshops and labs are provided with current and functional equipment and machines, and that workshop technicians support trainees in managing practicals.

The TVETA officers confirmed that, even though the government is trying to offer both financial and material support towards the provision of infrastructural development and equipping of workshops and laboratories with advanced and adequate equipment, very little has been done to accomplish this.

5.2.3 Collaboration between industries, which provide hands-on experience, and TVET institutions, which provide training to prepare graduates with the necessary skills

The majority of graduate respondents disagreed that all trainees pursuing industrial attachments are placed, and a considerable number of respondents disagreed that public TVET institutions and enterprises collaborate. A large percentage of respondents disagreed that the time spent in attachment is enough for TVET students to obtain the necessary abilities. The vast majority of respondents did not believe the industry provided adequate practical training for TVET, and many stated that professional individuals in the sector supervise students to provide specialized education.

The majority of academic Heads of Department (HoDs) in TVET institutions denied that all trainees pursuing industry attachments are placed, and a significant percentage

claimed that public TVET institutions and businesses collaborate. Many people disputed that the duration of attachment is long enough for TVET trainees to learn the necessary practical skills, and the majority of people disagreed that industry provides adequate practical training for TVET students. A considerable number of people disagreed that industry professionals monitor trainees in order to provide specialized training, and the majority disagreed that trainers had acquired the essential modern practical abilities. Many people disagreed with the idea that trainers needed to be attached to increase the quality of instruction in practical course units. The TVETA officers indicated that no structured policy for partnership between TVET institutions and industries for attachment had been enacted.

5.2.4 Government interventions for successful skills development strategy through the TVET institutions

A large number of the graduate respondents disagreed that the government funds for the establishment of workshops and laboratories equipment in TVET institutions. Majority disagreed that the government employ qualified trainers in TVET institutions while a large number disagreed that the government facilitates equality and access to training to all students in the country.

The majority of academic Heads of Department at TVET institutions disagreed that the government sponsors the establishment of workshops and laboratory equipment in TVET institutions, and a huge majority disagreed that the government employs skilled trainers in TVET institutions. Many people disagreed with the government's claim that all pupils in the country have equal access to training.

The TVETA officers confirmed that it was their mandate to employ qualified trainers for quality training in TVET institutions. They also promotion equitable access to TVET education for all Kenyan youth based on gender and regions. Also, the government offers capitation and HELB to the students to facilitate their TVET trainings.

5.3 Conclusion

The study investigated how well training institutes prepare graduates for the job market. The researcher came to the conclusion that graduates of TVET schools are not well prepared for the labor market.

5.4 Recommendations

According to the findings, technical and vocational education and training in Kenya does not adequately prepare graduates for the labor market. As a result, we've devised the following suggestions:

1. TVETA should come up with policy guidelines on provision of the relevant quality education programmes that will lead to enhanced development of trainers that will enable them get employment in the labour market.
2. The government should issue policy guidelines requiring all TVET institutions to collaborate with the industry during trainees training.
3. TVET institutions should continually update their infrastructural facilities enhance adequate preparedness of the graduates for the labour market.
4. The government intervention is to ensure adequate modern infrastructural facilities, quality and equitable access TVET education by the trainees and employment of qualified trained trainers in the TVET institutions.

5.5 Area for Further Research

The purpose of this study was to determine how well graduates of Technical and Vocational Education and Training are equipped for employment in Kenya. The research looked at four variables: educational relevance, infrastructure challenges, industry collaboration, and government interventions. However, the study did not look at how disparities in leadership and management among TVET institutions affected graduate readiness for the Kenyan labor market. TVET institutions should also undertake tracer studies on its graduates to see how well-prepared they are for the job market.

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APPENDICES

Appendix I: Critical Dates

		MAY 2018	JUL 2018	OCT 2018	NOV 2018	DEC 2018	APR 2019	MAR 2021	APR 2021	MAY 2021
S/N	ACTIVITY	MONTHS								
1	Problem Specification									
2	Review Literature									
3	Developing Methodology									
4	Field work and Data compilation									
5	Data Analysis									
6	Draft report									
7	Final Report Submission									
8	Defense									

Appendix II: Action Plan

MONTH & YEAR	ACTIVITY	VERIFIERS	MAIN ACTOR
MAY – 2018	Problem Specification	Research Proposal	Researcher
JUL – NOV 2018	Literature Review	Literature Review chapter	Researcher
DEC – 2018	Developing methodology	Data instrument	Researcher
APR – MAY 2019	Field work and data compilation	Data collection and summary output.	Researcher & Respondents
NOV - 2020	Data analysis	Chapter on data analysis	Researcher
MAR - 2021	Draft final Report	Reports	Researcher
APR – 2021	Final Report Submission	Page on References and Appendices	Researcher
MAY – 2021	Defense	Reports	Researcher

Appendix III: Questionnaire for Graduates from Public TVET Institutions

This master's thesis research study examines how well public technical and vocational education and training institutions in Kenya prepare graduates for the job market. The goal of this survey is to collect your feedback on a variety of factors that are critical to achieving the TVET educational objectives. The information acquired will lead to some recommendations and proposals for improving TVET institution training and industry collaborations. The questionnaire should be filled out as completely as possible. During and after the study, all responses will be treated with the highest confidentiality.

Thank you!

Aluoch J.R. Jeremy

A student pursuing a master's degree in technology education.

University of Eldoret.

SECTION A: Personal Information

1. Gender

(i) Male ()

(ii) Female ()

2. Age

15 – 20 ()

21 – 25 ()

26 – 30 ()

31 – 35 ()

3. Graduation Level

i) Artisan ()

ii) Craft certificate ()

iii) Diploma ()

iv) Higher Diploma ()

4. Your Entry Qualifications.

- i) STD eight (8) ()
- ii) Form IV ()
- iii) Certificate ()
- iv) Diploma ()
- v) Others (specify).....

SECTION B: Professional Information

Please use an x to indicate how much you agree with the statement.

SA: strongly agree (1)

A: agree (2)

U: undecided (3)

D: disagree (4)

SD: strongly disagree (5)

SECTION C: Relevance of the Education Received by the Graduates

(I) Employment of TVET Graduates in the Labour Market.

	STATEMENT	SA	A	U	D	SD
6	Graduates of Technical and vocational education are ready to enter the workforce.					
7	The training experiences gained correspond to those encountered on the job market.					
8	The majority of TVET graduates find work within two years of graduation.					

(II) Training Relevance in the Labour Market.

	STATEMENT	SA	A	U	D	SD
9	The graduate's education and experience qualify him or her for the employment market.					
10	The training equipment is similar to that used in the industry.					
11	You can make effective use of the equipment thanks to your technical talents.					

SECTION D: TVET Institutions Infrastructural Challenges

(III) TVET Institution Infrastructural Challenges in Knowledge and Skill Provision.

	STATEMENT	SA	A	U	D	SD
13	There are spacious staffroom for trainers.					
14	Training rooms are adequate and are filled with training equipment.					
15	Workshops and laboratories are equipped with modern and functional equipment and machines.					

SECTION E: TVET institutions and industry collaboration

(IV) Industrial Training and Placement Collaboration between TVET Institutions and Industries

	STATEMENT	SA	A	U	D	SD
16	Every trainee who wants to work in industry is assigned to a job.					
17	The public TVET institutions and the private sector collaborate.					
18	The TVET trainees would be able to learn the necessary practical skills during the attachment term.					
19	Industry provides sufficient practical training for TVET students.					
20	In order to provide specialized training, industry experts oversee trainees.					

SECTION F: Government Interventions

(V) Government Interventions for Successful Skills Development Strategy through the TVET Institutions.

	STATEMENT	SA	A	U	D	SD
21	TVET workshops and laboratory equipment are funded by the government. institutions.					
22	The Government employ qualified trainers in TVET institutions.					
23	All students in the country have equitable access to training, thanks to the government's efforts.					

Appendix IV: Questionnaire for Academic Heads of Department (HoDs) in TVET Institutions

This master's thesis research topic looks into how well public technical and vocational education and training institutes in Kenya prepare graduates for employment. The purpose of this survey is to get your feedback on a variety of factors that are important in accomplishing TVET educational goals. Based on the information gathered, recommendations and proposals for strengthening TVET institution training and industry relationships will be made. The questionnaire should be completed to the best of your ability. During and after the study, all responses will be treated with the highest confidentiality.

Thank you very much!

Aluoch J.R. Jeremy

A student pursuing a master's degree in technology education.

University of Eldoret.

SECTION A: Personal information

1. Gender

(i) Male ()

(ii) Female ()

2. Age

25 – 30 years old ()

31 – 35 years old ()

36 – 40 years old ()

41 – 45 years old ()

46 – 49 years old ()

OVER FIFTY years old ()

3. professional qualification

- i) Dip Tech. Ed ()
- ii) HND level ()
- iii) B.Ed. Tech. Ed ()
- iv) BSC. ()
- v) Others ()

4. Previous work experience in a similar job is required.

- i) 0 – 5 year experience ()
- ii) 5 – 10 year experience ()
- iii) ABOVE TEN year experience ()

SECTION B: Professional Information

Please mark how much you agree with the statement with an x.

SA: strongly agree (1)

A: agree (2)

U: undecided (3)

D: disagree (4)

SD: strongly disagree. (5)

SECTION C: Relevance of the Education Received by the Graduates

(I) Employment of TVET Graduates in the Labour Market.

	STATEMENT	SA	A	U	D	SD
6	Graduates of Technical and vocational education are ready to enter the workforce.					
7	The training experiences gained correspond to those encountered on the job market.					
8	The majority of TVET graduates find work within two years of graduation.					

(II) Training Relevance in the Labour Market.

	STATEMENT	SA	A	U	D	SD
9	The graduate's education and experience qualify him or her for the employment market.					
10	Training equipment match those found in the industry.					
11	The curricula meet the labour market needs.					
12	The syllabi are taught by subject specialist completely					

SECTION D: TVET Institutions Infrastructural Challenges

(III) TVET Institution Challenges in Education and Skill Provision.

	STATEMENT	SA	A	U	D	SD
13	There are spacious staffroom for trainers					
14	Training rooms are adequate and are equipped with training equipment.					
15	Workshops and laboratories are equipped with modern and functional equipment and machines.					
16	Workshops are spacious and enough to handle practical.					

SECTION E: TVET institutions and industry collaboration

(IV) Industrial Training and Placement Collaboration between TVET Institutions and Industries.

	STATEMENT	SA	A	U	D	SD
17	Every trainee who is pursuing an industrial attachment is assigned to a job.					
18	The public TVET institutions and the private sector collaborate.					
19	The TVET trainees would be able to learn the necessary practical skills during the attachment term.					

20	TVET trainees receive sufficient practical instruction from industry.					
21	Skilled personnel in industry supervise trainees to offer specialized training.					
22	Trainers have gained the necessary practical skills in the present era.					
23	Trainers must be tied to practical course units to improve the quality of training.					

SECTION F: Government Interventions

(V) Government Interventions for Successful Skills Development Strategy through the TVET Institutions.

	STATEMENT	SA	A	U	D	SD
24	Workshops and laboratory equipment are funded by the government in TVET institutions.					
25	The Government employs qualified trainers in TVET institutions.					
26	The Government facilitates equality and access to training to all students in the country.					

Appendix V: Structured Interview Schedule for the TVET Authority

This is a master's thesis research project that looks at how well public Technical and Vocational Education and Training institutions prepare graduates for the labor market in Kenya. The goal of this structured interview is to get your thoughts on several factors that are necessary to meet the TVET educational goals. The information acquired will lead to some recommendations and proposals for improving TVET institution training and industry collaborations. You must provide as much detail as possible in your responses. During and after the study, all responses will be treated with the highest confidentiality.

Thank you very much!

Aluoch J.R. Jeremy

A student pursuing a master's degree in technology education.

University of Eldoret, Kenya.

1. How many public TVET institutions registered with TVETA?

.....

What are the criteria for registering them?

.....

2. How do you monitor the efficiency of the courses offered by them?

A. Employability and self-reliance aspects

.....
.....
.....
.....

B. Their economic effectiveness

.....
.....
.....
.....

Equality of education opportunity

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3. Cost efficiency

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4. What is your opinion on the improvement of the public TVET Institutes?

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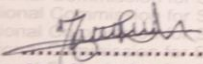
Appendix V: Research Permit


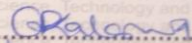
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EDUCATION AND TRAINING PREPARES
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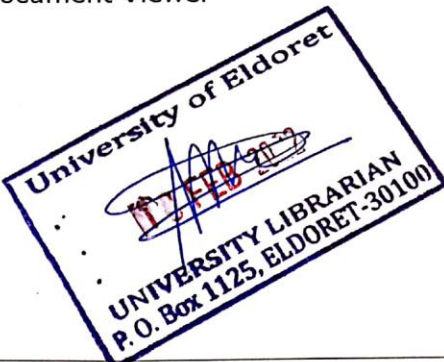
Appendix V: Similarity Report

Turnitin Originality Report

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