

**FACTORS INFLUENCING EMPLOYABILITY OF TECHNICAL AND  
VOCATIONAL EDUCATION AND TRAINING GRADUATES IN  
UASIN GISHU COUNTY, KENYA**

**BY**

**NYONGESA WAFULA SIMON**

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## DECLARATION

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Date: \_\_\_\_\_

**NYONGESA WAFULA SIMON**

**EDU/PGT/1004/14**

### Declaration by Supervisors

We append our signatures to confirm that this thesis has been submitted with our approval as university supervisors.

Sign: \_\_\_\_\_

Date : \_\_\_\_\_

**DR. WESLEY MUTAI**

Lecturer, Department of Technology Education

School of Education, Moi University

**Eldoret, Kenya**

Sign: \_\_\_\_\_

Date : \_\_\_\_\_

**DR. TITUS MURGOR**

Lecturer, Department of Technology Education

School of Education, Moi University

**Eldoret, Kenya**

## **DEDICATION**

First and foremost, I dedicate this thesis to my dad the late Vitalis P.N. Khaemba for spiritually, academically and financially uplifting my turtle dove sole from a boy to a man. May the Almighty God bless him abundantly. Secondly, I thank God for my dear mum Joyce Khakasa Songoi Nyongesa, without her I could never have reached this far. Lastly, I appreciate my siblings, Sophy Obilika, Moses Wanyonyi, Beverley Nanjala, Ruth Audrey, Levy Wekesa, Gaudencia Masinde and Isaac Khonokha for their moral support during my studies.

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## ABSTRACT

Employment is a critical factor in the socio-economic development of a nation. All else constant, Technical and Vocational Education and Training is an essential aspect of training with the potential to create employment. However, overwhelming evidence shows that most TVET graduates cannot secure employment. This study aimed to assess the factors that influence the employment of TVET graduates in Uasin Gishu County, Kenya. The objectives were to: Examine whether matching the training offered in TVET institutions with the industry expectations influence the employment of TVET graduates; determine the influence of TVET institutions' collaboration with the industries on the employment of TVET graduates; investigate whether the availability of workshop and laboratory facilities in TVET institutions influence the employment of TVET graduates and; establish the extent to which gender equality influences employment of TVET graduates. A mixed-method research approach and a descriptive survey research design were adopted. Human Capital Theory by Becker (2009) guided the study. The target population comprised 31 TVET institutions, 360 TVET graduates, and 110 industry experts. The techniques used were stratified sampling and simple random sampling to obtain the samples. The data collection instruments included questionnaires, interview schedules, and document analysis. The quantitative data were analyzed using SPSS. The qualitative data were analyzed by presenting themes that emerged. The study's findings were that the majority of the respondents strongly disagreed with the idea that training offered in TVET institutions matched the industry expectations. The qualitative findings supported this finding where the TVET graduates thought they were not competent. The majority of the respondents disagreed that TVET institutions collaborated with the industries. These findings were also supported by qualitative findings that TVET graduates lacked adequate collaboration with the industries through industrial attachments, internship programs, and workshop and laboratory facilities sharing. Also, most of the respondents strongly agreed that the availability of workshop facilities promotes employment. The results were supported by qualitative findings that the inadequate workshop and laboratory facilities caused the unemployment of the TVET graduates. The majority of the graduates strongly agreed that employers were gender-biased in employment. Qualitative findings supported the respondents' belief that no government policies had been implemented to ensure strict adherence to gender equality in employment. Regression analysis noted a significant positive relationship ( $r > 0$ ;  $p < 0.05$ ) between employment and: Matching the training offered in TVET institutions with the industry expectations; TVET institutions' collaboration with the industries; availability of workshop and laboratory facilities in TVET institutions, and lastly; gender equality. The study concluded that for the TVET graduates to be employed in the industries, TVET institutions should: Match their training to industry expectations, collaborate with industries, avail workshop and laboratory facilities, and ensure gender equality. The study recommended that TVET institutions match their training to industry expectations, collaborate with industries, avail workshops and laboratory facilities, and observe gender equality during the enrolment of trainees.

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## ABBREVIATIONS

<b>CBE</b>	Competency -Based Education
<b>CBET</b>	Competency-Based Education and Training
<b>CBT</b>	Competency-Based Training
<b>CDACC</b>	Curriculum Development Assessment and Certification Council
<b>CIPP</b>	Contecxt-Input-Process-Product
<b>CPD</b>	Continuing Professional Development
<b>DCLT</b>	Distributed Cognition Learning Theories
<b>EE</b>	Employment Equity
<b>EFA</b>	Education For All
<b>ETF</b>	Employment and Training Fund
<b>ICT</b>	Information Communication Technology
<b>ITF</b>	Industrial Training Fund
<b>KAM</b>	Kenya Association of Manufacturers
<b>KNQA</b>	Kenya National Qualification Authority
<b>LLLP</b>	Life Long Learning Programme
<b>MDGs</b>	Millennium Development Goals
<b>MoE</b>	Ministry of Education
<b>NACOSTI</b>	National Council of Science, Research and Innovation
<b>NRF</b>	National Research Fund
<b>SDGs</b>	Sustainable Development Goals
<b>SDL</b>	Skill Development Levy
<b>SIWE</b>	Student Industrial Work Experience
<b>SPSS</b>	Statistical Package for the Social Sciences
<b>SPSS</b>	Statistical Package for Social Sciences

<b>SSACs</b>	Sector Skills Advisory Committees
<b>TVET</b>	Technical and Vocational and Education and Training
<b>TVETA</b>	Technical and Vocational and Education and Training Authority
<b>WYD</b>	Whole Youth Development

## **CHAPTER ONE**

### **INTRODUCTION TO THE STUDY**

#### **1.1 Introduction**

This chapter presents the: Background of the study; the statement of the problem; the purpose of the study; the objectives of the study; the research questions; the significance of the study, the scope of the study; the limitations of the study; the delimitations of the study; the basic assumptions of the study; the theoretical framework; the conceptual framework and the definitions of the operational terms.

#### **1.2 Background to the Study**

Globally, unemployment is one of the biggest challenges. Therefore, Technical and Vocational Education and Training (TVET) is among the best strategies accepted by nations that lack a performing labour market to train the workforce and increase production in the informal sector. TVET encompasses technology, education, sciences, attitudes, knowledge, and technical skills related to employment in our socio-economic life (Kiplagat & Kitainge, 2021).

TVET provides the industry with human resource equipped with technical skills to foster economic development. It is a fundamental tool that improves the quality of the workforce. TVET graduates are flexible, adaptable, and productive. These attributes, coupled with life-long learning, make them competitive persons, potentially creating wealth and reducing their respective societies' poverty levels. Their skills result in industrialization, technological advancement, economic empowerment, and social mobility. TVET needs to produce competent graduates who satisfy industry expectations. The best practice and strategies worldwide link training to employment and job creation.

TVET is becoming popular and a powerful drive for acquiring practical skills needed for either employment or self-employment (Koros, 2021). The study noted that the perfect goal of TVET is to improve the employability of its graduates for the benefit of society and sustainability. TVET needs to be realigned, diversified, and accommodative to the industry expectations to achieve these.

Recently, studies have shown that TVET does not provide trainees with the relevant practical skills needed in the industries (Edokpolor & Owenvbiugie, 2017). For example, economic development policies have produced few employment opportunities in Liberia, resulting in slow growth in the public sector, private sector, and informal sector. As a result, youths use their digital connections and creativity to make ends meet (Fortune, 2021). TVET system had been increasingly worsening in the last decade in Nigeria (Okwori & Abutu, 2020). The worsening of TVET is despite the governments' realization that TVET can employ graduates due to its orientation towards the industry. It is important to note that poor-quality graduates are discriminated against in the industries.

TVET curricula provides sufficient skills to the graduates to fulfill the industry expectations (Maireva et al., 2021). Some factors which contribute to unemployment are: Deteriorating economic conditions; Lack of good skills and work experience to compete in the industries; Inability to apply knowledge learned in TVET institutions to practical work situations, and; graduates' ill-preparedness to start their businesses since they do not have access to capital. These factors result in graduates struggling to find suitable job placements. Therefore, TVET institutions need to produce relevant practical skills through work-based learning and internships. Also, financial institutions need to fund the TVET graduates to establish and run their enterprises.

### **1.3 Statement of the Problem**

Employment is a critical factor in the socio-economic development of a nation and results in: Good income; comfortable living standards; reduced gender inequality; low vulnerability; high savings; economic growth; poverty alleviation; social cohesion; and globalization that digitally connects all the countries in the world (Tull, 2019).

The World Bank Indicator notes that TVET reduces unemployment rate by 1.83% (Selase, 2019). In the 1990s, the World Bank data indicated that 70.4 % of Tanzanians were poor, while 66.4%, 59.6% and 21.5% of the citizens in Ethiopia, Uganda and Kenya respectively were living below the poverty line (Kinyondo & Pelizzo, 2018). The World Bank data shows that Kenya's unemployment rate has increased from 10.2% in 1991 to 11.5% in 2015 compared to the global unemployment rate which has fallen from 5.6% in 1991 to 5.4% in 2015 (Moyi, 2019).

In Africa, high population growth has led to much increased unemployment among the youth (21%) compared to the global average which stands at 14.4% (Kamau & Wamuthenya, 2021). There is massive wave of unemployment, socio-economic meltdown, and changes in lifestyle in the West African states (Awosusi & Shaib, 2020). Unemployment is at the centre of the African sub-region challenges. TVET produces trained labour required in the industries to foster financial advancement and social development that benefit people, families, and the entire society (Khilji & Roberts, 2021). However, there is overwhelming evidence that many TVET graduates in Africa, Kenya included, cannot secure gainful wage employment or self-employment. Therefore, the main objective of establishing TVET institutions is not being achieved.

#### **1.4 Purpose of the Study**

The purpose of the study was to investigate the factors that influence the employability of Technical and Vocational Education and Training (TVET) graduates in Uasin Gishu County, Kenya.

#### **1.5 Objectives of the Study**

##### **1.5.1 General objective**

To evaluate the factors influencing employability of Technical and Vocational Education and Training (TVET) graduates in Uasin Gishu County, Kenya.

##### **1.5.2 Specific objectives**

- i. To examine whether matching the training offered in TVET institutions with the industry expectations influences the employability of the TVET graduates in Uasin Gishu County, Kenya.
- ii. To determine the influence of TVET institutions' collaboration with the industries on the employability of TVET graduates in Uasin Gishu County, Kenya.
- iii. To establish whether the availability of workshop and laboratory facilities in TVET institutions influences the employability of TVET graduates in Uasin Gishu County, Kenya.
- iv. To investigate the influence of gender equality on the employability of TVET graduates in Uasin Gishu County, Kenya.



## **1.6 Research Questions**

The main research question in this study was: What Factors Influence the employability of TVET graduates in Uasin Gishu County, Kenya?

The specific research questions are:

- i. Does matching the training offered in TVET institutions with the industry expectations influence the employability of TVET graduates in Uasin Gishu County, Kenya?
- ii. Does TVET institutions' collaboration with the industries influence the employability of TVET graduates in Uasin Gishu County, Kenya?
- iii. Does the availability of workshop and laboratory facilities in TVET institutions influence the employability of TVET graduates in Uasin Gishu County, Kenya?
- iv. Does gender equality influence the employability of TVET graduates in Uasin Gishu County, Kenya?

## **1.7 Justification of the Study**

In Kenya, very few studies have been done on TVET, especially regarding the employability of TVET graduates. For instance, a study investigated the relationship between the practical skills attained by the electrical engineering technicians in Uasin Gishu and Nandi Counties and those required to service electrical equipment (Kiprono et al., 2020). However, the study concentrated only on electrical technicians and ignored other technical areas like building construction and mechanical engineering, which this study addressed.

Another study on TVET addressed the issue of soft skills among self-employed technicians in Kenya (Murgor, 2017). However, it only concentrated on specific soft

skills like time management and problem-solving abilities and failed to look at the influence of the following on employability: Matching the training offered in TVET institutions with industry expectations; TVET institutions' collaboration with the industries; availability of workshop and laboratory facilities in TVET institutions; and gender equality; which have been addressed by this study.

The unemployment of TVET graduates is a threat to the future of our country. It is likely to undermine realizing the universal goals of education and achieving the Millennium Development Goals (MDGs) of education in Vision 2030. Hence, by Studying identifying factors that influence the employability of TVET graduates, the country will grow economically and reduce the poverty levels of our people. TVET is the yardstick for solving the problem of unemployment.

### **1.8 Significance of the Study**

This study was a good tool for understanding the factors influencing the employability of TVET graduates in Uasin Gishu County, Kenya. The researcher will develop additional literature on factors influencing the employability of TVET graduates, which will bring specific knowledge to fill the existing research gap in knowledge concerning this area of study. The Curriculum Development Assessment and Certification Council (CDACC) will use the findings to measure the impact of curricula, revise the curricula and assess the quality of TVET being offered to ensure it is in line with the industry expectations. Policymakers will develop policies that promote the employability of female graduates who are perceived as vulnerable and disadvantaged. National growth is boosted when both genders are in economic development.

Technical and Vocational Education and Training Authority (TVETA), the TVET state management agency in Kenya, will use the results to steer and improve the TVET system according to the demand of the industries, this being results-based management. In addition, the findings can be replicated in other counties facing similar challenges concerning the employability of TVET graduates. Furthermore, the study would stimulate interest and further research that will inform stakeholders of TVET on issues of work of TVET graduates in the industry. Lastly, the findings will reference future studies and general reading.

### **1.9 Scope of the Study**

This research mainly concentrated on TVET graduates and industries experts within Uasin Gishu County, Kenya. The study investigated: Matching the training offered in TVET institutions with the industry expectations; TVET institutions' collaboration with the industries; availability of workshop and laboratory facilities in TVET institutions and; gender equality in employability among TVET graduates. Unemployment has persistently become a challenge facing Kenya as a nation. The respondents were 2014 to 2016 TVET graduates and industry experts who were considered relevant in providing the required data for the study. The study was done between February 2018 and April 2018.

### **1.10 Limitations of the Study**

The study was limited since it considered only specific thematic factors influencing the employability of TVET graduates and left out others. The other factors formed a basis for further studies. The researcher proposed undertaking studies on different thematic areas to ascertain their relationship with the employability of TVET graduates. Secondly, the study being survey-based, the population recruited

inadvertently excluded others. However, the researcher recommended a more comprehensive survey that would include others in the broader region to help overcome this limitation.

The study relied on TVET graduates, industry experts, and document analysis information. Thus, it was not possible to check the truthfulness of their statements and documents. These led to an underestimation of the actual position and threatened the validity of the findings. Moreover, some participants might be biased in their relatively high responses to specific questions. Nevertheless, triangulation of the research methods helped to reduce this limitation.

### **1.11 Assumptions of the Study**

The study made assumptions that the sampled respondents would be available, reliable, cooperative, honest, and accurate in their responses. The other assumption was that the sampled respondents would sufficiently represent the population and that time would be enough to allow for the successful completion of the research study.

### **1.12 Theoretical Framework**

The Human Capital Theory by Becker (2009) guided this study. Investments in education are significant because it leads to acquiring practical skills required for employment. The study looked at the relationship between the TVET and jobs in the industries. Investments in TVET ought to result in greater profits than other investments.

Human Capital Theory was pertinent to this research study in that TVET provides practical skills to graduates, resulting in them gaining employment in the industries, making them productive members of society. In addition, TVET supplies the

industries with human capital in carpenters, masons, electricians, and plumbers who help build the economy.

The resource committed to enhancing human capital has a specific productivity aspect. This study looks at the funding and grants the TVET institutions receive from the government. TVET ought to improve the efficiency and competency of the graduates. What advances the labour productivity of the TVET graduates is the proper training they obtain, which is the central premise of human capital theory. Despite many economists supporting the Human Capital Theory, the female gender is underrepresented in TVET institutions attracts a fair deal of criticism.

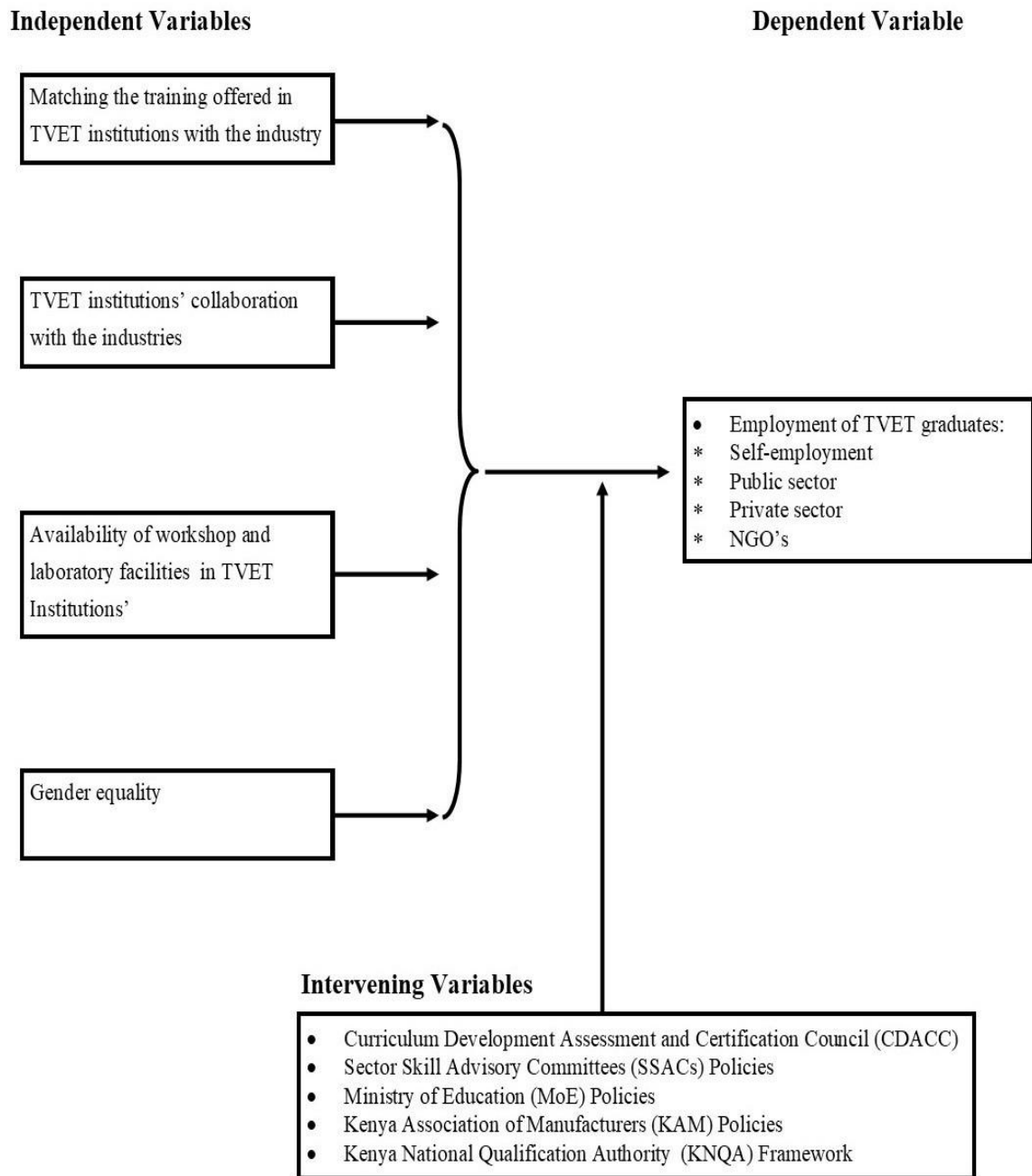
Those able and productive training habits do not automatically guarantee employment since job opportunities are not distributed by merit (Lillrank & Nilsson, 2021). The policy that emphasizes training for economic growth exaggerates the importance of human capital investments and that training is a sorting tool. The training is an expensive sorting scheme used by industries to recognize TVET graduates. Those unable to finance their training in TVET institutions are locked out of employment, despite learning through apprenticeship or job training. Children should go to school to acquire knowledge and skills. Through TVET, the nation realizes potential economic returns for its graduates who gain meaningful employment.

Human capital is developed differently among the TVET graduates due to their different characteristics: Inherent cognitive skills, norms, and values; abilities to demonstrate their practical skills acquired, and; capacities to benefit from the investment in human capital development. TVET yields more returns in producing a competent workforce than academic education. Therefore, human capital-labour

outcome linkages should synchronize supply-side analysis with demand-side analysis. TVET institutions supply industries with graduates with proper skills.

### **1.13 Conceptual Framework**

Conceptual Frameworks lay out key factors, constructs, and variables in a given phenomenon and show the relationships between elements (Lillrank & Nilsson, 2021). The independent variable can be described as the antecedent to the dependent variable in a study (Pandey & Pandey, 2021). It attempts to indicate the real influence of the study. TVET graduates acquire practical skills from the TVET institutions, which empowers them to gain employment. The independent variables, which include matching the training offered in TVET institutions with the industry expectations, TVET institutions' collaboration with the industries, availability of workshop facilities in TVET institutions, availability of employment opportunities at the industries, and gender equality, directly influence the dependent variable employability of TVET graduates. Intervening variables included: Curriculum Development Assessment and Certification Council (CDACC); Sector Skill Advisory Committees (SSACs); Ministry of Education (MoE) Policies; Kenya Association of Manufacturers (KAM) Policies, and; the Kenya National Qualifications Authority (KNQA) Framework. The intervening variables accelerate or delay the employability of TVET graduates. A systematic overview of various variables captured in this relationship, and a conceptual model has been developed. See Figure 1.1



**Figure 1.1: Conceptual Framework on Factors Influencing Employability of TVET Graduates in Uasin Gishu County, Kenya**

*Source: Author (2017)*

CDACC are mandates to: Recognize prior learning; promote of partnership between technical institutions and the industries, assess TVET, design competency-based curriculum, confirm curriculum fitness, and categorize and appoint the SSACs.

The SSACs are found in numerous sectors to develop occupational standards, improve the curriculum development and perform competency-based assessment of the TVET trainees. The MoE policies provide free and compulsory education, leading to trainees joining TVET institutions and acquiring technical skills that make them employable. Also, the facilities meant for persons with disabilities have been incorporated into the TVET institutions.

Kenya Association of Manufacturers (KAM) is a vibrant organization that: Represents the views of its members to the relevant authorities; promotes trade; unites industrialists; advocate for value addition and; provides essential links for dialogue with the government. The standards in the industries need to be maintained and boosted through sound policies that reduce running costs of carrying out a business. Kenya National Qualifications Authority (KNQA) Framework was established to harmonize training, education, trainees' assessment, and qualifications awarded in Kenya.

#### **1.14 Operational Definition of Terms**

**Collaboration:** Partnership between TVET institutions and the industry for mutual benefit.

**Employability:** A set of achievements that include skills, understandings and personal attributes that makes graduates more likely to gain employment and be



successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy.

**Employment:** A state where people work to earn a living or have paid work.

**Factors:** These are the determinants of employability. In this study, the factors referred to selected aspects presumed to determine the work of TVET graduates in Uasin adversely Gishu County, Kenya.

**Gender equality:** This is impartiality and justice in giving responsibilities and benefits to men and women.

**Graduates:** Trainees who have completed the Technical and Vocational Education and Training and have been awarded certificates with the respective examination bodies.

**Industry:** A commercial place where practical skills and technology are used to produce goods for sale or services such as insurance, transportation, and banking are offered.

**Technical and Vocational Education and Training (TVET):** The educational process involving, in addition to general education, the study of technologies and related sciences and the acquisition of practical skills, knowledge, and attitude relating to occupation in various sectors of economic and social life.

**Training:** The action of teaching the trainees a particular skill.

**Workshop and Laboratory Facilities:** They include personnel, tools, machines and equipment's found in the workshop and laboratory.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This given chapter reviewed the literature that relates to this study to identify and evaluate the attitudes and suggestions of other studies on factors that influence the employability of TVET graduates. The reviewed education research materials enabled the study to expose the existing gap in the employability of the TVET graduates. It was reviewed under the following subheadings: Matching the training offered in TVET institutions with the industry expectations; TVET institutions' collaboration with the industries; availability of workshop and laboratory facilities in TVET institutions and; gender equality in employment.

#### **2.2 Matching the Training Offered in TVET Institutions with the Industry Expectations in the Global Perspective**

The unemployment rate of TVET graduates is still high (Yamada et al., 2018). However, the Ethiopian economy grows notably, and the government prioritized TVET and the growth of industrial skills. The study by Yamada et al (2018) noted that there was widespread mismatch between the practical skills taught in TVET institutions and those expected in the industries. As a result, the trainers were satisfied with graduates who possessed comprehensive skills, while the industry experts expected quality and competency performance.

Trainers tend to underscore the importance of practical skills (Yamada & Otchia, 2020). The trainees, on the other hand, value practical skills so much. The combination of practical, managerial, and entrepreneurship skills produces a skilled workforce to meet the industry expectations in the New World Order. Also, the

industry expectations are different depending on how one recognizes the industry situations and the effectiveness of their training. Most trainers are inclined toward conventional teaching approaches and ignore Competency-Based Training (CBT), which is a cutting edge and impacts the trainees' attitude, motivations, and employment aspirations.

Trainees who have part-time jobs in industries while learning proved competent (Chavan & Carter, 2018). TVET did not provide the trainees with practical and employable skills; hence, it is appropriate to review the curriculum to incorporate employability skills. The issue of matching training to the industry expectations is essential and requires immediate attention from the government to reduce unemployment among the TVET graduates. A nation cannot grow economically and socially. Job creation is essential. There is a necessity to develop graduates with relevant skills, knowledge, and qualities through apprenticeships, on-the-job training, and internships programs. The governments should offer financial enticements and grants to industries that provide services or work with the TVET institutions to get trainees ready for work.

The TVET institutions' have to advance their training as employment becomes dynamic. For example, they need to put the trainees in practice groups to ease their interactions with the industry experts. To enable the TVET graduates to gain work-related skills, they need to be provided with sufficient industrial training. Linking employment training is an approach that should be advocated for TVET institutions worldwide.

In Kenya, the hospitality and tourism industry is not driven by demand but by supply; this has resulted in a lack of practical and technical skills, poor customer care services, and inadequate management skills (Francis et al., 2020). TVET institutions produce graduates who perform well in the industries compared to those from the universities in terms of innovation, conducting research, and demonstrating competency in the industry. For TVET graduates to do well and know the industry expectations, good collaboration and partnership between TVET institutions and the industry are critical.

The TVET institutions need to benchmark globally with other institutions and exchange ideas through workshops, conferences, and regular seminars to improve the curriculum. To bridge the skill gaps in technical areas, the trainees need to understand both the theory and practice in their areas of specialization. For the trainees to be exposed to the current practices and trends happening in the industry, frequent field trips and internships in different industry sections for both trainees and trainers would enable them to acquire practical skills and experience. CDACC needs to standardize its certification and curriculum so that the TVET graduates earn international recognition. To promote knowledge and skills government should: Start refresher programs for the trainees; promote research to establish new trends in TVET; encourage exchange programs; establish joint publications and seminars; and; introduce scholarships and work-integrated learning. This finding is similar to this study, which established that the TVET graduates lacked adequate skills to gain employment with the industry experts.

TVET institutions rarely promote their graduates' employment (Miseda, 2021). Also, the TVET graduates do not competently fulfill the industry expectations. In third-

world countries, trainers have insufficient industry experience. For over four decades, the need for non-academic skills in the industries has been on the rise. For survival, the Whole Youth Development (WYD) skills, which are personal attributes such as work ethic, honesty, and integrity, have become compulsory for the trainees. The WYD skills provide the trainees with technical skills, core work skills, and specific skills that enable them to be effective in the workplace in terms of proper communication, building teamwork, and exhibiting good professional skills.

TVET graduates need to be competent in their respective vocations to be employed in the industries (Okumu & Bbaale, 2018). Both the technical and soft competencies are essential in employment. The skill gap is more in technical skills than soft skills, and this is credited to the out-of-date technologies used in learning, poor trainees' attitudes, poorly trained technicians and trainers, and; inadequate practical lessons. The testing of trainees to ascertain their competency should be made mandatory, TVET be well marketed, and the industry experts to consider competence certification in employment. As a result, the TVET graduates will become competent and productive. Upon completion of training, the TVET graduates should be subjected to competency testing. Also, periodic entrepreneurial surveys could help match TVET skilling to the dynamic work environment.

TVET institutions positively contribute to the acquisition of practical skills needed in the tourism and hospitality industry (Olowoyo et al., 2020). The industry experts noted that most of the TVET graduates in the hospitality industry lack the requisite skills. There is an urgent need to align the hospitality curriculum to the needs of the hospitality industry. Human relations and communication courses were highly

regarded in the tourism and hospitality sectors. There is continued culture of TVET institutions not receiving adequate funding for training purposes.

The youth school and get employed in diverse areas (Tafere & Chuta, 2020). They included formal employment, temporary wage work, youth cooperatives, family business, and businesses operating. All, except one young woman, had found employment without having a university education. Even though their childhood hopes to finish university before employment, they had started work after their TVET, secondary or primary education. Childhood aspirations have not helped them move into their dream jobs. Schooling is a protracted process. Consequently, the transition to the labour market becomes irregular, characterized by multiple and sometimes reverse transitions.

TVET institutions develop and provide relevant skills to youths to penetrate the job markets (Nkwanyane et al., 2020). To achieve this, the curricula must be responsive and conform to the industry's expectations. The curriculum needs to provide satisfactory skills for the industries; if not, it should be urgently reviewed, revised, and corrected. In Kenya, the curriculum reviewal process needs to involve CDACC specialists and industry experts to produce a technological era curriculum.

Technical training has educational and professional functions, engaging with industry experts (Amegah, 2021). Engaging the employer has remained a big problem to our TVET institutions and needs to be addressed so that the trainees are not disadvantaged in the industry. The TVET institutions need to have an industry-oriented training framework.

### **2.3 TVET Institutions Collaboration with the Industries**

The confidence in technical training would be achieved by collaborating quality industries with TVET institutions (John & Yusri, 2021). The TVET systems globally have realized that there should be joint efforts between government, business, and industry to provide and finance training programs in TVET institutions (Bajracharya & Paudel, 2021). An appropriate and practical balance between government, private and non-government agencies would provide proper training to TVET graduates in their field of skills development.

This collaboration between industry experts and TVET institutions is significant to many third-world countries that need to engage and develop the skills of trainees. Most TVET institutions and industry partnerships are weak and do not extend beyond the private sector. Thus, adequate collaboration among TVET institutions and industries needs to be developed for the country's economic development.

For trainees to acquire employable skills the TVET, the TVET institutions need to adequately collaborate with the industries for trainees to gain employability skills (Mitiku et al., 2021). The challenges that hinder this collaboration are the inadequate inventiveness by the TVET institutions; poor feedback from the commercial enterprises; shortage of curriculum revisions to fit the changes in the industry, and; insufficient policy to motivate the industry partnership and improve the trainees' employability skill.

The collaboration between industries and TVET institutions effectively equips trainees with the practical skills needed to be sustained in the job market (Gasmelseed, 2021). Collaborations are essential for linking the gap between training

and employability of the TVET graduates. A parastatal should be established to oversee the purchase of workshop and laboratory facilities and equip trainees with management skills, computer skills, accounting skills, and; strategies needed to acquire employability skills. The collaboration between technical institutions and the industry needs to pave the way for continuous training. The trainees need to be equipped with the skills and knowledge needed in the job market. The government needs to finance TVET institutions and industries adequately to foster collaboration.

When the TVET institutions and the industries collaborate, the trainees readily acquire practical skills that prepare them for employment (Mordi, 2020). It is proper for the industries to be well equipped with workshop and laboratory facilities and train them on how to operate them. TVET is generally known to supply skilled workers, particularly in developing and middle-income countries like Malaysia (Kipli & Khairani, 2020). The research pivoted its concern on TVET's roles in fulfilling this necessity. It also highlighted TVET reforms and the importance of industry involvement in TVET policy and decision-making. Evaluation models and program evaluation indicators in training are essential.

The research suggested using the Context-Input-Process-Product (CIPP) model in evaluating the TVET programs. It has the potential to address the skill gap in TVET training. The model is exhaustive and offers systematic dimensions in identifying the industry's needs, strategies and resources requirements, feedback assessments, and the outcomes of the TVET training. The industries and other stakeholders in TVET need to show activeness and shape the TVET institutions' programs.



The engagement of industry experts in the training enables trainees to acquire relevant knowledge (Sumbodo et al., 2020). The trainees are furnished with practical skills and knowledge directly relevant to employment, familiarize themselves with the workplace environment, and reduce the constraints in transitioning from training to industries. The contribution of industry experts in the curriculum helps to prepare a market-based curriculum. Training stakeholder participation in TVET curriculum preparation is crucial. However, their engagement in the curriculum-making process has been neglected. Against this backdrop, the study examined the level of employer engagement in the TVET curriculum-making process in Nepal and interviewed 79 employers, asking about their level of participation in the curriculum-making process. The industry experts shared that their involvement fulfills the requirement provisioned by law. However, inputs were rarely incorporated in the process, though they had been involved in the curriculum design stage. As a result, the involvement of industry experts in curriculum development should not be cosmetic but meaningful and desirable. The recent digital revolution is rapidly transforming the industries and the skills profiles of many occupations. The dominant factors that cause changes in the industry include: Advancement in information and communication technology; new business strategies; new forms of employment; advancement in financial markets; globalization, and; different management practices. The environment is becoming unpredictable and changing very fast regarding ethics, technology, and social responsibility.

Years back, TVET was a second choice for the students who wanted to pursue further learning. However, this has changed since awareness increased through the quality of education. Nowadays, it has been proved that TVET is the best provider of knowledgeable and skilled workers in the 21<sup>st</sup> Century. In TVET, quality assurance is

an approach concerned with outstanding performance in an all-inclusive academic process involving teaching, learning, infrastructure, and trainees' behavior. Proper technical training should develop the trainees to identify employment prospects and academic goals. The challenge is that wide-ranging factors are working against quality TVET and collaboration needs to play a critical role in delivering TVET programs. It ensures that the fresh TVET graduates are world-class, and the education quality has to maintain global standards. Therefore, the training should be relevant and address the quality assurance needs in TVET.

More than eighty percent of youth in Nepal are estimated to be learning their life skills through work. The youth acquire conversational skills without visiting a school. Others discontinue schooling and start a career without formal or non-formal skills training. They confine their aspirations due to the unfavorable TVET system. A nation's TVET system should support many informal skills learners. The struggle at school and the work path the youth face in getting a job are diverse. The conversational skills learners have aspirations and are mainly limited to either establishing the existing enterprise with their competence acquired through workplace learning. The government should facilitate fulfilling the aspirations of those informal skills learners.

There is a shortage of trainees registered in TVET institutions and completed schooling (Msibi, 2021). When it comes to implementing the curriculum, quality is a big challenge in our TVET institutions. The industry experts noted that when they analyze their training needs, they find it hard to arrange practical training for the TVET graduates, making them only concentrate on theory. The TVET stakeholders

need to participate in curriculum implementation and have a shared vision and interest in curriculum implementation.

Industrial revolutions have swept the region and forced industries to produce a highly-skilled workforce that promotes practical and knowledge-based skills (Vinayan et al., 2020). Expecting this change, the Malaysian government initiated TVET training that is demand-driven to upskilling and reskilling the trainees to be productive members of society. Through collaboration and proper strategies, the government needs to support TVET and make it industry-driven, supportive of independent and lifelong learning.

The quest for industrial development globally is not new, considering its economic and social impact on national development (Fagge et al., 2020). TVET plays a significant role in producing skilled graduates to work in industries. Also, entrepreneurship development empowers the youth with technical know-how in running a business. Industrialization to be on a sustainable track. Developing countries need to embrace TVET, entrepreneurship, and private-public partnership to achieve industrial growth and sustainability. TVET helps in skill development and provides entrepreneurship education to prepare trainees to pursue businesses.

Countries should adopt a German dual system for TVET programs to promote skill acquisition. It is based on apprenticeship and practical-based assessment by industries. The trainees' performance is tracked while taking entrepreneurship education through the day trips, case studies, and experiences sharing via lectures-industrial and professional development. Establishing a link between industries and TVET institutions is imperative for industry-based skill personnel. Therefore, Student

Industrial Work Experience (SIWE) should be with relevant sectors to contribute to the Industrial Training Fund (ITF).

TVET has prospects and a good share of challenges (Gasmelseed, 2021). One of the challenges facing TVET is inferior inputs due to poor planning and policies, inadequate budget; low budget allocations; poor implementation of plans, and insufficient collaborations. These challenges can be addressed by training and motivating the trainers.

#### **2.4 Availability of Workshop and Laboratory Facilities in TVET institutions**

For the TVET graduates to be employed, they need good vocational, soft, and technical skills. Work-based learning programs include; activities related to work-based learning programs that do not fit gracefully into the traditional school and lack strong collaboration between TVET and industry. The TVET institutions should maintain regular communication between parents and trainers and produce reports that track each trainee's progress, skill, knowledge, and attitude (Stephen & Festus, 2021).

The Distributed Cognition Learning Theories (DCLT) affect trainers' Capacity Building in workshop and laboratory facilities for Skill acquisition in Nigeria TVET institutions (Ezeama et al., 2021). For this reason, the curriculum in these TVET institutions needs to incorporate activities that reflect DCLT for imparting modern practical skills to both the trainees and trainers. The trainers should be encouraged to embark on capacity-building training since the government will equip the TVET institutions with the latest workshop and laboratory facilities. High competency is expected to be demonstrated in the utilization of workshop and laboratory facilities,

including tools, equipment, and machines. The government should fund the TVET institutions with the industries to organize workshops, seminars, and conferences to properly train trainers and trainees to utilize modern workshops and laboratory facilities.

The workshop and laboratory facilities are crucial for they give a different experience to both trainees and trainers in training (Basuki et al., 2020). They turn graduates into skilled personnel who can propel development in all sectors. The workshop and laboratory facilities are not well managed in TVET institutions and industries. Therefore, adequate management of workshops and laboratories facilities is key to acquiring practical skills by trainees.

In Kenya, TVET is regarded as a critical driver of Human Resource Development (Chepkoech et al., 2021). The Kenya Vision 2030 notes that to produce quality trainees, the government needs to: Comply with the Sustainable Development Goals (SDGs) and provide adequate workshop and laboratory facilities. There is a direct relationship between good academic performance and the provision of the workshop and the provision of workshop and laboratory facilities. This makes it essential for the TVET institutions to have modern Information Communication Technology (ICT) infrastructures, libraries, workshops, and laboratory facilities. Kenya Vision 2030 aims at developing the skills of trainees. To accelerate the attainment of the SDGs, the Kenyan government needs to develop infrastructure in technical institutions.

The donations of tools, equipment, and other learning materials from alumni associations, foreign assistance, public-private partnership; skill development levy; currency transaction levy; air ticket solidarity levy; academic facility fee; ring-fenced

TVET were some of the sources of funding TVET (Oviawe, 2020). Based on the study's findings, the government and other stakeholders should instantly adopt the funding strategies for the sustainable development of TVET programs.

Technically skilled personnel can initiate, facilitate, and implement technological development (Allen, 2020). Also, it creates essential awareness of technological literacy. However, in southern Nigeria, training of youths and women has witnessed tough challenges like; Poor funding; inadequate workshop and laboratory facilities, non-availability of an adequate workforce; deficient training staff; not keeping pace with technological advancement; defective curricula; low standards when it comes to monitoring TVET and; wrong mind-set about TVET. Therefore, the study suggested that the government give more attention to TVET programs and increase funding for the TVET sector. In addition, appropriate and up-to-date equipment and tools for the workshops and laboratories are essential in enabling trainees. There is a significant relationship between workshop and laboratory facilities and trainees' acquisition of employable skills (Mumbe, 2020).

TVET institutions have a pathetic workshop and laboratory facilities compared to modern industries in terms of technological advancement. Trainers' competence influences their ability to operate the workshop and laboratory facilities. Even though they are accomplished, the trainers still need professional growth in the new workshop and laboratory facilities. Teaching pedagogy improves the trainer's competency in using workshop and laboratory facilities. They can transfer this knowledge to trainees who are seeking employment. TVET institutions need to have adequate training facilities. The environmental factors in most TVET institutions significantly affect the acquisition of employable skills such as problem-solving,

professionalism, personal qualities, and creativity. These skills need to be in line with the industry's expectations.

The government needs to provide adequate training facilities and equipment in TVET institutions. For the trainers to upgrade themselves, they need to participate in industrial attachments. Work-based learning and problem-based learning enable trainees to acquire practical skills needed in the industries. The use of trainee-centered methods like work-based learning, case study, and problem-based approach inculcates employable skills necessary in the industries.

There is no sustained collaboration between TVET institutions and the industries (Shimave et al., 2020). This collaboration complements institution-based activities with industry-based activities. The study recommended that TVET institutions forge a more vital, enduring collaboration with industry experts through periodic programs. TVET institutions use the different workshop and laboratory facilities as those found in the industries. They can also not match the technological changes in new workshops and laboratory facilities in industries.

Some issues impede the quality of learning outcomes in Nigeria. TVET is linked to human capital theory in that a nation needs to raise an adequate workforce through technical training that can fulfill the industry expectations. (Idjawe, 2020). Inadequate instructional workshops and laboratory facilities impede the acquisition of practical skills. To attain a quality learning outcome, the government should ensure that adequate workshop and laboratory facilities are available in the work-related areas of TVET.

The lack of employability and self-reliance competencies contributes to high unemployment levels among the youth (Karani et al., 2021). Competence-Based Education (CBE) ensures that trainees acquire communication, collaboration, critical thinking, problem-solving, self-efficacy, and digital literacy skills vital for employment. Globally, institution readiness is essential when changing the curriculum. Practically, equipping the trainees with proficiencies is still a challenge. The practical skills acquisition by trainees needs workshops and laboratory facilities in TVET institutions. The findings indicated that for any curriculum implementation, institutional preparedness is relevant, and TVET institutions produce trainees who get it problematic to solve societal problems.

The quality of decision-making and the development of a country needs knowledgeable and skilled human capital (Alnoor, 2020). Human capital plays a huge role in the planning process and implementation of national development. One strategy is to enhance the skills of trainees in TVET institutions. The efficiency, marketability, flexibility, and technical skills are essential to TVET graduates. To yield and fulfill the requirement for a skilled workforce, practical training of future TVET graduates should be receptive to the necessities of the industries that are dynamic, productive, and geared towards global competition. The study showed that technical skills are needed. Hence, workshop and laboratory facilities must also be available in TVET institutions.

The availability of workshop and laboratory facilities in TVET institutions is an issue of concern for many researchers (Wandolo et al., 2018). They established the availability of the workshop and laboratory facilities and whether they were modern. The findings revealed that equipment and tools in universities were comparatively



advanced; that is, only 78% of the available tools were modern while 19% were not. Also, there was the exploration of the available workshop and laboratory facilities in the TVET institutions. The lowest ability to own the training facilities was observed in science and technology institutes. Few TVET institutions were well furnished with workshop and laboratory facilities. By using observation, it was found that nearly all the TVET institutions used the workshop and laboratory facilities for different functions like stores, economics laboratories, and classrooms. As a result, TVET institutions were not well established in terms of workshop and laboratory facilities. TVET institutions had insufficient workshop and laboratory facilities. The government needs to determine the workshop and laboratory facilities required in each TVET institution to address the shortage.

All education stakeholders are significantly concerned about improving trainees' academic performance (Osaigbovo & Bello, 2021). One of the remedies for the trainees' poor performance is the use of workshop and laboratory facilities in training. The study was concerned with the effect of utilization of workshop and laboratory facilities on trainees' achievement. The findings showed that trainees taught Electrical Installation and Maintenance Works with workshop instructional facilities perform better in retention than those taught without workshop instructional facilities. Therefore, trainers should use workshop instructional facilities to teach trainees improved academic performance.

TVET institutions produce technically skilled graduates who can initiate, facilitate and implement technological growth (Allen, 2020). Also, it creates an essential awareness of technological literacy for youths and women. However, in South-South Nigeria, training of youths and women has observed complex challenges which

include: Poor funding; inadequate and poorly equipped workshop and laboratory facilities; non-availability of adequate human resources; poor staff training and retention profiles; non-keeping pace with technological advancement; defective curricula; poorly monitoring standards and wrong mindset about TVET. The study suggested that the government give more attention to TVET institutions programs; Increase funding of the TVET sector; Direct funds to research and development, and acquire appropriate and up-to-date workshop and laboratory equipment and tools.

## **2.5 Gender Equality in Employment**

There is severe gender inequality (ur Rahman et al., 2018). Most employees (80%) in the industries are male. Upcoming enterprises need to have more female employees to increase production. The same applies to larger firms with over 50 employees. Consequently, a more balanced workforce between male and female staff leads to quicker output without increasing inputs and other costs. Notably, a firm can grow excellently through distinct gender equality policies like publicizing the need to balance the well-being between females and males.

Unemployment was high among Myanmar's women (Paez & Tin, 2021). Globally, gender biasness in the industries is a significant obstacle to the economic growth of any country. There is a need for the government to provide evidence-based suggestions on gender equality. TVET improves women's labour force participation (Ngugi & Muthima, 2017). More women need to join TVET to contribute to the nation's social and economic development, participate in sustainable development goals, and; become technologically oriented staff. TVET empowers women in rural and urban regions (Ahmed et al., 2020).

Globally, no nation has achieved gender equality in the industries (Buribayev & Khamzina, 2019). The qualifications for women in the community industry are similar to those of their male counterparts. Due to this fact, there is a need to create lawmaking and institutional conditions that promote gender equality. There is a need for industry experts to have enlightened laws, attitudes, stereotypes, and perceptions that promote gender equality. The gender stereotypes mostly favor the male gender. Women are slightly more in the less lucrative sectors such as: Financial, health, social, and education. To expand women's economic opportunities and access to public resources, they need to be employed in innovative, profitable, and high-technology jobs. We need to ensure that we equal the employment of men and women. There is a need to improve laws that expand: Flexible employment models, labor security, and conditions.

A person's individualist values exceed gender identities while the collectivist values are of less importance to women's target to their socio-economic responsibilities (Davis & Williamson, 2019). Individuality is principally identified with gender equality attitudes in leadership, income, employment, and education. Individual character increases female employment, education achievement, and; gender equality.

We need to ensure that we equal the employment of men and women. There is a need to improve legislation on labour protection, labour conditions, working conditions, and expanding flexible forms of employment. Individuality is importantly connected with gender equality and attitudes that generate income. To increase female employment, there is a need to lessen male-controlled feelings. There are many women's experiences in an Engineering Programme (Matenda, 2020). Traditionally, engineering was a male-dominated program. The South African education and

training policies commit to resolving gender inequalities. All the democratic governments should commit to social justice to improve the position of women trainees. The findings showed that the female trainees faced various challenges during training and employment. The study recommended that many countries embrace social justice to promote job creation for women in engineering.

Almost half of the women in Bangladesh need to ensure their active participation in white and blue-collar jobs since they play an integral role in developing many nations (Rahman, 2021). The Bangladesh people hold white-collar jobs in high esteem, and everyone aims for a career in those sectors. On the other hand, TVET remained unattended despite the availability and demand of ample opportunities and adequate support from the government. People frequently have a male chauvinistic mindset in a patriarchal society and think that women should only be involved in odd household jobs. If they wish to be employed, they should go for white-collar jobs as TVET is unsuitable. In Bangladesh, English played a significant role in promoting better employment opportunities. However, women faced additional hindrances in accessing employment opportunities due to prevailing perceptions and practices in the male-dominant society. Data revealed that despite English being vital, the treatment of English in the institutes was not adequate. The study suggested proper placement of English to promote women's empowerment and minimize the gender divide.

In Canada, the female gender makes up about 50% of the labour force. There is a constant income gap in the industries, cases of staff holding traditional gender roles in both technical and managerial positions. Women should not be left out of leadership positions. Withholding women in industries has become a massive challenge since they tend to leave employment after two maternity leaves. Women need to be strongly

represented in leadership positions since there is a compelling confirmation that gender diversification in managerial positions is valuable for socio-economic development. Women need not be underrepresented in the labour market.

Gender-based inequalities in the industries have resulted in significant scrutiny in many governmental and research institutions (Cavero-Rubio et al., 2019). In Spain, there is a seal of distinction on gender equality in the industry that aims at eradicating the gender gap in employment. The public needs to apprehend the benefits of gender equality in all sectors of the economy. Gender equality positively increases staff efficiency and sales in the industries. Also, women positively influence a business enterprise when they are given a chance to be in leadership positions.

Chauvinist characters are generally understood to cripple support for the Employment Equity (EE) Policies supporting women's empowerment (Hideg & Shen, 2019). The government needs to endorse friendly sexist attitudes that promote an EE policy and recommend hiring women in not only feminine but also masculine positions. There is a need to strengthen gender equality to reduce professional gender discrimination. Women need to be well represented in leadership positions in the industries.

Highly schooled women experience less gender biasness in the workplace (Pološki Vokić et al., 2017). Women need to participate in knowledge-intensive activities with no pay gap compared to their male counterparts. Furthermore, literate women do not feel that though they have bad gender-affiliated experiences, circumstantial issues do not negatively influence their employment.

In regions dominated by the male gender, women were likely to be married and be employed outside their home areas (Grosjean & Khattar, 2019). There is an old-

fashioned mindset towards women engaging in jobs outside their home; they may enjoy working though the occupations may not be impressive. Having unbalanced sex ratios negatively affects cultural attitudes, labour supply positions, occupational choices, and the natural state. Homogeneous marriages and vertical cultural transmission sustain cultural endurance. With more female gender joining the industries, the gender-specific division of family unit labour has slowly reduced, and women not only stay at home but work outside just like their male counterparts.

The national government and corporations need to strive and promote gender tolerance in the industries. The consequences of gender equality need to match their expectations. Female managers need to increase in number in government offices and be promoted to high-management positions. The female managers need not be scanty at the topmost executive or administration level. In addition, the human resource management rules restrict women's advancement to management positions, where they can unswervingly influence decision-making.

## **2.6 Summary of the Literature and the Gap Therein**

This entire chapter explored studies on selected factors influencing the employability of TVET Graduates. Matching the training offered in TVET institutions with the industry expectations promotes the job of the graduates (Yamada et al., 2018; Yamada & Otchia, 2020; Chavan & Carter, 2018; Francis et al., 2020; Miseda, 2021; Okumu & Bbaale, 2018; Olowoyo et al., 2020; Tafere & Chuta, 2020; Nkwanyane et al., 2020; Amegah, 2021).

TVET institutions' collaboration with the industries boosts the employability of the TVET graduates (John & Yusri, 2021; Mitiku et al., 2021; Gasmelseed, 2021; Mordi,

2020; Kipli & Khairani, 2020; Sumbodo et al., 2020; Msibi, 2021; Vinayan et al., 2020; Fagge et al., 2020).

Availability of workshop and laboratory facilities in TVET institutions promotes practical skills among the trainees, thus promoting employability (Stephen & Festus, 2021; Basuki et al., 2020; Chepkoech et al., 2021; Oviawe, 2020; Allen, 2020; Mumbe, 2020; Shimave et al., 2020; Idjawe, 2020; Karani et al., 2021; Alnoor, 2020; Wandolo et al., 2018).

The study aimed established gender inequality in the employability of the TVET graduates. However, gender discrimination was less felt amidst highly schooled women (ur Rahman et al., 2018; Paez & Tin, 2021; Ngugi & Muthima, 2017; Ahmed et al., 2020; Buribayev & Khamzina, 2019; Davis & Williamson; 2019; Matenda, 2020; Rahman, 2021; Caverro-Rubio et al., 2019 ; Hideg & Shen, 2019; Pološki Vokić et al., 2017; Grosjean & Khattar, 2019).

## **CHAPTER THREE**

### **RESEARCH DESIGN AND METHODOLOGY**

#### **3.1 Introduction**

This chapter focused on the strategies and procedures followed in conducting the research study. It described the area of the study, the research design, the philosophical paradigm of the study, the target population, the sampling and sample size, the research instruments, pilot study, reliability and validation of instruments, data analysis plan, the methods that were used in testing the objectives, the unit of analysis, data processing, and analysis and; ethical considerations.

#### **3.2 Area of the Study**

This research study was conducted among industry experts and TVET graduates in Uasin Gishu County, Kenya. The County is among the 47 counties in the Republic of Kenya and is situated in the previous Rift Valley Province. Eldoret town is the largest town and the Capital, hosting the County's commercial and administrative offices. The county is positioned on a plateau and enjoys a temperate and mild climate. It is about 330km to the North-West of Nairobi City, located in the Mid-West of Kenya's Rift Valley. The County is cosmopolitan; however, the Nandi communities have the highest settlement. The County covers an area of 3,345.2 square kilometres. Kericho County is located to the South of Uasin Gishu County, while Nandi County is to the South-West, Bungoma to the West, Trans Nzoia to the North, and Elgeyo Marakwet to the East, and Baringo to the South-East. The main economic activities in the county include; horticulture, wheat farming, sports tourism, maize farming, and dairy farming. The County has six constituencies which include: Moiben, Turbo, Kesses,



Soy, Kapseret, and Ainabkoi. The Map of Uasin Gishu County is shown in Appendix 2.

### **3.3 Research Design**

The study adopted a descriptive survey research design that is interested in collecting measurable data from the sample size, relationships or conditions that exist, opinions of people, apparent effects, procedures that are going on, or developing trends (Budiman et al., 2021). The descriptive survey research design enables data collection without manipulating the research variables and describes the characteristics of variables. This makes it possible to collect data from vast sample size and produce results representing the entire population at a cheaper cost. Standardized questions are used to determine the reliability and validity of the items under study (Pandey & Pandey, 2021).

It sought to obtain information that described the factors that influenced the employability of TVET graduates in Uasin Gishu County, Kenya. It optimized the strengths of both quantitative and qualitative research methods. The quantitative method involved simple counts like frequency of occurrence to more extensive, multifaceted data and was used to apply the frequency and percentage of respondents' data. Consequently, the data collected was coded into the Statistical Package for the Social Sciences (SPSS) software. Then, the percentages and frequencies of the data were prepared for further analysis and interpretation.

Also, the qualitative analysis method was used to describe and analyze the information obtained through interview schedules from the industry experts. Qualitative research helped the researcher construe and understand the complex

certainty of the research and the ramifications of quantitative data. Due to these reasons, a mixed approach of research methods was used to carry out the study.

The study traced back the 2014 - 2016 TVET graduates in selected TVET institutions, resulting in a dispersed sample size in all sectors. Survey research cheaply collects a vast quantity of data from a considerable population. Still, the tracer study was limited to questionnaires in data collection. That is why questionnaires were used as an effective data collection tool in this research.

### **3.4 Philosophical Paradigm of the Study**

A paradigm is an array of ideologies and practices that influence experts in a given field on what should be taught, how research analysis needs to be done, and how the outcomes should be made clear (Siponen & Klaavuniemi, 2021). The study was grounded on the constructivist philosophical worldview, which believes that the researcher and the study participants construct multiples of knowledge. Therefore, the researcher had comprehensive knowledge of the phenomenon being studied and the respondent's perception of the variables under study.

### **3.5 Target Population**

A population can be defined as all the aspects that qualify to be included in a study. On the other hand, the target population refers to the regular population being studied to which the research analysis results should be concluded (Pandey & Pandey, 2021). It is to the target population that the study results are generalized. The results of the study are generalized to the target population.

This research study targeted all the 2014 to 2016 TVET graduates from the 42 TVET institutions and the industries in Uasin Gishu County, Kenya. The study aimed at

collecting data from the TVET graduates and industry experts. The TVET graduates understand the factors that made them employed or what the employers expect from them. Those who are unemployed explained why they would not secure jobs. Using questionnaires and interviews schedules, the industry experts explained what they expect from the TVET graduates. Through questionnaires, the TVET graduates provided information on their employability.

### **3.6 Sampling and Sample Size**

The sample size needs to be premeditated at the designing stage in quantitative research. Quantitative researchers should select the most significant sample to represent the target population (Pandey & Pandey, 2021). This research targeted all the industries and the 2014 to 2016 TVET graduates from the 42 accredited private and public TVET institutions in Uasin Gishu County. However, a sample representing the population had to be obtained because of administrative issues. A detailed study of people's parts rather than the whole is permitted in research (Fellows & Liu, 2021).

#### **3.6.1 Sampling Size Criteria**

There is always some sampling error in selecting a sample from a population, but the researcher should try to minimize such errors (Fellows & Liu, 2021). In research, 30% of the accessible population is a good representative of the population (Kothari, 2017). To get a more representative sample, 13, which form 30% of the 42 TVET institutions in Uasin Gishu County, were chosen randomly to provide a list of the TVET graduates.

The researcher visited the 13 TVET institutions randomly selected and established that 360 TVET graduates had graduated between 2014 to 2016. The sample size for a

target of 360 graduates at a confidence level of 95% was 186 (Krejcie & Morgan, 1970). Thus, 186 graduates from the sampled TVET institutions were chosen using the simple random sampling technique. The study also targeted all the 110 industries listed in the Business Directory and Companies Listings of 2017 in Uasin Gishu County. The sample size for a population of 110 industries at a confidence level of 95% was 86 (Krejcie & Morgan, 1970).

**Table 3.1: Target Population and Sampling Size**

<b>Code</b>	<b>Respondents</b>	<b>Population</b>	<b>Sample</b>
A	TVET institutions	42	13(30.95%)
B	TVET graduates	360	186(51.67%)
C	Industry experts	110	86(78.18%)
<b>Total</b>		<b>512</b>	<b>285</b>

**Source: Author (2017)**

### 3.6.2 Sampling Technique

To acquire data on the factors influencing the employability of the TVET graduates, stratified sampling, simple random sampling, and purposive sampling were employed. Stratified sampling was used to strata the 13 sampled TVET institutions into seven public and six privates. Next, the simple random sampling technique was employed to select the 186 TVET graduates from documents obtained from the sampled TVET institutions. Finally, purposive sampling was utilized to select the 86 sampled industries.

### 3.7 Sampling Study Procedures

This study used stratified sampling and purposive sampling techniques to select the 13 TVET institutions in Uasin Gishu County, Kenya. Purposive sampling is mainly employed in quantitative research and involves selecting persons who understand the phenomena being studied (Pandey & Pandey, 2021). In purposive sampling, personal

judgment is used by the researcher since he or she has prior awareness of the population and also aims at achieving a specific purpose. Therefore, the researcher used his knowledge to select the TVET institutions and the industry experts that would provide a suitable sample for the study. TVET institutions' list was collected at the Uasin Gishu County Directors' office.

This study was done on 2014 to 2016 TVET graduates in 13 selected private and public vocational and TVET institutions in Uasin Gishu County, Kenya. From these 13 TVET institutions, there was a population of 360 TVET graduates. The study employed simple random sampling in selecting the 186 TVET graduates. Purposive sampling selected the 86 industries from the 110 industries listed in the Business Directory and Companies Listings of 2017 in Uasin Gishu County.

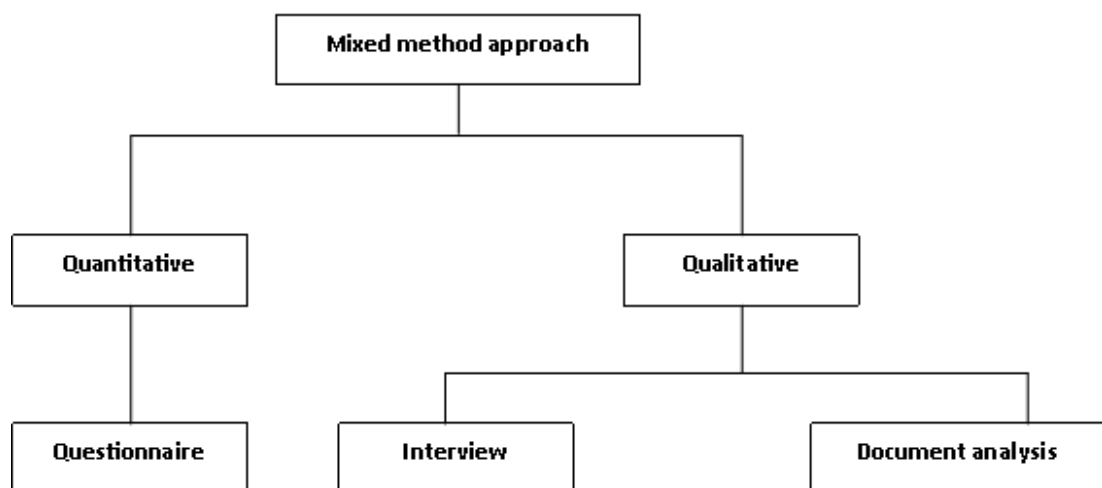
### **3.8 Data collection**

Data collection is acquiring precise data to prove or counter some facts. Researchers need to understand what they will obtain and how they will obtain it during data collection. Both the primary and secondary data sources were employed during data collection. The primary data was collected by using a field survey for TVET graduates and industry experts. Contacts of the graduates were obtained from their respective TVET institutions. Interview schedules gave a quality examination of the research aspects. Questionnaires were based on the assumption that the respondents would be able to give candid answers. The questionnaires were constructed using a scale, open-ended and closed items. Closed items made it possible for respondents to opt for two or more fixed options.

The dichotomous items allowed for only two options: Yes or No. The open-ended items formed a basis on which the respondents expressed themselves authoritatively. Hence, the respondents provided the answers in their own words in open-ended items. Finally, the scale items enabled the respondents to indicate their degree of agreement or disagreement. For secondary data, various unanalyzed documents like a survey of the TVET graduates' contacts and graduation reports were reviewed. Also, relevant books and journals were assessed.

### 3.9 Research Instruments

A research instrument is used to collect data and is designed to measure skills, knowledge, and attitude. A person conducting research should see the research instruments, the respondents, and the study area. In research, the data collection process results in obtaining accurate information and introducing effective programs. The procedure for collecting data should be impartial, organized, and repeatable (Kothari, 2017). The data collection procedure is summarized in Figure 3.1 below:



**Figure 3.1: Data Collection Instruments**

**Source: Author (2017)**

### **3.10 Validity of the Research Instruments**

A device is supposed to be successful in measuring what it is supposed to measure, such that the differences in the individual scores represent the fundamental differences in features being studied (Kothari, 2017). Validity is the capacity of the research instruments to give the same outcomes. Validity is how a research instrument measures what it is presumed to measure and carries out what it is meant to perform. It is rare for a tool to be 100% valid. Face validity verifies if the instruments measure the concept being tested, this can be done by having friends test-run the research instruments to ensure that the research questions are unambiguous.

A content validity test ensures the inclusion of good, pertinent questions that cover the entire area under study. The test is grounded on the ability to make a judgment as there are no objective methods used. A congregation of experts (lecturers) assessed the research instruments' content validity. In the case of construct validity, the questionnaires are checked to ascertain that they conform to the theoretical expectations suggested in the theoretical framework. The research supervisors checked the instruments to ascertain that they were valid constructively.

### **3.11 Reliability of the Research Instruments**

Reliability refers to how the scores obtained with an instrument are consistent. A research instrument is reliable when it can yield the same information when given out again under the same circumstances. However, it is challenging to realize the same data when dealing with humankind (Kothari, 2017). Any value above 0.7 is good enough to confirm that a research instrument is dependable and has an excellent internal consistency level (Pandey & Pandey, 2021). Thus, using the SPSS software, a computed Cronbach's alpha value of 0.91 was obtained, and the value ascertained that

the research instruments were reliable, valid, relevant, and correct. When the data collection instruments are accurate, the quality of the research improves.

### **3.12 Pilot Testing**

Piloting is the process of testing the research instruments on the participants who will not be involved in the actual study. It was essential for the researcher to have a preliminary test of the research instruments on a manageable sample of participants in a preliminary exercise to establish any shortcomings so that it is rectified. In October 2017, the researcher conducted piloting in the neighboring Bungoma County. 10 TVET graduates from Matili Technical Training Institute, 10 TVET graduates from Kisiwa Technical Training Institute, and four industry experts within Bungoma town were sampled during the pilot study.

Piloting is a critical stage in developing an instrument that allows for evaluating the instrument before the main study is conducted (Malmqvist et al., 2019). The data collected was utilized to evaluate the reliability of the instruments controls challenges that could have come up during the actual research. Piloting was carried out in the same way as the actual study.

### **3.13 Data Collecting Procedure**

Before the data collection process, the researcher sought authorization from relevant authorities. The National Council of Science gave a research permit, Research and Innovation (NACOSTI), and the researcher reported to the County Commissioner and the County Director of Education for clearance before embarking on the research project. A letter of introduction was also done to the TVET graduates and industry experts. Data for the study were collected between February 2018 and April 2018. The instruments were conducted personally by the researcher to all the participants.



Explanations were made where required and sufficient time given to those participating so that they give accurate answers because of how sensitiveness of the matter.

### **3.14 Data Processing and Analysis**

Data collected in the study were both quantitative and qualitative. Quantitative analysis methods were employed in analyzing the data collected. The quantitative data collected using questionnaires were edited, coded, and entered into the Statistical Package for Social Sciences (SPSS) program that prepared, summarized, and analyzed the raw data to produce descriptive statistics on Factors Influencing the Employability of the TVET graduates in Uasin Gishu County, Kenya. Collected data were summarized using tables (frequency and percentages) and graphs. From the analyses, different cross-tabulations revealed the Factors Influencing the Employability of the TVET Graduates in Uasin Gishu County, Kenya.

Lastly, qualitative data was analyzed thematically. The four themes emerged: Matching the training offered in TVET institutions with the industry expectations; TVET institutions' collaboration with the industries; availability of workshop and laboratory facilities in TVET institutions and; gender equality in the employability of TVET graduates in Uasin Gishu County, Kenya.

### **3.15 Ethical Considerations**

Ethics were followed to obtain valid and reliable data when carrying out this study. The norms used differentiated between what is acceptable and what is not (Dignum et al., 2018). Several ethical issues can arise during academic research, writing, and publishing. The researcher endeavored to ensure that the research was: Confidential,

free from plagiarism, free from the fabrication of data, free from conflicts of interest, and fair to human subjects.

Authorization to conduct the study was given after presenting the research study proposal to a panel of lecturers and supervisors in Moi University. The researcher explained to the participants the nature and purpose of the study. The respondents provided their consent to participate in the study or not and to withdraw. The respondents gave the whole information with much confidentiality to protect the participants' integrity. According to the human ethics procedures recognized by Moi University, the researcher submitted the questionnaires and interviews schedules, which were constructed in English, to the NACOSTI for approval. Also, piloting was carried out after getting approval from NACOSTI.

## **CHAPTER FOUR**

### **DATA PRESENTATION, ANALYSIS, INTERPRETATION, AND DISCUSSION**

#### **4.1 Introduction**

This chapter presents the findings from the data obtained from respondents using questionnaires, interviews, and official documents and discusses the descriptive and analytic results of the research study. The descriptive results provide data on Factors Influencing the Employability of the TVET Graduates in Uasin Gishu County, Kenya. One hundred eighty-five questionnaires were distributed to the TVET graduates. However, 168 (90.8%) were filled in and returned. Also, out of the 78 questionnaires distributed to the industry experts, 71 (91.0%) were filled and returned, while 69 (88.5%) were interviewed. The collected data was analyzed, interpreted, and discussed, and the results were presented under the significant headings below.

#### **4.2 Demographic Information**

This subsection discusses the primary data on the response rate of the sampled population, characteristics, and nature of the TVET graduates and industry experts.

##### **4.2.1 Demographic Information of TVET Graduates**

Gender, age, graduation year, and the courses undertaken formed the general information of TVET graduate participants as indicated in Table 4.1 and Table 4.2. Regarding the proportion of male and female TVET graduates, the total percentage of male TVET graduates (65.9%) was more significant than the total percentage of female participants (34.1%); this indicates that enrolment of females in TVET institutions is low. Hence, these courses are dominated by males.

**Table 4.1: Demographic Information of the Sampled TVET Graduates (n=168)**

<b>Gender</b>	<b>Frequency</b>	<b>Percentage</b>
Male	111	65.9
Female	57	34.1
<b>Age</b>		
15-19 years	22	13.1
20-24 years	67	39.9
25-29 years	54	32.1
30 and above years	25	14.9
<b>Graduation year</b>		
2016	27	16.1
2015	63	37.5
2014	78	46.4

**Source: Author (2017)**

The majority of the TVET graduates (39.9%) were aged between 20-24 years, while 32.1%, 14.9%, and 13.1% were between 25-29 years, 30 and above years, and 15-19 years, respectively. These findings indicate that most of the graduates were at their youthful stage. The majority of the respondents (46.4%) graduated in 2014, 37.5% in 2015, and 16.1% in 2016. The correct information was realized since they had been in the industry for over one year. Results on courses undertaken by gender are presented in Table 4.2. Most of the graduates (28) embarked on Diploma in Information Communication Technology, while only 7 pursued Diploma in Building Technology and Craft Certificate in Masonry.

**Table 4.2: Courses undertaken by gender (n=168)**

<b>Course</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
Diploma in Mechanical Engineering	20	0	20
Diploma in Fashion and Design	6	9	15
Diploma in Electrical and Electronics Engineering	14	0	14
Diploma in Civil Engineering	9	5	14
Diploma in Information Communication Technology	9	19	28
Diploma in Survey	8	0	8
Craft Certificate in Masonry	7	0	7
Diploma in Building Technology	3	4	7
Artisan in Plumbing	7	1	8
Artisan in Automotive Engineering	12	0	12
Diploma in Architecture	8	0	8
Diploma in Secretarial and Office Management	0	19	19
Diploma in Automotive Engineering	8	0	8
<b>Total</b>	<b>111</b>	<b>57</b>	<b>168</b>

**Pearson Chi-Square (98.81); Df (1.12); P=0.000**

**Source: (Author, 2017)**

In terms of gender, most male graduates (20) sought Diploma in Mechanical Engineering, while none were reported to have undertaken Diploma in Secretarial and Office Management. On the other hand, the majority of the female graduates (19) were reported to have undertaken Diploma in Information Communication Technology and Diploma in Secretarial and Office Management while none pursued Diploma in Mechanical Engineering, Diploma in Electrical and Electronics Engineering, Diploma in Survey, Craft Certificate in Masonry, Artisan in Automotive Engineering, Diploma in Architecture, and Diploma in Automotive Engineering. Findings further indicated that the distribution of courses by gender was significant ( $p < 0.05$ ); this implies no uniformity in the distribution of gender among courses offered by the TVET institutions.

Naturally, engineering courses have continued to be dominated by the male gender, especially at the higher level of learning. Until recently, women's entry into the

engineering field was low. In areas of Dhaka, a study on Women's participation in TVET noted that there was nearly equal gender representation (Rahman, 2021). The participation of the females was not 36 satisfactory though it had increased in the last ten years. The percentage of females in TVET had been 2% in 2009, and now it was around 15%. The government allotted 100% scholarship for females and established one female polytechnic institute in each division to encourage females. According to the responses, there were 4,569 trainees in his institutions. Among them, only 606 were females, which was around 13%. The main reason behind the less participation of females in the TVET sector was the restrictions from society and families. However, the contribution of the female gender in several occupations is inadequate. It is noticeable from the study that no female TVET graduate was pursuing either Mechanical Engineering, Electrical Engineering, Surveying, Architecture, or Automotive Engineering.

#### **4.2.2 Demographic information of the industry experts**

The findings on the demographic information of the industry experts are shown in Table 4.3. Generally, most industry experts (73.2%) were male, while only 26.8% were female. The findings indicate that females' participation in private and public offices was low in most male-dominated positions. It is essential to include the views of females, for a study is more enhanced with the participation of more females (Gunn, 2020). Since it was a suitable sample and the ratio between males and females was extensively spread out, it is apparent that much work is supposed to be done to achieve gender equality in TVET institutions and the industries. The majority of the participants (40.8%) were aged between 31 and 40 years, 31% were between 20 and 30 years, and 28.2% were 41 years and above. In addition, 64.8% and 35.2% of the respondents were from private and public organizations.

**Table 4.3: Demographic Information of the Industry Expert's (n=71)**

<b>Gender</b>	<b>Frequency</b>	<b>Percentage</b>
Male	52	73.2%
Female	19	26.8%
<b>Age</b>		
20-30 years	22	31.0%
31-40 years	29	40.8%
41 years and above	20	28.2%
<b>Nature of organization</b>		
Public	25	35.2%
Private	46	64.8%

**Source: Author (2017)**

### **4.3 Influence of Matching the Training Offered in TVET Institutions with the Industry Expectations on Employability of the TVET Graduates**

The TVET graduates were asked about matching the training offered in the TVET institutions with the industry expectations on employability. Their responses were summarized in Table 4.4. The majority of the participants (46.4%) strongly disagreed that TVET institutions' training matches the industry expectations, while only 17.9% agreed. Most of the respondents (54.2%) strongly disagreed that they were competent in their jobs, 22% disagreed that they were qualified, 12.5% agreed that they were capable, and 11.3% strongly agreed. The majority of the respondents (63.7%) strongly disagreed that they work in their technical fields, while only 23.8% strongly agreed. When respondents were asked whether skills required by employers were taught in the TVET institutions, 23.8% said yes, while 76.2% said no.

**Table 4.4: TVET Graduates' Responses on Matching the Training offered in TVET institutions with the Industry Expectations**

Item	SA	A	N	D	SD
Industry oriented training offered hence employed	30 (17.9%)	10 (6.0%)	0 (0.0%)	50 (29.8%)	78 (46.4%)
I am competent in my work	19 (11.3%)	21 (12.5%)	0 (0.0%)	37 (22.0%)	91 (54.2%)
I working in my technical field	40 (23.8%)	0 (0.0%)	0 (0.0%)	21 (12.5%)	107 (63.7%)
Skills required by employers are taught in TVET institutions	Yes 40 (23.8%)	No 128 (76.2%)			

Key: SA – Strongly Agree, A – Agree, N – Neutral, D – Disagree, SD - Strongly Disagree

**Source: Author (2017)**

Industry experts' responses on matching the training offered in TVET institutions with the industry expectations are summarized in Table 4.5. The majority of the industry experts (69.0%) strongly agreed that graduates are not employed due to a mismatch of training in TVET institutions with industry expectations, while 7% strongly disagreed. In addition, 83.2% of the respondents strongly agreed that the industry employs TVET graduates only working in their technical fields. As a result, there is an inadequate supply of TVET graduates in the technical field.



**Table 4.5: Industry Experts' Responses on Matching the Training Offered in TVET Institutions with the Industry Expectations**

<b>Item</b>	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>
Unemployment of TVET graduates is due to mismatch	49 (69.0%)	15 (21.1%)	2 (2.8%)	0 (0%)	5 (7.0%)
We employ TVET graduates working in their technical fields	51 (83.2%)	12 (16.9%)	4 (5.6%)	0 (0%)	4 (5.6%)
There is inadequate supply of TVET graduates in our technical field	59 (83.2%)	5 (7.1%)	3 (4.2%)	0 (0%)	4 (5.6%)

**Key:** SA – Strongly Agree, A – Agree, N – Neutral, D – Disagree, SD - Strongly Disagree

**Source:** Author (2017)

Industry experts were interviewed on matching TVET institutions' training with industry expectations. The majority of them cited “*offering on the job training, and specific skills geared to current practices in specific occupations in the industry are significant in preparing graduates for employment.*”

Regression analysis studies interactions between variables. The study employed regression analysis to determine the relationship between matching training with the industry expectations and the employability of TVET graduates, and the outcomes were presented in Table 4.6.

**Table 4.6: Regression Analysis on Matching the Training Offered in TVET Institutions with the Industry Expectations and employability of TVET Graduates**

	<b>B</b>	<b>Sig.</b>	<b>Partial correlations(r)</b>
Training was oriented towards industry expectations	0.047	0.047**	0.11
I am competent in my work	0.028	0.016**	0.18
I work in the field I trained in	0.194	0.012**	0.22

\*\* denote significance at  $p < 0.05$

**Key:** B – Regression analysis, sig. – significance, r – partial correlation

**Source: Author (2017)**

The study established a significant positive relationship ( $r > 0$ ;  $p < 0.05$ ) between matching the training with the industry expectations and the employability of the TVET graduates. Checking the TVET training with industry expectations affects employability because it contributes to functional and instrumental TVET graduates who contribute to the industry's growth. The study further argued that humans could upgrade their poverty-stricken lives by getting well-paying jobs. Men and women become employable by using technical skills and competencies learned in technical institutions. Skills development is crucial, and technical education is vital; understand employability factors. The TVET curriculum should be matched with the industry expectations so that the graduates remain relevant in the industries. Mismatch of skills results in unemployment which defeats the sole purpose of TVET.

#### 4.4 Influence of TVET institutions collaboration with the industries on the employability of TVET graduates in Uasin Gishu County, Kenya

TVET graduates were asked whether the collaboration of TVET institutions with industries affects employability, and their responses were recorded in Table 4.7. The majority of the respondents (39.9%) strongly agreed that industries provide on-the-job training before hiring graduates, while 33.3% strongly disagreed. In addition, 41.7% of the respondents disagreed that industries liaise with TVET institutions on practical skills training, while 30.4% agreed. When respondents were asked whether the industry is committed to providing apprentice services to graduates, 46.4% strongly agreed, 29.2% strongly disagreed, 12.5% disagreed, 11.3% agreed, while only 0.6% were undecided, as shown in Table 4.7.

**Table 4.7: TVET Graduates' Responses on TVET Institutions' Collaboration with the Industries**

Item	SA	A	N	D	SD
Industries offer on the job training	67 (39.9%)	31 (18.5%)	0 (0.0%)	14 (8.3%)	56 (33.3%)
Industries liaise with TVET institutions	51 (30.4%)	46 (27.4%)	1 (0.6%)	70 (41.7%)	0 (0.0%)
Industries provide apprentice services	78 (46.4%)	19 (11.3%)	1 (0.6%)	21 (12.5%)	49 (29.2%)

**Key:** SA – Strongly Agree, A – Agree, N – Neutral, D – Disagree, SD – Strongly Disagree

**Source: Author (2017)**

The majority of the industry experts (59.2%) strongly agreed that the industry employs graduates who have undergone proper industrial training, while 12.7% strongly disagreed. Also, most industry experts (62%) strongly agreed that they only

employ graduates who have undergone industrial internships programs, 18.2% agreed, 4.2% were neutral, 5.6% disagreed, and 9.9% strongly disagreed.

In interview results on how to improve TVET institutions' collaboration with the industries, the majority of the respondents argued that the industry should take part in TVET curriculum and training. Some added that *“lifelong learning should be encouraged to attain practical skills rather than certificate acquisition.”*

**Table 4.8: Industry Experts’ Responses on TVET Institutions' Collaboration with the Industries**

<b>Item</b>	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>
Industries employ graduates with proper industrial training	42 (59.2%)	15 (21.1%)	3 (4.2%)	2 (2.8%)	9 (12.7%)
Industries employ graduates who have undergone industrial internships	44 (62%)	13 (18.2%)	3 (4.2%)	4 (5.6%)	7 (9.9%)
Industrial attachments for increases employability of the trainers	47 (66.2%)	11 (15.5%)	2 (2.8%)	3 (4.2%)	8 (11.3%)
Trainship programmes increases employability of graduates	42 (59.2%)	14 (19.7%)	3 (4.2%)	4 (5.6%)	8 (11.3%)
Sharing of workshop and laboratory facilities with TVET institutions promotes employability	46 (64.8%)	12 (16.9%)	2 (2.8%)	4 (5.6%)	7 (9.9%)

Key: SA – Strongly Agree, A– Agree, N – Neutral, D – Disagree, SD - Strongly Disagree

**Source: Author (2017)**

On whether industrial attachment for lecturers increases the employability of the trainees, 66.2% strongly agreed, 15.5% agreed, 11.3% strongly disagreed, 4.2% disagreed, and 2.8% were undecided. Whether train-ship programs offered by industries increase the employability rate of their trainees, 59.2% of the respondents

strongly agreed, 16.9% agreed, 9.9% strongly disagreed, 5.4% disagreed, while 2.8% were neutral.

**Table 4.9: Regression Analysis on the TVET Institutions' Collaboration with the Industries and the employability of TVET Graduates**

	<b>B</b>	<b>Sig.</b>	<b>Partial correlations</b>
On the job training are given to graduates in industries	0.126	0.0144**	0.114
Industries liaise with TVET institutions on practical skills training	0.075	0.0331**	0.762
The industry is committed to providing apprentice services to graduates	0.105	0.194	0.101

\*\* denotes significance at  $p < 0.05$

**Source: Author (2017)**

Generally, a significant positive relationship ( $r > 0$ ;  $p < 0.05$ ) was noted between TVET institutions' collaboration with industries and the employability of TVET graduates. However, an insignificant relationship ( $p > 0.05$ ) between on-the-job training and graduates' employability was recorded, as indicated in Table 4.9.

TVET institutions' collaboration with the industries enables trainees to feel the work environment and thus gain 'hands-on' experiences. The hands-on training transfers appropriate skills, knowledge, and work ethics to the trainees in different trades. Also, suitable production methods and technology are transferred to the industries by the TVET graduates.

The partnership between the TVET institutions and the industries helps the trainees prepare for the ever-changing technologies in the workplace. TVET needs to be adaptable, acceptable, and applicable to the industries.

One of the things worrying the employers nowadays is the ability to find competent employees and train them. In most cases, the practical skills expected in the industries and those trainees have do not match, thus creating a skill gap. There is a genuine concern to industries experts who need to employ competent TVET graduates. Industry experts need TVET graduates who are consistent in their work. Problem-solving skills, social skills, and positive attitudes are essential values for one to be successful in the industry. Being creative is an attribute that industry experts should not overlook. TVET institutions should empower and create high-performance graduates needed for competitiveness in the industries. TVET graduates possessing practical techniques are highly needed in the industries. Foundation competencies are essential for trainees to be successful in their career pathways.

#### **4.5 Influence of availability of workshop and laboratory facilities in TVET institutions on employability of TVET graduates in Uasin Gishu County, Kenya**

TVET graduates were asked whether the availability of workshop facilities in TVET institutions affects the employability of TVET graduates, and their responses were recorded in Table 4.10. Whether facilities in TVET institutions enhance acquisitions of practical skills, 47% strongly agreed, 15.5% agreed, 28.6% were neutral, 8.3% strongly disagreed, and only 0.6% disagreed. Approximately 40% of the respondents strongly agreed that graduates should operate tools and equipment effectively to be employed, 29.2% agreed, 20.2% were undecided, and 8.3% disagreed and strongly disagreed. When respondents were asked whether facilities in TVET institutions are similar to those in the industry, 38.1% strongly agreed, 12.5% agreed, 19.6% were undecided, 29.2% disagreed, and only 0.6% strongly disagreed.

**Table 4.10: TVET Graduates' Responses on the Availability of Workshop and Laboratory Facilities**

<b>Item</b>	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>
Workshop and laboratory facilities in TVET institutions enhance acquisition practical skills	79 (47%)	26 (15.5%)	48 (28.6%)	1 (0.6%)	14 (8.3%)
Competency on operation of workshop and laboratory facilities is required for one to be employed	57 (40.0)	49 (29.2%)	34 (20.2%)	14 (8.3%)	14 (8.3%)
Workshop and laboratory facilities in TVET institutions are similar to those in the industry	64 (38.1%)	21 (12.5%)	33 (19.6%)	49 (29.2%)	1 (0.6%)

**Key:** SA – Strongly Agree, A – Agree, N – Neutral, D – Disagree, SD - Strongly Disagree

**Source: Author (2017)**

When industry experts were asked whether the unemployment of the TVET graduates is due to their inadequate training, 63.4% of them strongly agreed, 19.7% agreed, 9.9% disagreed, 5.6% strongly disagreed, while only 1.4% were undecided. 66.2% strongly agreed, 16.9% agreed, 8.5% strongly disagreed, 7% disagreed, and 1.4% were neutral on whether the industry employs graduates who can operate machines. On whether the facilities found in the industries are similar to those in TVET institutions, 70.4% strongly agreed, 12.7% agreed, 1.4% were neutral, 8.5% disagreed, and 7% strongly disagreed. Lastly, when asked whether the unemployment of graduates is due to their incompetency in operating the equipment, tools, and machines, 64.8% strongly agreed, 18.3% agreed, 1.4% were neutral, and 5.6% disagreed. In comparison, 9.9% strongly disagreed, as shown in Table 4.11.

**Table 4.11: Industry Experts' Responses on the Availability of Workshop and Laboratory Facilities**

<b>Item</b>	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>
Unemployment due to inadequate training	45 (63.4%)	14 (19.7%)	1 (1.4%)	7 (9.9%)	4 (5.6%)
We employ graduates who are able to operate machines	47 (66.2%)	12 (16.9%)	1 (1.4%)	5 (7%)	6 (8.5%)
Industry facilities are similar those in TVET institutions	50 (70.4%)	9 (12.7%)	1 (1.4%)	6 (8.5%)	5 (7%)
Unemployment of graduates is due to their practical incompetence	46 (64.8%)	13 (18.3%)	1 (1.4%)	4 (5.6%)	7 (9.9%)

**Key:** SA – Strongly Agree, A – Agree, N – Neutral, D – Disagree, SD - Strongly Disagree

**Source: Author (2017)**

The regression analysis results on the relationship between the availability of workshop and laboratory facilities in TVET institutions and the employability of TVET graduates are presented in Table 4.12. The study established a significant positive relationship ( $r > 0$ ;  $p < 0.05$ ) between the operation of tools, equipment, availability of facilities, and employability of TVET graduates. However, an insignificant positive relationship ( $r > 0$ ;  $p > 0.05$ ) was recorded between facilities in TVET institutions and employability.



**Table 4.12: Regression Analysis on the Availability of Workshop and Laboratory Facilities in TVET Institutions and Employability of TVET Graduates**

	<b>B</b>	<b>Sig.</b>	<b>Partial correlations (r)</b>
Facilities in TVET institutions enhance acquisitions of practical skills	0.019	0.071	0.26
Graduates should operate tools and equipment effectively for them to be employed	0.058	0.029**	0.83
Facilities in TVET institutions are similar to those in the industry	0.04	0.026**	0.87

\*\* denotes significance at  $p < 0.05$

**Source: Author (2017)**

#### **4.6 Influence of Gender Equality on Employability of TVET Graduates in Uasin Gishu County, Kenya**

Results on the role of gender in the employability of TVET graduates were as shown in Table 4.13. Graduates were asked whether employers are gender-biased in their job, and 54.2% strongly agreed, 23.2% agreed, 22% were neutral, and only 0.6% strongly disagreed. Approximately 27.4% of the respondents disagreed that the industry strives for gender balance, 22.6% strongly disagreed, 9.5% strongly agreed, and 40.5% were undecided. The majority of the respondents (53%) disagreed that both genders are given equal responsibilities, 20.8% strongly disagreed, 25.6% were undecided, and 0.6% strongly agreed.

**Table 4.13: TVET Graduates' Responses on Gender Equality**

<b>Item</b>	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>
Employers are gender biased in employment	91 (54.2%)	39 (23.2%)	37 (22%)	0 (0%)	1 (0.6%)
Industry strives for gender balance	16 (9.5%)	0 (0%)	68 (40.5%)	46 (27.4%)	38 (22.6%)
Both genders are given equal responsibilities	1 (0.6%)	0 (0%)	43 (25.6%)	89 (53%)	35 (20.8%)
Preferred gender	<b>Male</b> 112 (84.8%)	<b>Female</b> 20 (15.2%)			

**Key:** SA – Strongly Agree, A – Agree, N – Neutral, D – Disagree, SD - Strongly Disagree

**Source: Author (2017)**

When industry experts were asked whether gender equality is observed in the employability of TVET graduates, 2(2.8%) strongly agreed, 1(1.4%) agreed, 3(4.2%) were neutral, 16 (22.5%) disagreed, while 49 (69.0%) strongly disagreed.

**Table 4.14: Industry Experts' Responses on Gender Equality**

<b>Item</b>	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>
Gender equality is observed in employment	2 (2.8%)	1 (1.4%)	3 (4.2%)	16 (22.5%)	49 (69.0%)

**Key:** SA – Strongly Agree, A – Agree, N – Neutral, D – Disagree, SD - Strongly Disagree

**Source: Author (2017)**

Regression results on the effect of gender on the employability of TVET graduates are presented in Table 4.15. Again, a significant positive relationship ( $r > 0$ ;  $p < 0.05$ ) was recorded between gender balance, gender-based responsibilities, and the employability of TVET graduates.

**Table 4.15: Regression Analysis on Gender Equality and the Employability of TVET Graduates**

	<b>B</b>	<b>Sig.</b>	<b>Correlations</b>
Employers are gender biased in employment	0.036	0.462	0.058
Employment positions are preserved for specific gender to achieve gender balance in employment	0.12	0.001**	0.253
Both genders are given equal responsibilities at the industry	0.138	0.033**	0.165

**Key:** SA – Strongly Agree, A – Agree, N – Neutral, D – Disagree, SD - Strongly Disagree

**Source: Author (2017)**

Gender equality in employment is an important aspect that needs to be embraced (Hitka et al., 2018). However, the employers noted that they did not consider gender equality when employing the TVET graduates. Globally, no nation has attained gender equality in their places of work (Salvia et al., 2019). The female gender can perform the same duties as their male counterparts; hence, there is a need to create legal and institutional conditions to promote gender equality in the industries.

#### **4.7 Respondents' Opinions and Perceptions on Factors Influencing Employability of the TVET Graduates**

##### **4.7.1 Matching the Training Offered in TVET Institutions with the Industry Expectations**

The industry experts felt that: Unemployment was due to the mismatch between training offered in TVET institutions and what the industry expects; there was a shortage of trainees who were competent in practical skills; most trainees focus on theoretical and comprehensive knowledge; the trainers need to provide a more rational approach to TVET that would ensure that the trainees acquire practical skills;

jobs are becoming more complex, and thus there is need to build better links between training and employability.

The TVET graduates thought that: There was understaffing of trainers who could promote competency in practical skills acquisition; the industry employed TVET graduates who were confident in their work; matching training with industry expectations makes them confident in their abilities; TVET institutions have not fully adapted to the needs of the industry; there is curriculum deficiency in TVET programs since they do not emphasize on the acquisition of employable skills and technological changes in the industry; they lack role models, scholarships and suitable industrial attachments.

The researcher felt that the TVET needs to be linked to employment job creation and be diverted to accommodate industry changes. Conferences, seminars, and workshops would enable the trainees to acquire practical, managerial, and entrepreneurship skills. On the other hand, the trainers need to: Use a conventional approach to teaching; adopt new approaches such as CBT to make trainees flexible, adaptable, productive, and competent in jobs they are anticipated to accomplish in the industries. The curriculum should teach the trainees to be self-employed and invest in skill training.

The government needs to put policies that would help reduce the gap between the practical skills attained in TVET institutions and those expected in the industries. The TVET graduates who have part-time jobs while training demonstrate better work-ready skills; for this reason, the government needs to: Promote internship programs, apprenticeship, on the job training, offer an additional one year of industrial training to TVET graduates, and ensure that TVET institutions to offer demand-driven

courses. When the government gives financial incentives to the industries collaborating with TVET institutions, the industry experts will not consider the in-depth training of TVET graduates an unnecessary expense, thus enabling TVET graduates to learn from their supervisors. They will be provided with adequate training needed in the industries.

#### **4.7.2 TVET institutions' collaboration with the industries**

Industry experts noted that: Both the government and industry are supposed to participate in shaping the TVET programs, which require adequate finance; they employ appropriately trained TVET graduates; collaboration between TVET institutions and the industries enables graduates to experience a real workplace environment; TVET graduates build their professional image by being competent and confident in their abilities and traits; industrial internship programs and industrial attachments significantly boost employability. Low collaborations result in unemployment, while good collaborations enable the TVET graduates to acquire relevant practical skills in industrialization. Hence, there is a need to establish online means of cooperation, contemporary skills, and networks to bridge the skills gap and enhance the employability of TVET graduates.

The TVET graduates felt that: Industry experts needed to provide them with more training or re-training and apprentice services; they needed a smooth transition from school to work; they were left alone to find employment in the labour market; the TVET institutions lacked initiatives, and; there was a poor response from industries to promote collaborations.

The researcher feels that the curriculum reviews in TVET institutions should be as per the industry's requirements. The government should put policies that support incentive mechanisms for the industry, create a parastatal to spearhead finance collaborations and establish an ITF to help the trainees acquire industrial work experience.

#### **4.7.3 Availability of workshop and laboratory facilities in TVET institutions**

The industry experts noted that: The workshop and laboratory amenities in both the industry and the TVET institutions were in a poor state; there was a need for proper physical infrastructure to house the workshop and laboratory facilities; management and utilization of workshop and laboratory facilities were down-and-out contributing to low competency exhibited by the TVET graduates; training ought to be responsive to the expectations of the industry; the workshop and also the laboratory facilities in TVET learning institutions need to be similar as those in the industry to give the trainees a distinct experience and enable them to retain and upgrade their practical skills; conferences, workshops, and seminars enable trainees to learn how to use modern tools and equipment.

The TVET graduates noted that: They were starved of workshop and laboratory facilities; unemployment was caused by inadequate training in workshop and laboratory facilities; the workshop and laboratory facilities in TVET institutions were not similar to those found in the industries; hence they found it hard to operate the equipment and; TVET institutions need to update their workshop and laboratory facilities to resemble those in the industries.

The researcher noted that through public-private partnership, the industries can need to donate facilities to the TVET institutions to aid in acquisition of practical skills in a

mutually beneficial way; the Skill Development Levy (SDL) can enable the government raise funds to support TVET institutions acquire modern equipment; more trainers need to be trained to operate workshop and laboratory facilities; TVET institutions need to adopt trainee-centred methods like work-based learning; there should be sharing of workshop and laboratory facilities among the TVET institutions since it's expensive to acquire them; the government should monitor and upgrade workshop and laboratory facilities so as to keep pace with technological advancement; most TVET institutions underutilize the available workshop and laboratory facilities; technological changes render the workshop and laboratory facilities obsolete, TVET institutions need to be finance so as to acquire modern workshop and laboratory facilities and; curriculum needs to include practical lessons that meet the socio-economic needs of the region.

#### **4.7.4 Gender Equality in Employment**

The industry experts felt that: Female labour force participation is significant and increases an organization's productivity; the industries have not achieved equalized gender distributed workforce; gender stereotypes favour the male gender; there is a need to have gender balance; a male chauvinistic mindset results in gender discrimination for it does not allow women to be ably represented in leadership positions; embracing social justice ensures that women are not involved only in household odd jobs but also in white-collar jobs; there should be a desire for equality in the industries to eliminate gender inequality; the government needs to create legislative and organizational conditions that promote gender equality.

The TVET graduates felt that to minimize gender inequality: employment equality policies should be put in place; women need to be retained in the industries;

incentives should be put in place to attract female trainees into engineering courses so that it is not male-dominated; there should be gender-equal attitudes in employment; there should be improved gender legislations in labour; the government should improve gender regulations that protect employment conditions; the industry needs to revisit the list of jobs barring the usage of the females. Women need jobs that will not harm their health.

The researcher felt that: Having more educated women in the industries result in less gender inequality; industries should discourage appointment of the female gender in feminine positions only; women should not conform to their traditional gender roles only; gender equality in the employment is critical since it promotes fairness; female graduates need not be uncomfortable or intimidated by with labour-intensive tasks such as plastering, floor screeding, and concrete mixing; the female gender prefers office work which is less labour intensive (Game et al., 2020); more technicians are required in the field to work, and very few are required in the office; industries should provide equal opportunities to both gender; there should be no direct discrimination in employment; the female TVET graduates should be well represented in employment; there should be enactment of proper policies and laws that balance the welfare treatment between males and females in employment; national bodies that promote gender equality need to be put up ensure strict adherence to gender equality.



## **CHAPTER FIVE**

### **SUMMARY OF FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS**

#### **5.1 Introduction**

The preceding chapter dealt with several aspects relating to the research problem. This present chapter is a comprehensive summary of the Study, Summary of the Major Findings, Conclusions, Recommendations, and Suggestions for Further Study, concerning the study's findings regarding the factors influencing the employability of TVET graduates in Uasin Gishu County, Kenya.

#### **5.2 Summary of the Study**

In summary, the study has five chapters. Chapter one outlined the context of the study and described the TVET institutions and the employability status of their graduates. The study purposed to analyze the factors that influenced the employability of TVET graduates in Uasin Gishu County, Kenya. Research questions were formulated to investigate these factors. Therefore, the research study was essential as it may recommend policies that would promote the employability of the TVET graduates. Chapter two of the study is set out to understand the existing related literature and hence bring out the existing gaps in the research area and advance a theoretical framework that would help interpret the research findings and conceptualize the method to be used by the researcher. The literature review related to this study provided the guidelines and laid the foundation for interpreting the data collected. In chapter three, the research methodology was presented. The discussion incorporated the research strategy, the design, the procedure, the methods, and the validity and reliability of the research instruments. The study gathered information from industry experts and TVET graduates.

Chapter Four focused on the presentation and discussion of the significant findings discussed in line with the research questions. The return rate of questionnaires was 91%. Tables, Pie Charts, Graphs, and narration, were employed in the presentation and analysis of the data. Chapter five presented the: Summary of the Study, Summary of the Major Findings, Conclusion, Recommendations, and Suggestions for Further Study.

### **5.3 Summary of the Major Findings**

The TVET graduates' demographic data revealed that: TVET institutions were dominated by the male gender, rating at 65.9%; the Majority (39.9 %) of them were youths aged between 20-24 years, and most (46.4%) of them graduated in the year 2014. These results show that there was gender disparity in TVET institutions and that TVET graduates are seen to proceed to the industries immediately after they finish schooling.

Most (28) undertook Diploma Information Communication Technology, while only 7 pursued Diploma in Building Technology and Craft Certificate in Masonry. On gender, most male graduates (20) pursued Diploma in Mechanical Engineering while none of them was reported to have undertaken Diploma in Secretarial and Office Management. The lion's share of the female graduates (19) was reported to have undertaken Diploma in Information Communication Technology and Diploma in Secretarial and Office Management, while none undertook Diploma in Mechanical Engineering, Diploma Electrical and Electronics Engineering, Diploma in Survey, Craft Certificate in Masonry, Artisan in Automotive Engineering, Diploma in Architecture, and Diploma in Automotive Engineering. The distribution of courses by

gender was significant ( $p < 0.05$ ) since most male graduates pursued technical courses while the female graduates pursued business-related courses.

- i. The most significant part of industry experts (73.2%) was male, while 26.8% were female. The participation of females in the industries was low since males dominated most positions. Incorporating the females' views is vital for it enriches the study (Hitka et al., 2018).
- ii. The ratio between males and females is so wide-spaced, so much work is to be done to mainstream gender in technical education. The majority of the industry experts (40.8%) were aged between 31 and 40 years, 31% were between 20 and 30 years, and 28.2% were 41 years and above. In addition, 64.8% and 35.2% of the industry experts were private and public industries employees.
- iii. On matching the training offered in TVET institutions with the industry expectations, the majority of the graduates (46.4%) strongly disagreed that the training offered in TVET institutions matched the industry expectations. In comparison, only 17.9% of them agreed with it. A more significant number of the graduates (54.2%) strongly disagreed that they are competent in their jobs, while 11.3% strongly agreed that they are competent. A lion share of the graduates (63.7%) strongly disagreed that they work in their technical fields of training, while only 23.8% strongly agreed that they work in fields they trained. When asked whether skills required by the industry experts were taught in the TVET institutions, 23.8% said yes, while 76.2% said no. More industry experts (69.0%) strongly agreed that graduates are not employed since their training does not match industry expectations, while 7% strongly disagreed. In addition, 83.2% of the industry experts strongly agreed that they

only employ graduates in their technical fields. There is an inadequate supply of TVET graduates in the technical field. There was a significant positive relationship ( $r > 0$ ;  $p < 0.05$ ) between matching the training offered in TVET institutions with the industry expectations and the employability of TVET graduates. Matching the training offered in TVET institutions with industry expectations promotes employability because it contributes to functional graduates who are instrumental in the industries (Okumu & Bbaale, 2018).

- iv. On TVET institutions' collaboration with the industries, most graduates (39.9%) strongly agreed that industries provide on-the-job training before employing graduates. In comparison, 33.3% of them strongly disagreed with the same. On the other hand, 41.7% of the graduates disagreed that industries liaise with TVET institutions on practical skills training, while 30.4% agreed. When asked whether the industry is committed to providing apprentice services to graduates, 46.4% strongly agreed, 29.2% strongly disagreed, 12.5% disagreed, 11.3% agreed, and only 0.6% were undecided. Most industry experts (59.2%) strongly agreed that they employ graduates who have undergone proper industrial training, while 12.7% strongly disagreed. Most industry experts (62%) strongly agreed that they employ graduates who have undergone industrial internships programs. In interview results on how to improve TVET institutions' collaboration with the industries, the majority of the respondents argued that the industry should take part in TVET curriculum and training. Some added that *“lifelong learning should be encouraged to attain practical skills rather than certificate acquisition.”* On whether industrial attachment for lecturers increases the employability rate of their trainees, 66.2% strongly agreed, 15.5% agreed, 11.3% strongly disagreed,

4.2% disagreed, and 2.8% were undecided. Whether train-ship programs offered by industries increase the employability rate of their trainees, 59.2% of the respondents strongly agreed, 16.9% agreed, 9.9% strongly disagreed, 5.4% disagreed, while 2.8% were neutral. Generally, a significant positive relationship ( $r>0$ ;  $p<0.05$ ) was recorded between TVET institutions' collaboration with industries and graduates' employability. However, an insignificant relationship ( $p>0.05$ ) between job training and graduates' employability was recorded. TVET institutions' collaboration with the industries on training enables trainees and trainers to use a natural work environment to get 'hands-on' experiences and deserve mention if training institutions have to be relevant in their endeavor. The collaboration offers trainees and trainers hands-on instruction methodology, which has the most significant potential of efficiency for transferring relevant knowledge, skills, and work ethics for their respective trades. Also, the industry benefits from the production and technology transfer from TVET attached to the process.

- v. On the availability of workshop and laboratory facilities in TVET institutions, most of the graduates (47%) strongly agreed that workshop and laboratory facilities in TVET institutions enhance the acquisition of practical skills. 15.5% agreed, 28.6% were neutral, 8.3% strongly disagreed, and only 0.6% disagreed. On the other hand, most industry experts (66.2%) strongly agreed that graduates should operate tools and equipment effectively to be employed, 29.2% agreed, 20.2% were undecided, and 8.3% disagreed and strongly disagreed. When graduates were asked whether workshop and laboratory facilities in TVET institutions are similar to those in the industry, 38.1%

strongly agreed, 12.5% agreed, 19.6% were undecided, 29.2% disagreed, while only 0.6% strongly disagreed.

- vi. When industry experts were asked whether the unemployment of the TVET graduates is due to their inadequate training, 63.4% of them strongly agreed, 19.7% agreed, 9.9% disagreed, 5.6% strongly disagreed, while only 1.4% were undecided. 66.2% strongly agreed, 16.9% agreed, 8.5% strongly disagreed, 7% disagreed, and 1.4% were neutral on whether the industry employs graduates who can operate machines. On whether the facilities found in the industries are similar to those in TVET institutions, 70.4% strongly agreed, 12.7% agreed, 1.4% were neutral, 8.5% disagreed, and 7% strongly disagreed. Lastly, when asked whether the unemployment of graduates is due to their incompetency in operating the equipment, tools, and machines, 64.8% strongly agreed, 18.3% agreed, 1.4% were neutral, and 5.6% disagreed. In comparison, 9.9% strongly disagreed, as indicated in Table 4.11. Regression analysis results on the relationship between the availability of workshop and laboratory facilities in TVET Institutions and the employability of TVET graduates are presented in Table 4.12. There was a significant positive relationship ( $r > 0$ ;  $p < 0.05$ ) between the operation of tools, equipment, availability of facilities, and TVET graduates' employability. However, an insignificant positive relationship ( $r > 0$ ;  $p > 0.05$ ) was recorded between facilities in TVET institutions and employability.
- vii. On the extent to which gender equality influences the employability of TVET graduates, graduates were asked whether industry officials are gender-biased in employment, and 54.2% strongly agreed, 23.2% agreed, 22% were neutral, while only 0.6% strongly disagreed. Approximately 27.4% of the graduates

disagreed that the industry strives for gender balance, 22.6% strongly disagreed, 9.5% strongly agreed, and 40.5% were undecided. The majority of the respondents (53%) disagreed that both genders are given equal responsibilities, 20.8% strongly disagreed, 25.6% were undecided, and 0.6% strongly agreed. The study noted that a significant positive relationship ( $r>0$ ;  $p<0.05$ ) was recorded between gender balance, gender-based responsibilities, and the employability of TVET graduates. Industry experts were asked whether equality is observed in graduates' employability to ensure gender balance, and the majority of the respondents (57.7%) agreed, 21.1% strongly agreed, 15.5% undecided, 4.2% disagreed, and 1.4% strongly disagreed. A study by Paez & Tin (2021) reported the importance of gender in graduates' employability.

- viii. In this study, employers revealed that they do not view gender equality as an essential issue when employing the TVET graduates; studies support this as ur Rahman et al. (2018) established no significant relationship between gender equality and employability of the TVET graduates. On the other hand, authors such as Matenda (2020) and Hiden & Shen (2019) have strongly advocated for gender equality.

#### **5.4 Conclusion**

Employability of TVET graduates is an important issue for policymakers. It should be good quality and, at the same time, allow for self-employment. For the demand side, policy issues should be related to the curriculums and the program structure, other than policy issues that affect the operation of labour outcomes, such as the mismatch of skills and training in labour markets.

Findings from the present study noted that factors exist that influence the employability of TVET graduates. TVET equips the graduates with the technical skills needed for employability. However, most of the graduates' respondents reported a mismatch of training in TVET institutions with industry expectations. In addition, most industry experts recorded that most graduates are not employed due to a lack of proper training. Results further recorded a significant relationship between matching training in TVET Institutions with industry expectations and graduates' employability. It indicated that most TVET graduates gain employment in their areas of specialization.

The majority of the respondents agreed that TVET institutions' collaboration with the industries is significant in promoting the graduates' employability. In addition, there was a significant positive relationship between TVET institutions' collaboration with the industries and employability. Findings further recorded that graduates strongly agreed that there are inadequate workshop facilities in TVET institutions. In addition, there was a significant positive association between the operation of tools, equipment, and availability of facilities and the employability of TVET graduates.

However, an insignificant positive relationship was recorded between facilities in TVET institutions and the employability of the TVET graduates. The majority of graduate respondents strongly agreed that employment opportunities are there. However, industry experts affirmed that the lack of graduates in TVET was the main challenge faced in employment. Findings further indicated that there was gender biasness during employment of the TVET graduates. The male gender was reported to be more preferred than the female. Regression results as indicated in Table 4.15,



showed that gender equality significantly affected the employability of the TVET graduates.

### **5.5 Recommendations**

To enhance TVET graduates' employability, matching training in TVET institutions with industry expectations, equipping technical education facilities and gender recommendations are worth considering and applying. The Kenyan government needs to direct its attention and resources to developing engineering infrastructure, empowering the country to design, fabricate, and produce large quantities of workshops and essential laboratory equipment, machines, and tools. The obsolete, substandard, outdated, and damaged workshop and laboratory facilities should be replaced with modern ones. The Kenya National Qualification Authority Framework should promote proficiency by ensuring that each qualification level and linked with the national qualification frameworks. There is a need to appreciate the training and improve the current TVET curriculum. Good awareness campaigns do enlighten the industry stakeholders on the importance of schooling. There is a need for constant curricula reviews once every three years, as is the requirement with technical skills. Technical skills require that the curricula be reviewed since we live in a dynamic society. Collaborations need to be strengthened to ensure that they mutually help the TVET graduates and the industry. To establish an evidence program that is responsive to the needs of the TVET graduates and the industry experts. There should also be an advancement in monitoring and evaluation of TVET and tracking its graduates to establish their progress. The government should fund the TVET sector to enable it to attract many trainees.

### **5.5.1 Recommendations for Practical Action**

The research recommends that TVET institutions need to liaise with the industries on training matters. As a result, they will establish the technical areas in demand and consequently train more trainees to fill that gap.

Reforms like establishing the new Competency-Based Education and Training (CBET) curriculum should be developed to respond to the current industry demands. CBET curriculum requires performance as the primary source of evidence at the end of a learning experience. It is a flexible modular-based system, and trainees can obtain as many modules as possible to lead to the certification. It is also local to a given area.

The introduction of the Employment and Training Fund (ETF) will provide grants or loans to support the provision of TVET. As a result, the trainees will upgrade their skills and become more competitive, thus improving their performance in the industries.

The CBET Train-the-Trainer workshops should be introduced to equip trainers with the necessary tools to plan CBET programs using occupational standards and the KNQA Framework developed by the industry, deliver programs using competency-based methods, review training programs and deliver quality service to customers. These improve the training quality delivered to the trainees who acquire technical skills, positive attitudes, and knowledge required for employability. Also, the government should ensure quick evolution of technology is at the forefront of the government agenda to rebrand TVET.

TVET should be a Life Long Learning Programme (LLLP) to allow Continuing Professional Development (CPD) training and upskilling in your chosen professional area. It can be achieved through workshops, seminars, conferences, and advanced certifications in specialized professional areas. It will help trainees improve their knowledge, be innovative and develop professionally. In addition, the industries should support the TVET institutions through vigorous exchange programs.

TVET institutions need to satisfy the learning desires of their trainees. The trainees should equally access suitable education programs as articulated by the Education for All (EFA) global movement. The training needs to support trainees who are good in mathematics, analytical skills and spatial skills, verbal skills, and kinesthetic skills.

Hence, TVET programs need to provide more significant opportunities for the diverse trainees to participate in building the nation towards the attainment of its' development blueprint, Kenya Vision 2030. TVET needs to provide a path for the trainees inclined towards early vocational quests.

### **5.5.2 Suggestions for Further Study**

The following are suggestions for further research;

- i. Employment of rural versus urban graduates.
- ii. Comparative analysis of the employment of public versus private TVET institutions graduates.
- iii. Determinants of collaboration between TVET institutions and the industries.
- iv. Relevance of the Diploma in Civil Engineering TVET curriculum in Bungoma County, Kenya.

- v. A study to find out how TVET graduate's tracer survey mapping determines the needs of the industry employers
- vi. A study on influence of infrastructural facilities such as learning facilities, game facilities textbooks, water facilities, toilets and hostels on employment of TVET graduates.
- vii. A study on the financing of TVET institutions.

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## APPENDICES

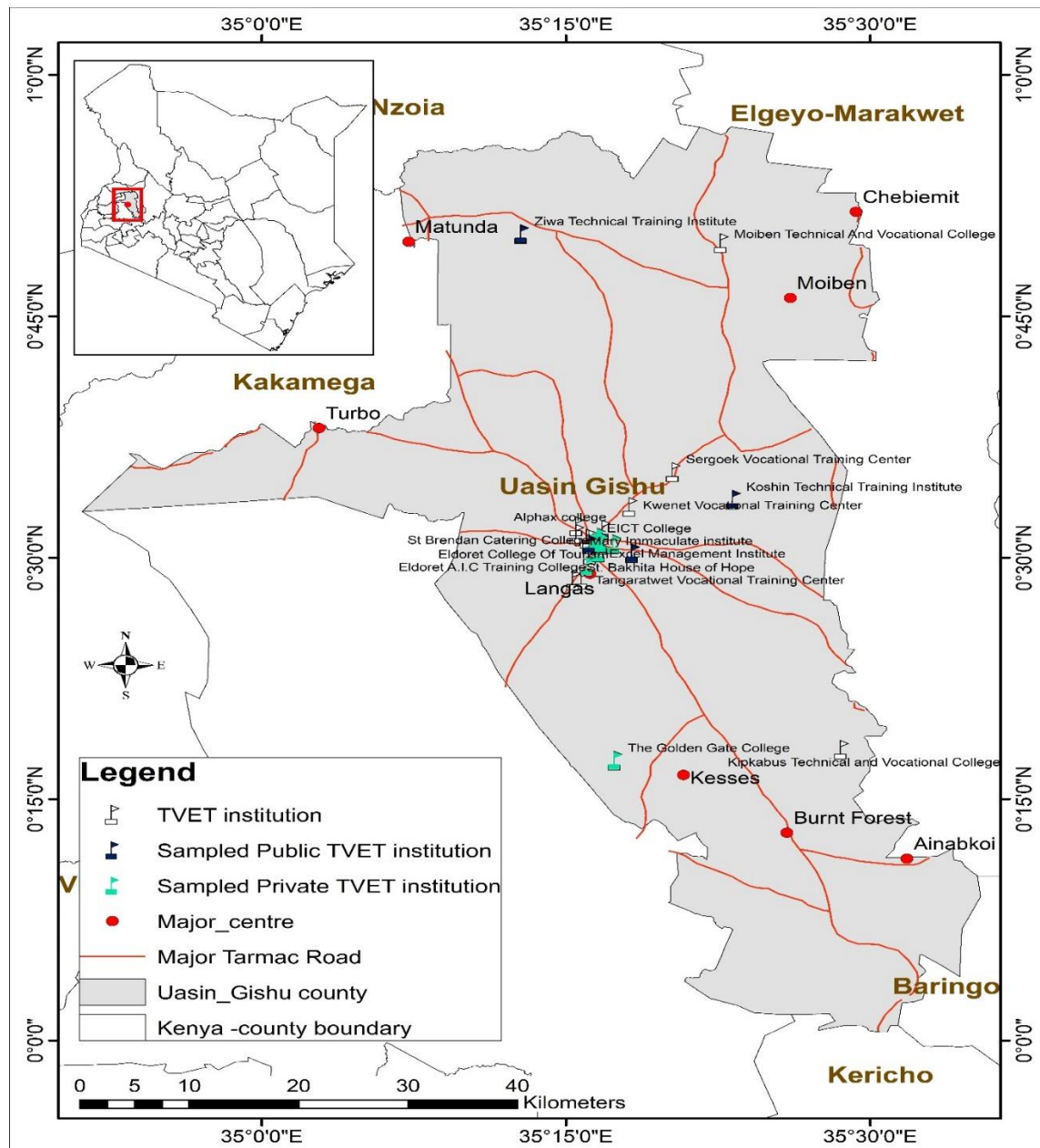
### Appendix I - Table for determining sample size from a given population

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	1000000	384

**Key:** N – population size, S – Sample size

**Source:** Krejcie & Morgan (1970)

**Appendix II - Map of the Study Area**



**Key:** N – North

**Source:** Author (2017)

### Appendix III - TVET Institutions in Uasin Gishu County as at 2017

S.NO	TVET INSTITUTION	TYPE
1.	Africa International College Aico	Private
2.	Alphax College	Private
3.	Ancilla Vocational Training Institute	Private
4.	Apex Institute of Management Studies	Private
5.	Arise and Shine Vocational Training Center,	Private
6.	Cambridge Universal College	Private
7.	Data to Information Technical College	Private
8.	East Africa Institute of Certified Studies	Private
9.	EICT College	Private
10.	Eldoret A.I.C Training College	Private
11.	Eldoret Aviation Training Institute	Private
12.	Eldoret College of Professional Studies	Private
13.	Eldoret College of Tourism	Private
14.	Eldoret National Polytechnic	Public*
15.	Eldoret Technical Training Institute	Private
16.	Eldoret Vision Institute of Technology	Private
17.	Elgon View College- Main Campus	Private
18.	Excel Management Institute	Private
19.	Kenya College of Professional Studies	Private
20.	Kenya Institute of Applied Sciences	Private
21.	Kenya Institute of Business Technology	Private
22.	Kenya Institute of Management	Private
23.	Kenya Institute of Professional Studies	Private
24.	Kenya Medical Training College Eldoret Campus	Public*
25.	Kings College of Accountancy	Private
26.	Kipkabus Technical and Vocational College	Public*
27.	Koshin Technical Training Institute	Public*
28.	Kwenet Vocational Training Center	Public*
29.	Mary Immaculate Institute	Private
30.	Moiben Technical and Vocational College	Public*
31.	Nehema Institute of Science & Technology	Private
32.	Rift Valley College of Management and Technology	Private
33.	Rift Valley Technical Training Institute	Public*
34.	Robin Institute of Business Studies	Private
35.	Sergoek Vocational Training Center	Public*
36.	St Brendan Catering College	Private
37.	St. Bakhita House of Hope	Private
38.	Tangaratwet Vocational Training Center	Public*
39.	The Golden Gate College	Private
40.	Umuro Vocational Training Center	Public*
41.	Victory College of Accountancy	Private
42.	Ziwa Technical Training Institute	Public*

## Appendix IV - Letter of Information



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Moi University

P. O Box 2500, Eldoret.

14<sup>th</sup> January 2017

Dear Sir/Madam

### **RE: RESEARCH DATA COLLECTION**

I am a postgraduate student at Moi University, pursuing a Master of Education in Technology Education (Building and Civil Technology). It is a requirement for the course to carry out a research project. Currently, I am soliciting information on the topic “**Factors Influencing Employability of Technical and Vocational Education and Training Graduates in Uasin Gishu County, Kenya.**” Your institution has been selected for data collection. Therefore, I kindly request your permission to collect your institution or organization data in October 2017. My respondents will be 86 industry experts and 186 TVET graduates who graduated between 2014 and 2016 from selected TVET institutions in Uasin Gishu County. The researcher will use questionnaires and interview schedules to collect data. This research is purely academic, and any information provided shall be treated with confidentiality.

Yours faithfully,

Nyongesa Wafula Simon

EDU/PGT/1004/14.

### **Appendix V – Informed Consent**

Hello, I am Nyongesa Wafula Simon, a Masters's student at Moi University conducting a research study as part of the Master of Education in Technology Education (Building and Civil Technology) requirement. The study is entitled, **“Factors Influencing Employability of Technical and Vocational Education and Training Graduates in Uasin Gishu County, Kenya.”** The information procreated will be shared with stakeholders to ensure decent interventions are made so that TVET graduates remain relevant, innovative, and marketable. During the research, you have the rights to :

- i. Participate voluntarily, withdraw at any time, and not be coerced.
- ii. Understand the procedures of the study and reasonably know what to expect.
- iii. Understand the nature of the study, what it proposes, and its likely impact.
- iv. Ask questions during the research; contacts are provided below.
- v. Obtain a copy of the research results; references are provided below.
- vi. Have your privacy respected; the information you provide will be kept strictly confidential and used for this study only.
- vii. To know the benefits that will be accrued to you by the study.

Since the study is of great importance, kindly participate by filling the attached questionnaire and give your responses with as much honesty as possible. Thank you.

We have carefully read and agreed to the above provisions of the research.

RESEARCHER’S

SIGNATURE:.....DATE:.....

PARTICIPANT’S

SIGNATURE:.....DATE:.....

Yours sincerely,

**Nyongesa Wafula Simon**  
EDU/PGT/1004/14.





10. Traineeship programmes we offer to increase the employability rate of the graduates.

Strongly Agree ( ) Agree ( ) Neutral ( ) Disagree ( ) Strongly Disagree ( )

11. Sharing workshop facilities with TVET Institutions promotes the employability of the graduates.

Strongly Agree ( ) Agree ( ) Neutral ( ) Disagree ( ) Strongly Disagree ( )

***Section D: Influence of workshop and laboratory facilities in TVET institutions on employability of TVET graduates***

12. Graduates are "undertrained" technically on operating equipment, tools, and machines; hence do not get employed.

Strongly Agree ( ) Agree ( ) Neutral ( ) Disagree ( ) Strongly Disagree ( )

13. We only employ graduates who can operate tools, equipment, and machines

Strongly Agree ( ) Agree ( ) Neutral ( ) Disagree ( ) Strongly Disagree ( )

14. Equipment, tools, and machines are not similar to those found in TVET institutions; hence graduates do not get employed to operate them.

Strongly Agree ( ) Agree ( ) Neutral ( ) Disagree ( ) Strongly Disagree ( )

15. Graduates are incompetent in operating equipment, tools, and machines; hence we do not employ them.

***Section E: Extent to which gender equality influences employability of TVET graduates***

16. Gender equality is observed in the graduates' employment to ensure gender balance.

Strongly Agree ( ) Agree ( ) Neutral ( ) Disagree ( ) Strongly Disagree ( )

17. Why don't you consider gender equality in employment if you disagree or strongly disagree?

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

**Thank you for your time.**

## Appendix VII - TVET Graduates' Questionnaire

This questionnaire is designed to help the researcher get information on *Factors Influencing Employability of Technical and Vocational Education and Training (TVET) Graduates in Uasin Gishu County, Kenya*. Please read the instructions for each question carefully before giving the responses required. It is important to give correct and accurate responses to this questionnaire. The information given would be used for research purposes only and strictly confidential.

### *Section A: Demographic Information*

1. Gender: a) Male [  ]      b) Female [  ]
2. Age: a) 15-19 years [  ]      b) 20-24 years [  ]      c) 25-29 years [  ]  
d) 30 years & greater [  ]
3. Year of graduation: .....
4. Name of course undertaken: .....

*Would you please tick the answer that best describes your responses in sections B, C, D, E, and F*

### *Section B: Matching the training offered in TVET institutions with the industries expectations*

5. The training was oriented towards the industry expectations, and this helped me gain employment  
Strongly Agree (  ) Agree (  ) Neutral (  ) Disagree (  ) Strongly Disagree (  )
6. I am competent in the tasks I am expected to perform in the industry  
Strongly Agree (  ) Agree (  ) Neutral (  ) Disagree (  ) Strongly Disagree (  )
7. I work in my technical field of training  
Strongly Agree (  ) Agree (  ) Neutral (  ) Disagree (  ) Strongly Disagree (  )
8. Do the industry experts require the skills you were taught in your technical institution?  
Yes [  ]      No [  ]

### *Section C: TVET Institutions collaborate with the industries on employability of the TVET graduates.*

9. Industries provide on-the-job training before giving the job to the graduates  
Strongly Agree (  ) Agree (  ) Neutral (  ) Disagree (  ) Strongly Disagree (  )

**10.** Industries liaise with TVET institutions on practical skills training

Strongly Agree ( ) Agree ( ) Neutral ( ) Disagree ( ) Strongly Disagree ( )

**11.** The industry is committed to providing apprentice services to the TVET graduates

Strongly Agree ( ) Agree ( ) Neutral ( ) Disagree ( ) Strongly Disagree ( )

***Section D: Availability of workshop and laboratory facilities***

**12.** Tools, equipment, machines, and laboratories in TVET Institutions enhance the practical skills needed for employment.

Strongly Agree ( ) Agree ( ) Neutral ( ) Disagree ( ) Strongly Disagree ( )

**13.** TVET graduates need to operate tools, equipment, and machines effectively to be employed?

Strongly Agree ( ) Agree ( ) Neutral ( ) Disagree ( ) Strongly Disagree ( )

**14.** Tools, equipment, and machines in TVET Institutions are close and similar to those in the industry, making us employable.

Strongly Agree ( ) Agree ( ) Neutral ( ) Disagree ( ) Strongly Disagree ( )

***Section E: Gender equality in employment***

**15.** Industry experts prefer a certain gender in employment

**16.** Strongly Agree ( ) Agree ( ) Neutral ( ) Disagree ( ) Strongly Disagree ( )

If you strongly agree, which gender do they prefer? Male [ ] Female [ ]

**17.** Certain employment positions are kept for a specific gender to have gender balance in employment?

Strongly Agree ( ) Agree ( ) Neutral ( ) Disagree ( ) Strongly Disagree ( )

**18.** Are both genders given the same responsibilities in the industry?

Strongly Agree ( ) Agree ( ) Neutral ( ) Disagree ( ) Strongly Disagree ( )

*Thank you for your co-operation.*

**Appendix VIII- Industry Experts' Interview Guide**

- 1. In your view, how do we match the training offered in the TVET institutions with the industry expectations?

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

- 2. Generally, how do we improve TVET Institutions' collaboration with the industries?

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


- 3. How do we ensure that the graduates can effectively operate tools, equipment, and machines to promote their employability?

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

- 4. How do we promote gender equality in the employment of TVET graduates?

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

## Appendix IX - Research Permits



**NATIONAL COMMISSION FOR SCIENCE,  
TECHNOLOGY AND INNOVATION**

Telephone: +254-20-2213471,  
2241349, 3310571, 2219420  
Fax: +254-20-318245, 318249  
Email: dg@nacosti.go.ke  
Website: www.nacosti.go.ke  
When replying please quote

NACOSTI, Upper Kabete  
Off Waiyaki Way  
P.O. Box 30623-00100  
NAIROBI-KENYA

Ref. No. **NACOSTI/P/18/83971/21143** Date: **20<sup>th</sup> February, 2018**

Simon Wafula Nyongesa  
Moi University  
P.O. Box 3900-30100  
**ELDORET.**

**RE: RESEARCH AUTHORIZATION**

Following your application for authority to carry out research on ***“Factors influencing employment of Technical, Vocational and Educational Training (TVET) graduates in Uasin Gishu County, Kenya,”*** I am pleased to inform you that you have been authorized to undertake research in **Uasin Gishu County** for the period ending **20<sup>th</sup> February, 2019.**

You are advised to report to **the County Commissioner and the County Director of Education, Uasin Gishu County** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

*G.P. Kalerwa*  
**GODFREY P. KALERWA MSc., MBA, MKIM**  
**FOR: DIRECTOR-GENERAL/CEO**

*Proceed*  
**COUNTY COMMISSIONER**  
**UASIN GISHU COUNTY**

Copy to:

The County Commissioner  
Uasin Gishu County.

The County Director of Education  
Uasin Gishu County.

*Proceed*  
**29/02/18**  
**FOR: DIRECTOR OF EDUCATION**  
**UASIN GISHU COUNTY**  
**P.O. Box 9843, ELDORET**  
**127 2121053-2063442**

**THIS IS TO CERTIFY THAT:**  
**MR. SIMON WAFULA NYONGESA**  
**of MOI UNIVERSITY, 76-50204**  
**KIMILILI, has been permitted to conduct**  
**research in Uasin-Gishu County**

**Permit No : NACOSTI/P/18/83971/21143**  
**Date Of Issue : 20th February, 2018**  
**Fee Received :Ksh 1000**

**on the topic: FACTORS INFLUENCING**  
**EMPLOYMENT OF TECHNICAL,**  
**VOCATIONAL AND EDUCATIONAL**  
**TRAINING (TVET) GRADUATES IN UASIN**  
**GISHU COUNTY, KENYA**

**for the period ending:**  
**20th February, 2019**



*Signature of Applicant*

**Applicant's**  
**Signature**

*Signature of Director General*

**Director General**  
**National Commission for Science,**  
**Technology & Innovation**

**CONDITIONS**

1. The License is valid for the proposed research, research site specified period.
2. Both the Licence and any rights thereunder are non-transferable.
3. Upon request of the Commission, the Licensee shall submit a progress report.
4. The Licensee shall report to the County Director of Education and County Governor in the area of research before commencement of the research.
5. Excavation, filming and collection of specimens are subject to further permissions from relevant Government agencies.
6. This Licence does not give authority to transfer research materials.
7. The Licensee shall submit two (2) hard copies and upload a soft copy of their final report.
8. The Commission reserves the right to modify the conditions of this Licence including its cancellation without prior notice.



**REPUBLIC OF KENYA**

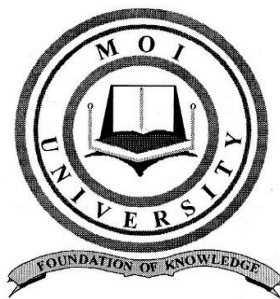


**National Commission for Science,**  
**Technology and Innovation**

**RESEARCH CLEARANCE**  
**PERMIT**

**Serial No.A 17474**

**CONDITIONS: see back page**



**MOI UNIVERSITY**  
**Office of the Dean School of Education**

Tel. Eldoret (053) 43001-8/43620  
Fax No. (053) 43047

P.O. Box 3900  
Eldoret, Kenya

**REF: EDU/PGT/1004/14**

**DATE: 14<sup>th</sup> December, 2017**

**The Executive Secretary**  
National Council for Science and Technology  
P.O Box 30623-00100  
**NAIROBI**

Dear Sir/Madam,

**RE: RESEARCH PERMIT IN RESPECT OF NYONGESA WAFULA SIMON**  
**- EDU/PGT/1004/14**


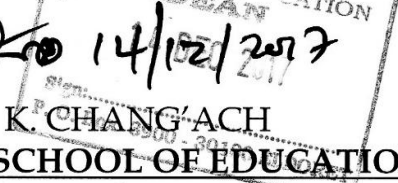
The above named is a 2<sup>nd</sup> year Master of Education (M.Ed) student at Moi University, School of Education, Department of Technology Education.

It is a requirement of his Master of Education (M.Ed) Studies that he conducts research and produces a thesis. His research is entitled:

**“Factors Influencing Employment of Technical, Vocational and Educational Training (TVET) Graduates in Uasin Gishu County, Kenya”.**

Any assistance given to enable him conduct research successfully will be highly appreciated.


Yours faithfully,



  
**PROF. J. K. CHANG'ACH**  
**DEAN, SCHOOL OF EDUCATION**



## Appendix X – Similarity report

SR056



**EDU 999 THESIS WRITING COURSE**

*PLAGIARISM AWARENESS CERTIFICATE*

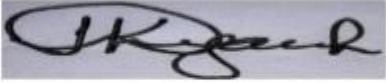
This certificate is awarded to

***NYONGESA WAFULA SIMON***

**EDU/PGT/1004/14**

In recognition for passing the University's plagiarism  
Awareness test with a similarity index of 1% and  
Striving to maintain academic integrity

Awarded by:



Prof. John Changách, CERM-ESA Project Leader

11<sup>th</sup>/04/2022