

**INFLUENCE OF PARTNERSHIPS ON QUALITY OF TECHNICAL
VOCATIONAL EDUCATION AND TRAINING (TVET):
A CASE OF TVET INSTITUTIONS IN RIFT VALLEY AND
WESTERN KENYA REGION**

BY

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DECLARATION

DECLARATION BY THE STUDENT

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DEDICATION

I dedicate this research to my PhD colleagues Murgor Titus, Wamalwa Chrispinus, William Koech and Mutai Wesley whose teamwork spirit was a source of inspiration and motivation during my research.

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ABSTRACT

Although Technical, Vocational Education and Training (TVET) institutions facilitate the acquisition of the practical and applied skills necessary for the world of work, several research findings have revealed that these institutions have limitations and challenges in equipping learners with relevant skills for the job market in many countries including Kenya. Partnerships between TVET institutions and Enterprises can greatly enhance the acquisition of relevant Knowledge, skills and attitudes required for the world of work. Therefore, the aim of this study is to examine the influence of partnerships between Technical Vocational Education and Training (TVET) and enterprises in terms of promotion of access to training by learners, curriculum development, Practical training, Teacher training and the challenges associated with such partnerships in general in their endeavor to achieve quality and relevant education and training. The research adopted mixed methods approach and utilizing descriptive survey design. The study targeted administrative staff of technical training institutions in rift valley and western Kenya regions. Using purposive random sampling, the researcher identified a sample of 40 administrative staff from 12 institutions spread across Rift Valley and Western Kenya region. Data was collected using questionnaires, focus group discussions (FGD) and interview schedule. Qualitative data from Interviews and FGD was transcribed and read several times in a bid to identify categories of emerging topics and sub-topics which were clustered to form themes. Emerging themes were presented through narration citing direct quotes, excerpts and re-contextualized into reviewed literature. The quantitative data was analyzed by use of frequencies and percentages and presented by use of frequency tables. Majority of the respondents (22.5%) stated that Partnerships played a role in supplying curriculum instruction materials which were received as grants or donations from enterprises. Only 7.5% of them reported the use of resource persons from enterprises in curriculum instruction. About 100% of the respondents reported that TVET partners contributed in practical training support system through industrial training support, construction of Laboratories/Workshop and donation of training equipment. The partnership was reported to have played a role in training of TVET trainers programs through in-service training for teachers (25%) and industrial attachment of Teachers (8%). Based on activities that promotes access to TVET such as scholarships offered to students by enterprises stood at (75%). Challenges related to effective communication (67.5%), organizational structures (60%) and differing goals (52.5%) were reported to be the main challenges associated with TVET partnerships. Despite the challenges faced by the partnerships, the study concluded that TVET partnerships have considerable contribution to curriculum development, practical training, teacher in service training and equity in access to training. The findings have provided an inside of how TVET Partnerships is practiced in Kenya. The challenges constraining the partnerships have been put to the fore and procedures for best practice outlined. This findings is considered useful to the policy makers in the ministry of education, heads of TVET institutions, industry players and coordinators of industrial training in TVET institutions in Kenya and beyond Therefore, there is need to address challenges facing TVET partnerships to maximize their performance in technical vocational education and training (TVET) in rift valley and western Kenya regions

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LIST OF ABBREVIATIONS, ACRONYMS AND SYMBOLS

EFA	Education for all
AU	The African Union
CDACC	Curriculum Development Assessment and Certification Council
EBK	Engineers Board of Kenya
GDP	Gross Domestic Product
ICT	Information Communication Technology
ILO	International Labour Organization
KESSP	Kenya Education Sector Support Program
KICD	Kenya Institute of Curriculum Development
MDGs	Millennium Development Goals
MoHEST	Ministry of Higher Education Science & Technology
TVET	Technical and Vocational Education and Training
UNESCO	United Nations Educational, Scientific and Cultural Organization

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter deals with an overview of the background of the study, statement of the problem, research objectives, research questions, significance of the study, theoretical and conceptual frameworks, assumptions of the study, scope of the study, limitations and the operational definition of terms.

1.1 Background of the Study

Technical, Vocational Education and Training (TVET) plays an essential role in promoting knowledge and skills development of workers. However, TVET has long been considered by UNESCO as a key area in education that is continuously facing challenges in preparing workers with dynamic knowledge (Pavlova & Maclean, 2013).

Mitchell (1998), Maclean, & Lai, (2011) notes that in the current environment, a need has arisen to take a fresh look at ways in which closer partnerships can be forged on a new basis of shared responsibility and mutual support between the TVET institutions and enterprise in areas that are of strategic importance, not only for the delivery of training but for all aspects of skill development. Industries are viewing partnerships with TVET institutions as a means for employee training in addition to enabling recruitment and retention. On the other hand, TVET institutions, recognizing their inadequacies in learning environment are resorting to other ways of supplementing their practical training by forging partnership with industry players aimed at improving their training. The

combination of external forces and internal pressures has created a rich opportunity to explore the dynamics of partnerships involving traditional academic institutions

(Prigge, 2005; Susanti, 2011; Robertson *et al.*, 2012).

The rise of the private sector involvement in the education sector reflects a broader shift of public service responsibilities to the private sector. For instance, between 2003 and 2004, the number of approved private providers of supplemental services in TVET in the United States increased by 90 percent, from 997 to 1,890, while the amount of federal funds available for private contracting increased by 45 percent between 2001 and 2005 (Mondiale, 2009). In response, governments are developing institutions, funding mechanisms, and regulatory frameworks to take advantage of the growing capacity and expertise of the private sector to enhance public education.

Traditionally, it has been the responsibility of the State to ensure the effective functioning of any training system. The origin of this traditional sharing of roles lies in the primary concern of industry to develop the skills of their workforce. There has been a sharing of roles model whereby institution-based training is carried out by the TVET institutions and practical training by industry, such as alternate training in France, the dual system in Germany and apprenticeship training in India (Nasir, 2012).

It is recognized throughout the international TVET community that some of the best examples of TVET systems have embraced partnerships such as in Australia, Canada, Germany, and the United States (Boutin *et al.*, 2009; Maclean & Lai, 2011). Each system has stood the test of time and over the years, often through robust industry engagement,

has developed highly responsive TVET systems that have the potential to modernize according to training and technological developments throughout industry. However, the complexities of these countries' TVET systems limit what can be adopted by a developing nation (Hughes, 2005; Maclean *et al.*, 2018). The Japanese model of TVET takes place at the high school level with schools developing relationships with local employers who can pick from the best and the brightest. Countries such as South Korea, Malaysia and Singapore are more focused on a Human Resource Workforce Development model where all entities, private, public and social, contribute to the training and employment of an individual (Nasir, 2012).

In Costa Rica, the Omar Dengo Foundation (ODF), Wal-Mart, the Ministry of Public Education, the Ministry of Justice and Microsoft joined efforts and established Exploration in order for students and youth at social risk to acquire a set of non-formal learning experiences aimed at developing their creativity, productivity and health recreation (Gupta *et al.*, 2007).

Another contemporary example of partnership in education and training is the contracts to attract private funding to build and maintain school infrastructure which is spreading in European countries. Also, the governments of Colombia, Qatar, and the United States have contracted with private partners to manage public schools to cater for the differentiated demand for education, in some cases using a franchising model to take advantage of good practices and economies of scale. In several countries in the OECD (the Organization for Economic Co-operation and Development), including Denmark, New Zealand, Norway, and the United Kingdom, more than 20 percent of public

expenditure is transferred to private organizations either directly or through households to pay for education services and maximize school choice (Puukka & Marmolejo, 2008).

Several African countries subsidize private schools, mostly faith-based nonprofit organizations, either with school inputs (such as teacher salaries and textbooks) or through per pupil grants. The Gambia, Mauritius, and Zimbabwe rely substantially on private schools to deliver public education (Mkoga, 2013). Recently, the attempt to achieve universal enrollment in basic education coupled with limited public funding has increased demand across Africa to such an extent that this has fueled a growth in the number of private low-cost schools that cater for low-income students, mostly at the secondary level (Mkoga, 2013). This has given rise to a two tier system, with a few well-funded private schools that cater for high-performing students and many private schools with no government support that do not perform as well (Verspoor, 2008). Although many African countries recognize the importance of private schools in meeting demand and have found ways to expand access to education, the quality of the education and equity of access remain a challenge (Verspoor, 2008).

In 2005, Namibia's Information and Communications Technologies (ICTs) in Education Initiative, TECH/NA was established as part of a Sector-Wide Approach. The main goal was to equip, educate and empower TVET institutions with hardware, software, connectivity, curriculum, content and technical support as well as educate administrators, teachers and learners in ICT literacy and integration, and to empower communities. Support for this initiative came from many local and international partners. In addition to the funding by the Namibian government, various development partners, NGOs, civil

society organizations, and public and private partners provided and keep providing financial and in-kind contributions (Brannigan, 2010; Sakari, 2013).

The government of Kenya is encouraging partnerships in education sector. However, a big challenge for the development of TVET training in Kenya has been the relevance of the skills taught to the dynamic market demands and the terminal nature of TVET training including the lack of sufficient training opportunities for TVET at higher and post graduate levels (Pavlova, 2007). To confront the above situation, the government ought to promote partnerships with industry to provide the students with an authentic learning environment and exposure to real-life industry projects and applications (Republic of Kenya, 2014).

The Constitution of Kenya 2010 Article 10 articulates national values that education and training should develop and nurture. Article 55 states among other things that the state shall take measures including affirmative action to ensure that the youths access relevant education and training. The TVET Act 2013 provides for the inculcation of technical and professional skills, knowledge and levels of qualification needed in the various sectors of the economy. The TVET National Training Strategy (NTS) was developed to guide the growth of the TVET sub sector, particularly the competency based education and training that is demand driven. Article 3 of TVET act provides for improved training, delivery modes and life-long employability of the graduates. The Industrial Training Act 2012 provides for establishment of the National Industrial Training Authority which oversees the management of in-service training and the Industrial Training Levy.

1.2 Statement of the Problem

Lack of financial and managerial capacity impedes many governments' ability to meet obligations in regard to their national educational systems (Bertsch *et al.*, 2005). The private sector and general business community's involvement in education is usually limited and associated with philanthropy in Kenya. Any attempt by the government to increase budgetary allocations towards the education sector would generate greater imbalance in the development of the country's social economic development. According to Nyerere (2009), TVET system in Kenya is characterized by weak curriculum that is not flexible enough to meet the technological changes and diverse needs of different clients, poor instructional methods, outmoded/inadequate training equipment and lack of meaningful work experience and supervision during attachment. As a result, the quality of TVET graduates has continued to decline in recent years to an extent where graduates of TVET experience technology shock when they finally enter the job market.

In order to improve the quality and hence relevance in TVET, governments may have to consider alternative methods such as partnerships with enterprises so as to meet their commitments in education and training. Establishing partnerships with the private sector especially enterprises with valuable financial and material resources and expertise can assist governments to expand and improve the quality TVET services hence meet EFA and sustainable development goals.

Collectively the findings of previous studies across the world provide evidence that partnership between TVET and enterprises can improve the quality of training. However, despite of the many challenges faced by TVET institution in training, little research has

been done in elucidate the influence of partnerships with Enterprises on the quality of TVET training. Therefore, the present study sought to evaluate the influence of partnerships on quality of Education and training in TVET institutions in Rift Valley and Western Kenya regions

1.3 Objectives of the Study

General objective

The general objective of this study was to examine the influence of partnerships on the quality and relevance of TVET in Rift Valley and western Kenya Regions.

Specific Objectives

The specific objectives of the study are as follows: -

1. To examine the influence of partnerships in curriculum development for quality TVET.
2. To assess the influence of partnerships on the quality of practical training in TVET institution.
3. To establish the influence of partnerships on quality of TVET teacher training programs.
4. To examine the influence of partnerships in supporting equity in access to training by students for quality TVET
5. To determine the challenges experienced by TVET institutions in pursuing partnerships for quality training

1.4 Research Questions

The following research questions were used to guide the study:

1. What is the influence of TVET and enterprise partnership in Curriculum development and validation?
2. What activities do TVET partners engage in to promote practical training in TVET institutions?
3. What is the contribution of Enterprises towards TVET teacher in-service training programs?
4. How does the private enterprise influence equity in access to TVET by students?
5. What are the challenges associated with TVET institutions partnership with Enterprises?

1.5 Justification for the Study

Partnership in TVET is a new concept in Kenya. It is therefore an exciting and valuable subject of study especially when it pertains to its influence on quality and relevance to education and training. This study is expected to add an academic value to the field of TVET partnership in Kenya where scanty documented research is available. This study is anticipated to make a significant contribution that may augment the scanty existing body of knowledge concerning the influence of partnerships on quality and relevance of TVET in Kenya and beyond.

1.6 Significance of the Study

The finding of this research has shade some light on how TVET Partnerships is practiced in Kenya. The challenges constraining the partnerships have been put to the fore and

procedures for best practice outlined. The findings is considered useful to the policy makers in the ministry of education, heads of TVET institutions, industry players and coordinators of industrial training in TVET institutions in Kenya and beyond

1.7 Theoretical Perspective

In the formulation of theoretical perspective for the study of partnership between TVET institutions and Enterprises in Rift valley and Western Kenya regions, human capital theory and vocational education theorems were used to guide the study. Human capital theory proposed by Theodore William Schultz in 1961 and developed extensively by Gary Stanley Becker in 1964 (Willis, 1986) formed the basis of the theoretical framework with Prosser & Allen theorems of Vocational education and training being used as the basis for gauging the influence of partnerships in various areas of TVET.

Human capital theory was developed in the sixties and was premised on the realization that the growth of physical capital requires a skilled human capital for its manipulation. Human capital theory suggests that education and training raises the productivity of workers by imparting useful knowledge and skills, hence raising workers' future income by increasing their lifetime earnings (Becker, 1962; Xiao, 2001; Wolf, 2004; Afrooz *et al.*, 2010). The theory postulates the input, process and output model. The input which includes the trainees, human resources, equipment and infrastructures should be considered as investment in education and training. The process entails the strategies put in place to enhance transformation of the untrained trainees into a skilled and competent graduate who at the end is regarded as an output of the training process.

The human capital theory has been applied in various research works. Olaniyan, & Okemakinde (2008) applies human capital theory but emphasizes the need of integrating the theory with another theory that focus on transformation part in the context of the input, process and output model indirectly advocated by many researchers. The strength

of human capital is thus evident on the linear relationship portrayed in training and rate of return.

Criticism that could be argued on human capital theory is based on assumption that by just going to school improves productivity and thus could explain higher wages. Training Institution such as TVET may not necessarily produce productive workers if they are equipped to train. The quality and relevance of the output of this training system is greatly influenced by the training process. To bridge this shortcoming Prosser & Allen theorems of Vocational education and training becomes handy.

Despite the critic of human capital theory, the theory enables effective empirical analysis in social research and produces reliable findings that affect TVET enterprise partnerships in this study. Figure 2 shows theoretical framework flow diagram representing logical flow of the theoretical concept as discussed by human capital theory and Vocational education theorems. The diagram illustrates how the two theories integrate into each other in an effort to inform this study.

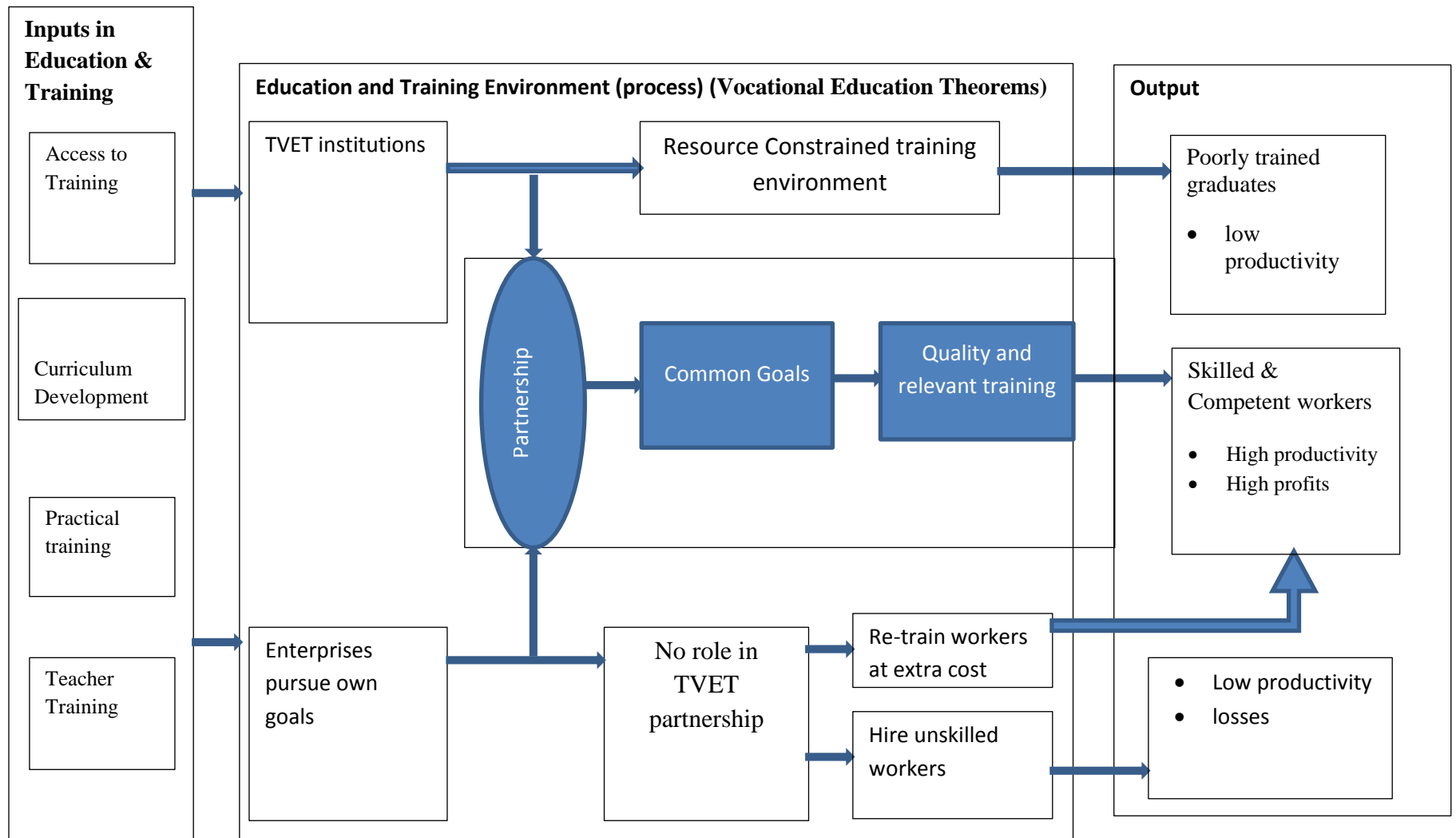


Figure 1: Theoretical Framework Logical Flow Diagram

Source: (Author, 2018)

Human capital theory brings out the aspect of input, process, output, as a direct transformation of unskilled worker to skilled and hence productive worker. This transformation involves investing in education and training through acquisition of requisite infrastructure and equipment for practical training, facilitating access to training for learners and modernizing curriculum and enhancing the human resource capacity of trainers to deliver as the main input towards the process of acquiring quality and relevant skills. The ultimate output of this process is a graduate with relevant and useful skills for the world of work. Based on the quality, relevance and adequacy of training and skills attained, the outcome of the training process is absorption in the job market as a productive worker who then earns an income. Viewed as mechanism in which transformation takes place, the success of this transformation is greatly influence by the training process. An effective training process will promote acquisition of quality, relevant and adequate skills which in return will raise the chance of employability and/or self-employment for the graduates.

Prosser & Allen 1925 identified sixteen Vocational education theorems which act as a basis for sound and successful TVET programs (Gosney, & Hughes, 2016). Prosser was the National Director of vocational education and training in the United States. The theorems assert that There are certain minimum standards without which one may not reasonably expect to operate a program of vocational education and be effective generally in programs of either preparatory or extension education. This research will utilize Six out of the sixteen theorems namely 1,2,5,7 9 and 11. A brief description of these theorems is as outlined in this section.

Theorem 1 asserts that

“Vocational education will be efficient in proportion as the environment in which the learner is trained is a replica of the environment in which he must subsequently work (Gosney, & Hughes, 2016)”

This theorem asserts that the type, kinds, amount, use and arrangement of space, materials, equipment and supplies for a preparatory program be as close as possible a replica of those in employment. It has a bearing upon the length of time devoted to skill development necessary to approach industrial practice. It has implications for quality and quantity of production expected. It has direct implications for teacher learner ratios. It relates directly to the efficiency with which a student transfers from school to employment.

Theorem 2 asserts that

“Effective vocational training can only be given where the training jobs are carried on in the same way with the same operations, the same tools and the same machines as in the occupation itself (Gosney, & Hughes, 2016)”

The implications of this statement are that instructors must have recent employment experience in order to be skillful in the use of the latest equipment and must make use of the same types of tools and equipment as would be currently found in employment; and, must use live work or work identical to that provided in employment for instructional experience rather than pseudo or so-called “project” work. Emphasized here is that the skills taught should follow the same basic practices as industrial employers would expect, and learners should be able to move from the training situation to employment situation with little need for adjustment.

Theorem 5 asserts that

“Effective vocational education for any profession, calling, trade, occupation or job can only be given to the selected group of individuals who need it, want it, and are able to profit by it (Gosney, & Hughes, 2016)”

Vocational education is not for everyone and this statement implies that those admitted should be carefully selected through effective guidance procedures and should be potentially successful as future productive workers. Persons should be selected on the basis of their own interests and aptitudes, and on the basis of their being potentially a successful employee following preparation.

Theorem 7 asserts that

“Vocational education will be effective in proportional as the instructor has had successful experience in the application of skills and knowledge to the operations and processes he undertakes to teach (Gosney, & Hughes, 2016)”

The implication in this case is that the teacher cannot teach that which they do not know; and, since the subject matter of the vocational teacher is composed of the skills and knowledge of the occupation, it would follow that teachers who are recognized as highly competent workers themselves through actual successful employment experience would be most desirable for a vocational program. The recency of any such experience is also of utmost importance if learners are to be prepared for current expectation for employers; and this, the recency of work experience of the potential vocational teacher is implied in this theorem.

Theorem 9 asserts that

“Vocational education must recognize conditions as they are and must train individuals to meet the demands of the “market” even though it may

be true that more efficient ways of conducting the occupation may be known and that better working conditions are highly desirable(Gosney, & Hughes, 2016, Santosa, & Muchlas, 2017)”

Vocational education programs can never exist as merely course in a school system but must be considered a community-wide project. Therefore, this statement implies the dire need for the use of craft committees; for instructors with recent employment experience; and for a program that is geared to existing opportunities in the community, the area or the state. Instruction beyond immediate needs is encouraged, but not at the cost of basic current needs of employers.

Theorem 11 asserts that

“The only reliable source of content for specific training is an occupation is in the experience of masters of that occupation (Gosney, & Hughes, 2016)”

This statement reaffirms the need for occupational analysis as the basic method of curriculum development. It also emphasizes the importance of effective involvement of representative occupational advisory committees in assisting in curriculum planning. The occupationally competent instructor must utilize both these resources in the construction of his detailed course content.

A close partnership between the TVET and enterprises in shaping training systems is desirable, not only in the interests of the TVET institutions but also of enterprises/industry, in order to develop the competitive workforce that is required by the national economy in the context of globalization. Current efforts to form partnerships therefore seek the advantage of using the strengths of both partners for their mutual

benefit. In the absence of a robust partnership regulatory framework and policies, TVET institution will continue pursuing own goals independent and parallel to those of industry.

In this scenario both parties stand to lose instead of gaining.

1.8 Conceptual Framework of the study

Figure 1 is an illustration of conceptual framework

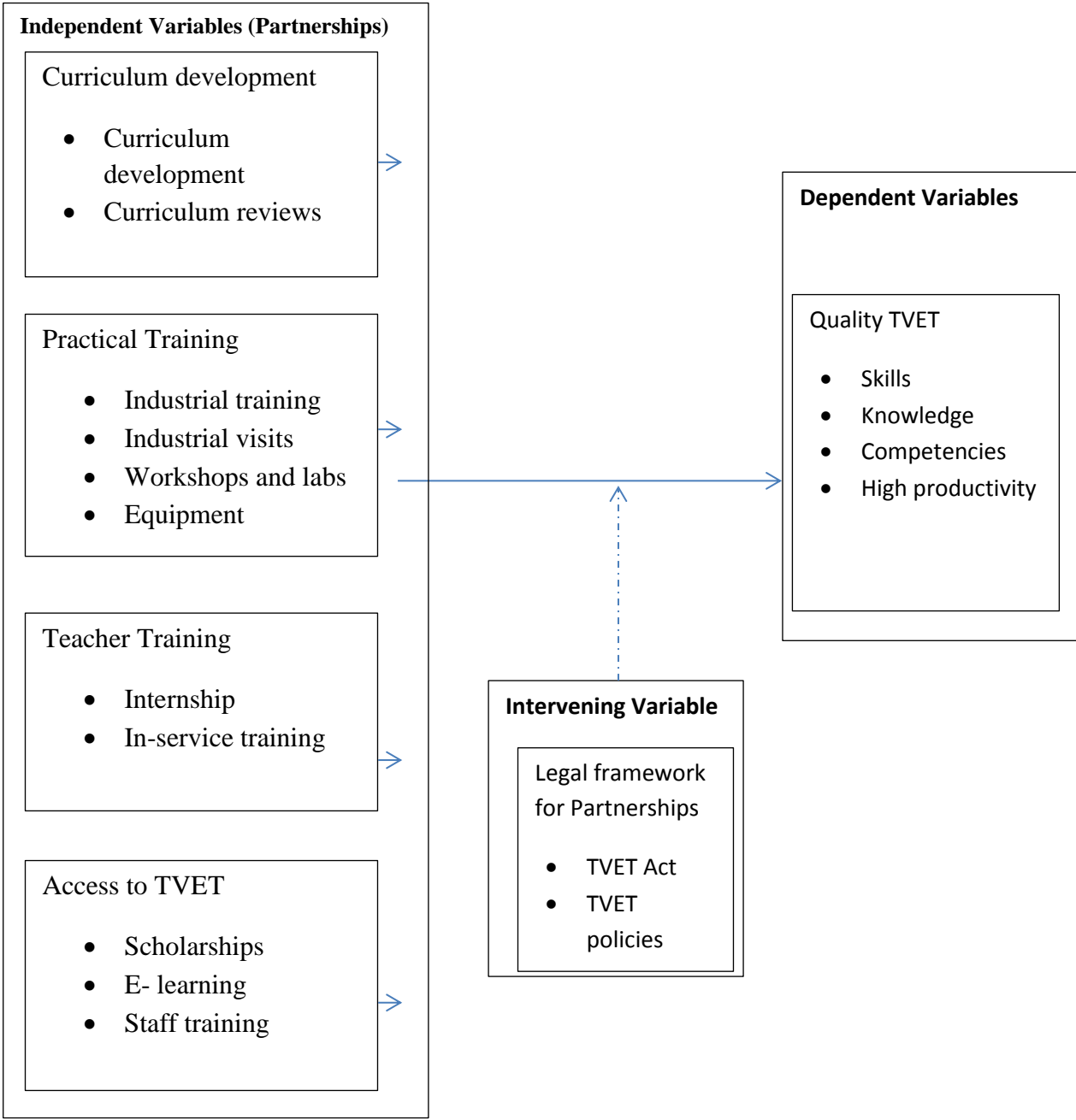


Figure 2: Conceptual Framework**Source: (Author, 2018)**

In this conceptual framework, partnership in curriculum development, practical training, teacher training and equity in access to TVET by students have direct impact on the quality and relevance of education and training to the labour market. As supported in literature review, quality and relevance in TVET is best assured with the input of key stakeholders such as enterprises. Enterprises being the final consumers of TVET products ought to be involved in development and review of curriculum. Practical training is another critical area that involves acquisition of hands on experiences. Enterprises have the latest equipment for hands on training that can be accessed through a robust partnership framework. The role of quality of TVET is propositional to the quality of TVET teacher. TVET teachers with constant in service training have the potential to improve the quality of their products. Quality of TVET cannot be complete without addressing the issue of access to training by students. Enterprise partners have the potential to promote access to TVET through scholarship programs and facilitation of their staff to pursue training in TVET institutions. In summary, Partnership in all these areas has the potential to catalyze the attainment of quality and relevance in education and training.

1.9 Assumptions of the Study

The study assumes that the respondents will give an honest view of the state of partnerships between TVET institutions and enterprise.

1.10 Scope and Limitations of the Study

The study covered selected TVET institutions licenced to operate in Rift Valley and Western Kenya regions. The limitation of this study was that the researcher was not be in a position to organise a joint brainstorming session between enterprise players, and TVET institutions representative to discuss the challenges facing partnership. In terms of variables, the researcher was not in a position to observe in person an on-going partnership in curriculum development and review.

1.11 Operational Definition of Terms

For the purposes of this research, the following definitions shall be adopted:

Enterprise	In the context of this study, the term “enterprise” includes transnational Corporations and large, medium and small enterprises in the modern (organized) sector of the economy in industry, commerce and services and Jua kali sector.
Industry	Formal enterprises
Partnership	A collaborative relationship between entities to work toward shared objectives and goals through a mutually agreed division of labor.
Practical Education:	Refers to education whose acquisition relates to, or is governed by, or acquired through practice or action, rather than theory or speculation.
Quality Training	Training that meets the threshold of fitness for purpose
Relevant	One that meets employer’s needs and expectations
Technical Education	Refers to educational programs that specialize in the skilled trades, applied sciences, modern technologies, and career preparation

Vocational Education and Training (VET) Refers to Education and training which aims to equip people with knowledge, attitudes, skills and competences required in particular occupations or more broadly on the labour market

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter contains a review of the literature related to partnership in training. It begins with a synopsis of the concept of partnerships in education and training, other areas covered include: -The concept of Technical Vocational Education and Training (TVET), Forms of Partnerships in TVET, partnership in TVET curriculum development, partnership in practical training, partnership in teacher training, challenges associated with partnerships in education and training and strategies for enhancing partnerships in education and training.

2.2 The Concept Partnership

The term Partnership has been defined differently by various researchers. De Schepper, & Haezendonck, (2014) Point to the fact that Partnership has been defined differently by academics, public agencies and international organisations, with the result that a universal definition to which all would agree is elusive. Weihe (2008) concludes that an authoritative definition of Partnership is one that encompasses all the different variations of the concept currently in use, is still not logically possible. Hodge and Greve (2005) defined Partnership as institutional cooperation between the public and private sectors designed to increase the efficiency and effectiveness of public service delivery. Hayllar (2010) on the other hand defined Partnership as a contractual arrangement involving the private sector in the delivery of public services based on a partnership approach where the responsibility for the delivery of services is shared between the public and private

sectors, both of which bring their complimentary skills to the enterprise. In addition, Skelcher, (2005) defined Partnership as a cooperation of some sort of the ability between public and private actors in which they jointly develop products and services and share risks, costs and resources that are connected with these products.

Partnership are collaborations in which public and private sectors each bring their complementary skills to a project, with different levels of involvement and responsibility, for the sake of providing public services more efficiently (Chan *et al.*, 2010). Smith & Wohlstetter (2006) added that Partnership typically consist of voluntary, enduring arrangements that involve significant levels of resource-sharing and joint decision-making. Achieving value for money, especially from the taxpayers' perspective, is reflected as an element of Partnership (Chan *et al.*, 2010).

According to Li *et al.* (2005), the concept of Partnership is underpinned by a government's desire to resolve capacity constraints in the provision of public facilities and services by calling upon private management skills to increase the efficiency, effectiveness and quality of facilities, and services delivery. The researchers further elaborated that the level of private sector involvement might range from simple service provision without recourse to public facilities, through service provision based on public facilities usage, up to and including full private ownership of public facilities and operation of their associated services. Akintoye *et al.* (2003) further reported that these partnerships come in all sizes and types, which makes it difficult to group them in a consistent fashion.

2.3 The Concept of Technical and Vocational Education and Training (TVET)

Many contemporary definitions of the term Technical, Vocational Education and Training (TVET) are evolving to reflect the fundamental changes in the organisation and scope of TVET programmes worldwide. The Federal Republic of Nigeria (FRN, 2013) defined technical and vocational education and training (TVET) as a comprehensive term referring to those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life. FRN maintained that TVET is further understood to be an integral part of general education; a means of preparing for occupational fields and for effective participation in the world of work; an aspect of lifelong learning and a preparation for responsible citizenship; an instrument for promoting environmentally-sound sustainable development; as well as a method of facilitating poverty alleviation.

UNESCO (2009) posited that the term TVET applies to all forms and aspects of education that are technical and vocational in nature, provided either in educational institutions or under their authority, by public authorities, the private sector or through other forms of organized education, formal or non-formal, aiming to ensure that all members of the community have access to the pathways of lifelong learning. The organisation maintained that Technical and Vocational Education and Training refers to a wide range of relevant learning experiences in the world of work that may also take place in a variety of learning contexts such as educational institutions and working places. It further maintained that TVET includes learning aimed at developing skills in the practice

of certain trades, as well as learning aimed at preparing for entry into the labour market in general.

The goals of TVET as stipulated in the Kenya National policy on Education (2013) includes, among others, providing trained manpower in the applied sciences, technology and business particularly at craft, advanced craft and technical levels as well as giving training and imparting the necessary skills to individuals who shall be self-reliant economically. Indeed, Akhuemonkhan & Raimi (2013) added that TVET is a potent means for fast-tracking technological progress, citizens' capacities, economic growth and national development.

UNESCO-UNEVOC (2006) identified three main types of TVET programmes namely formal, non-formal and informal TVET. According to the organisations, formal TVET refers to organised vocational education programmes provided within an approved public educational or training institution and it is structured (in terms of curriculum, learning objectives and learning time) such that it constitutes a continuous "ladder" where one level leads to the next and finally leads to certification. Non-formal TVET is the type of vocational education and training which takes place outside the formal school system either on a regular or intermittent basis. It has the advantage of shorter duration, is occupation-specific and its main emphasis is on the acquisition of practical skills for direct employment. On the other hand, Informal TVET is the type of vocational education that is provided by craftsmen of different trades in the informal sector. It is more appropriately often referred to as vocational training or experience based learning and is usually carried out in form of apprenticeship system.

In many developing countries TVET is becoming a prominent issue considering its importance in preparing the young generation to enter their working life and in responding to the indispensable demand of the development process, which is to provide the economy with quality work force in accordance with the needs of the goods and services required by industries. Practitioners in education and scholars alike agree that TVET is the master key for unlocking development, alleviating poverty and employment creation (Quisumbing, 2005; Fien & Wilson, 2005; Hollander, & Mar, 2009; Ahmed, 2010; Minghat & Yasin, 2010; Egesi *et al.*, 2014).

Globalization, technological advances, demographic pressure, social inequalities and the quest for sustainable development are creating rising demand for TVET policies and programmes that respond to labour market demands, support youth transitions between education and the world of work, and promote poverty reduction, social inclusion and gender equality. TVET is an important tool of public policy as it supports economic growth and poverty alleviation, facilitates the transition of young people to decent work and adulthood and promotes social inclusion (Nilsson, 2010). Viewed in this light, TVET is a platform to promote sustainable development and economic empowerment.

2.4 Partnerships in Education and Training

One way some corporations are overcoming their employee development problems is by forming partnerships with TVET providers. Creating a partnership between such institutions with different aims can be a very challenging process, since TVET institutions and industry are not natural partners, and their mission and cultures are frequently different (Abdullah, 2013; Helmy, 2014).

Abdullah (2013) argues that successful partnering is related to the capability to respond to the necessity of transformation, innovation and continuous learning by both TVET providers and industry partners. They describe the formation and nature of partnerships as a mixture of inter-organisational and interpersonal. Inter-organisational includes the environment, responsive administrative arrangement, change management and competition level; and interpersonal aspects of trust, friendships and senior executive support at work. Similarly, Callan & Ashworth (2004) and Helmy, (2013) noted that successful training partnerships between VET providers and industry include the productive administration of an extensive body of environmental, training and people issues.

Various issues shape an improved partnering result. Lendrum (2003) states that training partnerships are formed by a scope of environmental factors, and readiness to adjust the approach to training. He also argues that key to the success of all collaborations are the attitudes of people and the quality of interaction amongst them. As a result, these are researched in three domains: environmental factors and their impact on partnerships; modification of the training model (or process) to meet the particular training needs (training factors); and the tasks and interactions of people needed to ensure partnerships work effectively (people factors). These three factors and Lendrum's model are addressed more fully in chapter three. There are case studies on partnership creation, operations, accomplishments, expansions and evaluation that have been pursued. However, as partnerships continue to grow, roles are formalised, responsibilities occur, written policies, organised and empirical documents of partnership events, stakeholders, and results should be more pursued systematically (Mowen & Kerstetter 2006).

Private participation in education has increased dramatically over the last two decades across the world, serving all types of communities from high-income to low-income families (Patrinos *et al.*, 2009). Although governments remain the main financiers of education, in many countries private agents deliver a sizable share of education (Patrinos *et al.*, 2009). Broadly, Partnership in school education operates to provide infrastructural services, support services and educational services (Patrinos *et al.*, 2009). There appears to be a progression in scope with the simplest being the private partner providing infrastructure services and government providing educational and other support services (Patrinos *et al.*, 2009). The next stage in progression is where the private sector provides both infrastructure services and support services.

According to the Al-Tubi (2014), the determinant of success is not the public or private formula, but rather government commitment to education. Governments do not need to fulfil all roles, but can meet their obligations through enabling other providers, providing the necessary finance and regulation and ensuring oversight and accountability.

In education, PPPs can follow one of two models: the ‘problem/deficit’ model, which entails a real and/or perceived public sector failure which can be remedied by Partnership, and the ‘non-deficit/opportunity’ model, which operates when governments leverage and attract resources to enhance educational quality (Davies & Hentschke, 2006). Within these models, there are four viable uses of Partnership: improving school infrastructure and resources, promoting educational quality and innovation, enhancing the relevance of education to the economy and reaching excluded learners (Latham, 2009). These broad aims can be attained by facets such as ‘financial provision, pedagogical

development, human resources development, service delivery, infrastructure, (and) facilities management' (Genevois, 2008).

The main rationale for developing Partnership is to improve financing for education through increasing cost-efficiency and mobilising additional resources, improving the provision of educational services through expanding equitable access to education to the marginalised, and improving service quality and outcomes through emphasising system efficiency, equity, choice and accountability (Genevois, 2008; Patrinos *et al.*, 2009). Fennell (2007) identifies three key drivers that have paved the way for Partnership in education: the perception that public schools have failed to provide adequate education, leading parents to seek other alternatives, the variation in the quality of education offered by private providers which calls for regulation of the sector, and the increasing commercial interest in education. These issues have received considerable academic and political attention and are now at the heart of education provision reform.

In the wide range of Partnership, the scope of private partners' involvement ranges from in-kind donations to contributions of knowledge, skills and attitudes to address complicated reform issues, including policy, practice and institutional reforms (Ginsburg *et al.*, 2012). In this Partnership, the public sector comprises the broad government sector and the private sector is represented by a continuum of non-public bodies, ranging from for-profit business organisations to non-for-profit community groups and civil society. These myriad stakeholders include government agencies, international financial institutions, foreign corporations, consulting firms, academic and research institutions, local governments, pressure groups and NGOs (Fennell, 2007). Others also play prominent roles in these Partnerships, such as major national and international companies

which can intervene at the levels of curriculum and management, world ICT companies which can redesign teaching and learning systems and computerise information systems, and existing local education providers (Jones & Bird, 2000).

Partnership in education and training according to Marinez-Moyano (2006) is the process in which two or more people or organizations work together to realize shared goals. The ultimate goal of collaboration in TVET is to produce a highly competent, skilled and educated work force relevant to the needs of the industries. This is believed, would produce graduates that are competent, skilled and knowledgeable commensurate with industry standards. The emphasis is that in today's world, an effective TVET system cannot be built if there is a gap between education and the world of work. Institutions of learning can establish partnerships with industries to enhance qualitative training, varied practices, production of goods and services, knowledge of the world of work and opportunity for further training, employment and placement (Mekonnen, 2014).

2.4.1 Aims of Partnerships in Education and Training

The efforts of establishing partnerships between a higher education institution and industry can take many forms. From a methodological viewpoint, a partnership is a way to approach problems, while from a managerial viewpoint it is a tool utilised to solve problems (Perkmann & Walsh, 2007). Helmy (2014) gave many reasons for TVET institutions to find partners in order to create partnerships. These reasons include: 1). opportunities to obtain additional sources of revenue including government funding; 2). to help meet the needs of industry and business; 3). the maintenance and possible development of academic curricula and programs; 4). the provision of scholarships for students; and 5). the expansion of teacher improvement programs

According to Dunbar (2013) the greatest motivation for TVET institutions to establish partnerships on a short- or long-term basis with business and industry corporations is financial. The researcher further noted that such resources improved facilities, increased cash flow and provided access to different areas of learning, training programs, and research programs that integrated academic and industrial work.

Ankrah *et al.* (2013) reported that some of the most frequent academic/industry partnership interactions are consulting, patenting or licensing, strategic associations and training. Elmuti *et al.* (2005) discuss partnerships can also focus on professional development, academic and vocational technical skill assessment, college and career consulting, and retraining employees as well as knowledge exchange, consulting, project planning, involvement in curriculum development, training, workshops or seminars, and executive. Hogner & Kenworthy (2010) point out that collaborative partnerships involve a series of projects. These not only include training partnerships, particularly between industry and a VET provider, but also the active participation of both industry and VET provider staff. Overall, the ultimate goal of the higher education institution and industry partnership is to improve practice whether it is through research, training or services (Al-Agtash & Al-Fahoum, 2008).

2.4.2 Types of partnership in Education and Training

Relationships between Partnership and TVET occur in several ways. Helmy (2014) notes that partnerships between TVET and enterprises have two major foci: philanthropic and training related. Philanthropy through collaborations is possibly the most common structure of partnership between industry and higher education, engaging industry as the corporate donor and the institution as recipient (Austin & Peter 2000). Furthermore,

philanthropic partnerships generally demand the minimum strategic arrangement and relationship management, once established, can lead to opportunities for research or training partnerships.

Training-based partnerships have become better known in the last few decades, existing in many forms since the growth of vocational education, to address issues such as the acquisition and development of employee skills, specifically in the areas of technology and science. Helmy (2014) states that training-based partnerships are considered as an “add-on,” and tangentially linked to the main academic mission. Although they are considered as commercial and create new streams of income and students, they are not viewed as endangering traditional academic programs or staff roles. Gaskins (2014) states that training-based partnerships include continuing education and collegiate programs leading to the award of a degree. Moreover, transfer of knowledge is accomplished through a teaching and learning environment where the curriculum is related at least to some extent to business partner needs. These partnerships can be complex in their own right, contingent both on the degree of program customization and faculty involvement.

2.4.3 Areas of Partnership in TVET Training

According to Abubakar *et al.* (2014) there are seven areas of partnership in TVET Education and training

a) Adopt-a-School Programs

The main feature of Adopt-a-School programs is that the private sector partners provide cash and in-kind resources to complement government funding of public schools. The main aim of the programs is that quality, access, infrastructure and community

participation are improved within the government schools. The two common features of such programs include: the role of a Facilitator between the school and the adopting body and a focus on adoption of the poorest government schools. There are large examples of these programs in the Philippines and in the Sindh Province of Pakistan (Latham, 2009).

b) Private sector Philanthropy

The main feature of private sector philanthropic initiatives is to increase the amount and effectiveness of corporate philanthropy to improve chances for poor students to gain access to a quality education. These initiatives range from the purely philanthropic to those that have a profit element although overarching all of them is the aim to create sustainable models for education reform in the developing world through PPPs (Barrera-Osorio, 2009).

c) Capacity-building Programs

According to Latham (2009), the main feature of these capacity-building initiatives is that the private sector partners provide support to public schools across a range of areas such as curriculum and pedagogical support, management and administrative training, textbook provision, teacher training and quality assurance.

d) Outsourcing of School Management

School management initiatives involve the public sector authorities establishing contracts directly with private providers to operate public schools or manage certain aspects of public school operations (LaRocque, 2008). Although these schools are privately

managed, they remain publicly owned and funded. A common feature of these initiatives is the management contract that details such aspects as the performance targets, accountabilities, timeline and arbitration procedures.

e) Government Purchasing Programs

As explain by Mkonga (2013), government purchase initiatives involve contracts but in this case the government contracts with private schools to deliver education at public expense, often in the form of a subsidy per student enrolled in an accredited or eligible private school.

f) Voucher Programs

Voucher and voucher-like initiatives also involve governments funding students to attend private schools but in this case the transaction involves a voucher that is essentially a certificate or entitlement for the parent to use to pay for the education of their children. This voucher can be used to purchase education in either a public or a private school (World Bank, 2006).

g) School Infrastructure Partnerships

School infrastructure initiatives involve the design, financing, constructing and even operating of public school infrastructure under long-term contracts by private sector parties in partnership with the government (Latham, 2009). Essentially, under these infrastructure PPPs, the government is leasing a facility that has been financed, built and operated by the private operator while the government continues to retain its

responsibility for the delivery of the core educational service provision (World Bank, 2006).

2.4.4 Benefits of Partnerships in Education and Training

There are many reasons for establishing partnerships. The reasons for TVET providers include access to industry skills and facilities, generating additional income, research applicability, and increasing the job opportunities for teachers, trainers and graduating students (Asongu,-Tchamyou & Acha-Anyi, 2017). The reason for industry to create partnerships with TVET institutions is obtaining and supporting knowledgeable workers so they will be able to solve emerging technical and management problems in the company. This is seen as critical to business success (Gu Gomes & Brizuela 2011; Helmy, 2014) Therefore, vocational educational institutions and companies both need to work together in defining the nature of the relationship, determining collaboration methods and establishing shared goals. In this way both organisations can obtain advantages from the partnership.

Rasche *et al.* (2013) added that partnerships between industry and academic institutions are an increasingly important way by which corporations accomplish their corporate social responsibility (CSR) obligations. From the industry's perspective: 'It has been argued that the decision on how to govern the implementation of CSR becomes a strategy-led decision' Helmy (2014). Callan & Ashworth (2004) state that partnerships use cooperation to enable the distribution of a service or product and in partnerships there is a distribution of resources to add value to the service or product for customers.

Employing PPPs in education makes educational reform projects more efficient and effective, enhancing the quality of educational services and increasing access to education. They promote choice, induce competition between public and private providers and offer flexibility in areas such as management and teacher hiring. Educational quality is enhanced by benchmarking performance against measurable quality outcomes (Barrera-Osorio *et al.*, 2009; Patrinos *et al.*, 2009). The increased focus on core tasks, enhanced human capital, outcome-oriented performance and the proactive leadership in PPPs lead to improved service quality (Davies & Hentschke, 2006). In his cross-country analysis, based on student-level data from the OECD's Programme for International Student Assessment, Woessmann (2006) found evidence that PPPs are effective in enhancing students' cognitive skills. He concluded that school systems that adopt a PPP model in which education is publicly financed but privately operated is the most effective school system. In education, PPPs modernise leadership through introducing four principles: distributive transformation; organisational identity; technical excellence; performance accountability (Woods & Woods, 2004).

Elmuti *et al.* (2005) argue that partnerships between TVET and industry allow each of the organizations involved to preserve their own core competencies, managing structure and mission, whilst growing the knowledge and abilities of each organisation. Helmy (2014) highlight the increasing significance of partnerships TVET providers as increased ability to build and sustain effective partnerships will be a key competitive advantage for these institutions in an age of the global educational village. Even though TVET providers need significant support and funding from the government, they have to overcome a range of obstacles to attract and develop partnerships and, in turn, improve their capabilities and

capacity for entrepreneurial interactions (de Medeiros Rocha *et al.*, 2012). For the academic partner, there are benefits in addition to increased enrolments and revenue. From the business world's perspective, in addition to competitive advantage, there are also tangible employee benefits.

Collaborations with academic institutions are built on the recognition of mutual need and perceived value. Friga *et al.* (2003) explains that the industry partner can obtain an advantage through: access to skilled scholarly researchers connected to research facilities; tailored training and collegiate programs for their workforces; and improved vision and reputation based upon collaboration with higher educational institutions. Such partnerships may also contribute to better employee retention and employee recruitment. In addition to the acquisition of new employee competencies, these partnerships may impact the industry base line and enhance competitive benefits (Ford *et al.*, 2003).

For the TVET institution, an alliance or partnership with industry can offer a new source of income including access to finance for research endeavours in a vocational area and a body of non-conventional students drawn from the industry partner (Helmy, 2014).

The benefits of creating partnerships for both TVET institutions and industry can involve increasing their impact within an industry or the community, finding new opportunities for generating revenue, offering opportunities for access, and establishing a way to preserve the organisation's autonomy in the marketplace (Johanson, 2004; Musobo & Gaga, 2012).

The benefits of partnerships for education institutions, and especially for their teaching staff and students, are that as they study the requirements of an industry and gain real-life

experience in practical problem solving, they are also gaining skills, knowledge and experiences that cannot be obtained inside a classroom (Thomas & Busby, 2003; Tynjälä, 2008). TVET institutions can also benefit from obtaining financial assistance, providing their teaching staff and students with working knowledge and experience, contributing to improved regional economic growth, and expanding the employment opportunities of their students (Di Gropello, 2011).

The benefits for companies described by Elmuti *et al.* (2005) include the opportunities to gain access expertise which is not available inside the company, obtaining access to students as possible employees for recruitment, leveraging internal research capabilities, lowering research and development expenditures, increasing innovation in products and services, and shortening product lifecycles to compete better in the global marketplace.

In order to continue to operate, TVET providers require financial resources. Therefore, vocational education institutions seek to establish more networks with their stakeholders, especially industry. Funds come from within the institutions themselves; from outside entities, especially as government subsidies; from students in the form of tuition fees; and through partnerships (Calvert, 2004).

A study by Abdulla (2013) and Helmy (2014) claims that successful collaborations between TVET institutions and industry show a synergistic connection, whose total effect is greater than the sum of the parts. The researcher also explained that the mutual benefits for both partners may occur through modification and adjustment which is presented in process and product of the partnerships. The study further makes two recommendations for successful partnerships. First, the partners have to comprehend and reach agreement

on the common benefits of the partnership and agree that the partnership has a real value, whose outcomes will be greater than the costs of the partnership. Second, that one of the partnership types used extensively in workforce training is between a higher education institution and an individual enterprise in order to improve the skill and knowledge levels of that enterprise's workforce. TVET institutions, such as polytechnics, are involved in these types of partnerships more often than any other type of higher education institution.

2.5 Forms of Partnerships in TVET

There is a diversity of levels in formality of partnerships. Possibilities include joint ventures, long-term licensing agreements, supply contracts, brokering arrangements and co-promotion (Callan & Ashworth 2004). Callan and Ashworth argue that a partnership can exist in many forms: formal and informal, public or private, large or small, individual or organisational.

A corporation might have a formal contractually based affiliation with external partners, or it might have just an informal relationship with no contract. However, formal partnership contracts usually involve a contract to provide training between training providers and a business organization (Bruneel & Salter, 2010). Many researchers assert that a formal contract is essential for such training programs in order to achieve good quality training results (Hawley *et al*, 2006; Helmy, 2014).

In order to refrain from and avoid opportunistic behavior in a partnership, Zhou & Xu (2012) suggest that one method to advocate for a long-term relationship between partners is to always make full use of a contract or written agreement, because it

encourages the organisations involved to make a significant commitment to their cooperation.

Three types of partnerships and levels of formality are recommended by Zhang & Preece (2011). The first involves joint service agreements in which organisations join assets to get access to benefits too costly to obtain alone. The second are collaborations which allow the partners to exploit opportunities that involve their mutual capacities. Finally, Kanter (1994) listed value-chain partnerships, one of which is classic in the TVET sector: on-the-job and off-the-job training arrangements for trainees and apprentices (Marginson, 2000).

In initiating partnerships between organizations, Bringle & Hatcher (2002) suggest that TVET providers and industry should each build the necessary infrastructure and establish or develop appropriate policies and protocols. They also need to employ or develop personnel with the ability to appraise and react to unanticipated opportunities for forming partnerships of varying timeframes and levels of formality, and for multiple purposes.

By having formal contracts, a number of key aspects of training arrangements can be made more explicit. These include the nature of training programs, training materials, expected results, and skills prerequisites for trainers and trainees. In addition, a formal collaboration represents a stronger level of management involvement and commitment by both parties in the partnership. Many studies have shown that management's support is one of the most significant success factors in training partnerships. A formal relationship helps to cement this support and ensure its success.

In other words, with the existence of formal contract, TVET providers are enabled to provide the organisational support needed to stimulate, negotiate and undertake successful training partnerships. The elements include training design and evaluation to ensure that all parts of their administrative structures work together smoothly. And excessive bureaucracy must be avoided (Business-Higher Education Forum, 2001).

Another study by Kilpatrick (2003) stated that there are relationships of VET providers in a variety of partnerships that exist for a range of purposes. Vocational education and training partnerships consist of two or more organisations who work together in association over short or long period of time to attain commonly held goals around VET (Kilpatrick, 2003). The TVET partnership models with industry from Kilpatrick's review of a wide range of the education and training literature, relate especially to training needs and demand, developing curriculum, and partnerships and collaboration around training. Guenther (2003) and Helmy (2014) summarized the models as; a). industry/provider partnerships; b). client/provider partnerships; c). community/provider partnerships; d). broker/client/provider partnerships; e). researcher/industry/provider partnerships; f). government/industry/provider partnerships; and g). Provider/provider partnerships, usually involving government

Since the expansion of VET participation in partnerships is taking place in direct response to industry's needs, the considerable complexity and continuous change experienced by industry is reflected in a widening and changing role for TVET (Smith, 2009; Brewer & Comyn, 2015). Krishnan & Ab Wahab (2017) argues that many of the methodologies now widely used in the TVET sector, such as communities of practice, self-directed learning, action learning, work-based learning and problem-based learning,

for example, all reflect changes in the nature of work across all industries where an emphasis is placed on individual responsibility for work and learning alongside a rise in the importance of teamwork and networking.

2.6 Partnership in TVET Curriculum -Development

Generally, Curriculum encompasses the totality of body of knowledge both written and non-written which the students have to learn in their cause of study. To Offorma (2002), it is a deliberate and systematically planned attempt to change the behavior of the young, old and inexperienced and also to enable them gain the insight to build a better society. In similar vein, Umar & Tubosun, 2014) posit Curriculum as a body of knowledge, content and or subject used in education. In a simpler language, curriculum are the subjects, both concrete and abstract that the students must go through and pass before they could be awarded the certificates of graduation. Therefore, curriculum development should be a shared responsibility of both public and private sectors that are to employ the students when graduated.

The role of teachers in curriculum development, particularly, in tertiary education cannot be underestimated. Promising educational projects have failed because teachers were alienated in the educational reform at the commencement (Bowles & Gintis, 2011). It is therefore imperative to involve teachers at the various phases of educational reforms because of their training, role and position in education system, they are in a better position to understand when and how subject matter should be taught (Fullan, 2007). However, in this time and age when the quality of tertiary graduates has become a subject of public discussion, it is equally important to involve other stakeholders in curriculum

development, so that the product(s) that would be designed are not perceived by other stakeholders as imposition (Van den Akker, 2004) and therefore lack credibility during implementation.

The shared responsibility becomes even more crucial when the development of the curriculum pertains to an internship programme where educational institutions and industry closely need to cooperate to make it a successful learning experience for students. Thus stakeholders collaborative planning where needs and interests of stakeholders are elicited become paramount (Lewis, 2006). In view of the importance of internship it has become part of the curriculum of higher education (Beggs *et al.*, 2008; Domask, 2007) because the educational institutions normally do not have the facilities hence it is an avenue through which the industry complements what is taught in the classroom (Rothman, 2007). But how can one ascertain that the goals of student internship are accomplished when the internship is not guided with clear (written) curriculum materials. A study on the current situation regarding internship in the hospitality management sector in Ghana's polytechnics revealed that polytechnic industry collaboration needs to be strengthened, students fail to meet the required internship period of six months, some students fail to embark on internship at all due to limited number of placements, interns need to have experience in all sections of industry, and the need was expressed by the various stakeholders to design curriculum materials to guide student internships (Akomaning *et al.*, 2011).

Then improvement in student internship is an important aspect of the preparation of qualified staff for the sector and is a major concern in the curriculum reform in TVET institutions (Albashiry *et al.*, 2015). Design team is explained as a collaborative group

working together to produce a unit of instruction or creating a product (Crowther *et al.*, 2004) which is implemented and evaluated in an educational institution programme. It implies that in the design process teachers investigate challenges in their current instructional practice, (re-)design product(s), implement the product(s) and evaluate it.

Collaboration in design teams, according to Handelzalts (2009) and Mooney Simmie (2007) contribute to enhanced teacher knowledge, skills and practices. Research results indicate that through the sense of security that comes from design teams and support from colleagues, there is a greater willingness to experiment, try new things and be more apt to consider continual development in curriculum reform (Hargreaves *et al.*, 2003).

According to Power (2014), there is pressure for TVET institutions to work within collaborative partnerships to develop appropriate curriculum in line with government priorities for change. Studies on the nature of collaboration and partnership in curriculum development have found that the critical success factors include a clear articulation of the aims of each of the stakeholders taking part in the project and convergence of those aims towards a common purpose (Clegg and McNulty, 2002; Tett *et al.*, 2003; Foskett, 2005;). An essential part of the curriculum development process when working in collaborative partnerships is the development of trust and openness in the working relationship. This is a time-consuming process which cannot be hurried and must therefore be seen by all parties as a long-term relationship (Trim, 2001).

The process of curriculum development within the new paradigm of competency based education and training provides particular challenges due to the nature of collaboration and partnership. Some of the barriers to effective curriculum change within partnership

contexts, such as cultural disparities and the diversity of expectations between the stakeholders (Barden, 1993; Cantor, 1995; Trim, 2001). The admixture of perspectives, and the variety of problem-solving approaches used by the different partners in their various professional contexts, brings both tensions and unpredicted creativity to the shaping of the emergent curriculum. In this way the needs of a diverse student body and the employers can be met successfully, and each of the sectors gains insights into curriculum possibilities that can be transferred to new workplace learning contexts.

Trim (2001) has pointed out that the most successful partnerships occur where institutions have similar value systems. The partnership needs to be ready to recognise these emergent aims and work with them or risk weakening or jeopardising the partnership. In addition, each stakeholder may also have a set of aims that it does not articulate to the other partners at all. These may include issues of financial security, programme viability, institutional resistance to change and other sensitive subjects. For the unwary curriculum developer these unarticulated, hidden aims can hijack the process.

The process of curriculum development for TVET in Kenya is coordinated by Curriculum Development Assessment and Certification Council (TVET CDACC) which is a body created by TVET Act No 29 of 2013. The Council is mandated to undertake design and development of competency based curriculum for TVET. This entails: - Coordinating the development of competency based curriculum, Identifying and appointing Sector Skills Advisory Committees (SSACs), Overseeing evaluation of curriculum and support materials for Technical and Vocational Education and Training, approving proposals for application for development of competency based curriculum, Overseeing printing, publishing and dissemination of curricula and curricula support

materials. The Council has adopted the following process for development of competency based curriculum.

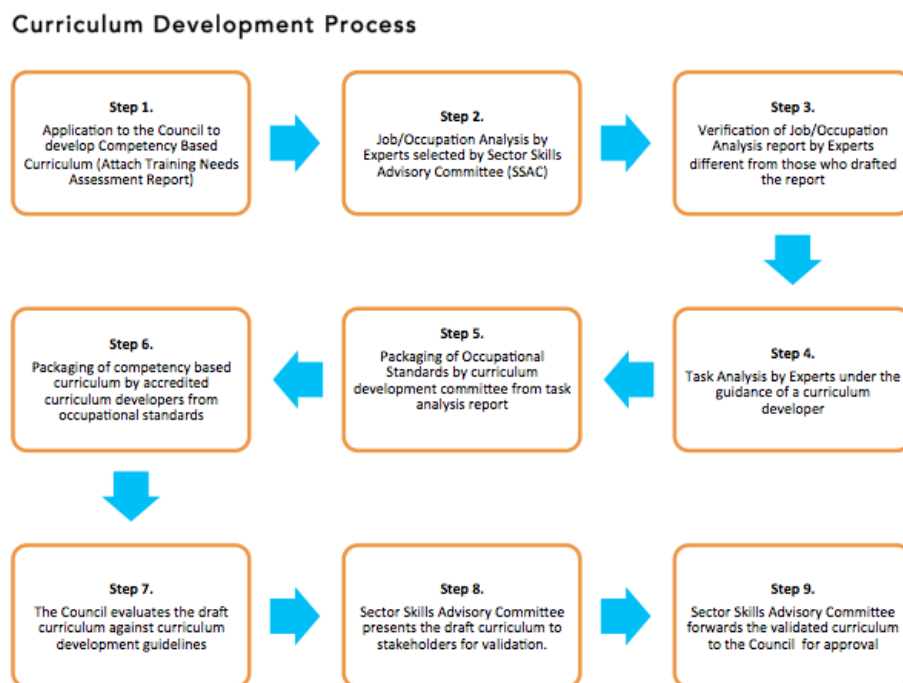


Figure 3: Curriculum Development Process

Source: (Maina, 2014)

2.7 Partnership in TVET Practical Training

The concept of Vocational and Technical Education is rooted on preparation of students for acquisition of necessary skills, knowledge and attitude to earn employment as expert assistant to professional in any field of Technology and Engineering (Okpor & Najimu, 2012). Partnership with credible and group accepted innovative approaches to funding and mobilization has the potentiality of increasing the overall access to essential services based on Partnership structure already in place ((Okpor & Najimu, 2012). The perception of Partnership in TVET recognizes the existence of alternative options for providing educational facility and services besides public finance and public delivery. partnership

according to Ahmed (2010) refers to a contractual agreement between a government agency or authority and a private sector entity that allows for greater private participation in the delivery of public infrastructure project. Facilities developments are the structures and facilities e.g. radio, sewage disposal, communication, road, power, hostel and building or workshop, telecommunication, library, solar energy, traffic control, transportation, electric power system needed for the effective operation of technical vocational education programme (Okoro, 1993; Ahmed 2010).

Ryden *et al.* (2000) describes facilities as rooms, equipment or services that are provided for particular purpose. The facilities used for technical education programme include among the following infrastructure, equipment supplied, library facilities, communication and recreational facilities and environment. The fundamental objective of Partnership is to encourage the private sector to use its facility to raise capital and the capability to build projects on time and to budget for the welfare of the technical vocational institutions, without having to compromise its profit motive. At the same time, technical institutions would retain its responsibility to provide goods and services to the public at affordable rates (Aimola, 2010). This arrangement according to Aimola calls for a judicious approach to decision making and underscores the need for a framework that enables the private sector partner to make reasonable returns on investments without diluting the standards and quality of services provided under public-private partnership arrangements, also any nation that is aspiring for self-sufficiency, political and economic emancipation cannot keep away from effective technical education program which can only be achieved through appropriate management of facilities.

The utmost concerns of employers today are finding good workers and training them. The difference between the skills needed on the job and those possessed by applicants, sometimes called the skills-gap, is of real concern to human resource managers and business owners looking to employ competent employees. Employers need reliable, responsible employees who can solve problems and who have the social skills and attitudes to work together with other workers. Creativity, once a trait avoided by employers who used a cookie cutter system, is now prized among employers who are trying to create the empowered, high performance workforce needed for competitiveness in today's marketplace (Stephen, 2014). Employees with these skills are in high demand and are considered valuable human capital assets to companies. The foundation skills for career in TVET are important competencies that students pursuing any career pathway should exhibit to be successful. The foundation skills should be developed from an analysis of all pathways in the occupational areas. TVET need to provide learners with a broad foundation for managing lifelong learning and career transitions in a rapidly changing economy and link to the academic performance standards.

Prosser and Allen theory of vocational education states that, Vocational education will be efficient in proportion as the environment in which the learner is trained is a replica of the environment in which he must subsequently work. Agbulu & Olaitan (2002) observed that Work environment is determined by the conditions necessary for production. Some of these conditions are physical like tools and machines and the place of work. In other words, the training environment must be identical with the occupational environment. This implies that while on-the- job training provides the exact environment, the schools

should aim at approximating it because a school without an organized workshop cannot claim to be providing vocational education. This therefore, calls for supply of adequate facilities and equipment similar to those used in the world of work, for training students in vocational education. Thus, acclimatizing them with what is expected of them during employment and reducing the effort required for transiting from school to work.

The implication of this theory to the present study is that a learner is supposed to have access to basic tools and machines appropriate for the job. Students need adequate working materials to enable them have enough class projects in all trades. These requirements make vocational education costlier than general education. Thus, it is better not to mount vocational education programmes than to starve it of adequate funds needed for success. If vocational education is provided, then it should be adequately funded.

2.8 Partnership in TVET Teacher Training

According to Weaver (1998) in any educational programme teacher is the most important element as he plays the pivotal role in the implementation of the whole educational process. The report also added that the teacher is the one who determines learners' achievements and weaknesses by his professional competency. So it is evident that the quality of education basically depends on the quality of teachers. However, a report by Biswas & Farhana (2015) showed that one of the major problems confronting the states with large teacher vacancy and inadequacy of trained teachers is the inadequate number of the teacher training institutions and their annual intake capacity. The report further showed that to meet up the crisis a large number of initiatives have been taken by private sectors. Though the private sector helps in expanding the capacity for training teachers it

is characterized by imbalances leaving much gap for the regional disparities. According to Callan and Ashworth (2004), TVET teacher education should be based on tripartite collaboration between teacher training institutions, industry and government. Okolocha (2012) is of the view that for vocational technical education to meet the economic, social and political trends of the time, a nation must use qualified vocational training professionals/teachers in implementing vocational technical education programmes.

On the competency of the personnel for vocational education, Prosser and Allen (1925) theory states that Vocational education will be effective in proportion as the instructor has had successful experience in the application of skills and knowledge to the operations and processes he undertakes to teach. The implication of this theory to the present study is that the personnel or vocational educator must be competent in the skills he/she is handling or must be a master of those skills theoretically and practically. This is because teachers can only give to the students what they know and what makes up a vocational teacher are the skills and knowledge of the occupation. It will follow therefore that only competent teachers who have been through actual successful employment should be the best for vocational programmes.

It is generally agreed that a modern and responsive TVET system needs to take into account current and expected socio-economic conditions including labor market demand, the needs of both the formal and informal sector in relation to employment, and the professional capacity of TVET teachers and instructors (Lee, (2010). According to Biswas & Farhana (2015), for the reformation of the teacher education, the public private partnership in teacher education should focus on: Providing pre service and in service training to a large number of teachers without compromising with quality; Strengthening

District Institutes of Education and Training (DIETs) and Colleges of Teacher Education (CTEs); Improving quality through ICT and Teacher capacity building. Biswas (2015) reported that the models of Public Private Partnership in Teacher Education include; Joint Venture Model Private sector forms a joint venture company along with the government where private sector is responsible for investment in construction and management of the operations while government contributes by way of fixed assets at a predetermined value, whether it is land, buildings or facilities or it may contribute to the shareholding capital; Management Contract Model where the private sector invests in infrastructure and runs operations and management and the government takes the responsibility to pay the private investor for specified service; Equity Model The government and private sector both invest in infrastructure and the management operations are done by private investors and Annuity Model where the private sector invests in the infrastructure and the government runs the operations and management of the institutions in turn making annualised payments to private investor.

2.9 Challenges associated with Partnerships in TVET Institutions

According to Patrinos *et al.* (2009) globalization has come up with a new scenario as far as labor market needs are concerned. The study further elaborated that all nations are confronted with the fact of dichotomous phenomena in the labor market. On the one side the globalization induces a wider occupational spectrum providing individuals with broader opportunities for selecting jobs. On the other side it boosts a fierce Competition in acquiring matching job opportunities. Another study by Alhadar *et al.* (2004) elaborated globalization poses a big challenge to establish an education system, which meets the needs of the labor market, and can cope with the rapid development of

technology and work organization. The researcher further explained that the changes are occurring in the organization of work, the management of human resources, the relationship between technology and skill requirements, and employment and work arrangements (self-employment, part-time work etc). Industries have seen the need for a more flexible, adaptable workforce than before.

Elmuti *et al.* (2005) explained that the sole benefit of partnerships between education and training institutions and industries is to enable students to study the requirements of an industry and gain real-life experience in practical problem solving, they are also gaining skills, knowledge and experiences that cannot be obtained inside a classroom. However, several challenges facing the partnership have been reported. PPPs are challenged by a variety of barriers which can be classified and discussed in relation to two broad levels: ideological and practical. The ideological constraints include anti-privatisation sentiment, opposition from vested groups (trade unions, public sector institutions, etc.), and the balance between conflicting goals (e.g. access versus quality) (Al-Tubi, 2014). The practical constraints comprise legislation to support reform and certain management issues related to finance, autonomy and evaluation.

2.9.1 Ideological challenges

The ideological barriers are primarily associated with fear of privatisation and loss of state control over public services and the dominance of the private sector. Besides these, other ideological obstacles include political and social defiance and conflicts of interests. These are explored below.

a) Political and social opposition

Achieving political and public support for the participation of the private sector in educational and training provision is a key obstacle to successful partnerships (Gibson & Davies, 2008). Experts rate lack of political support as the most serious obstacle to Partnership (Harris, 2004). The perceived problems of public workers' displacement, high costs, poor design and analysis of projects, corruption and lack of competition between private providers can all lead to political opposition to Partnership and failure to achieve the planned goals (Rosenbaum *et al.*, 2013). Gbadegesin & Oyewole (2014) margued that the private sector spends money to procure resources for the education institutions such as computers and projectors, however, these resources are often stolen by the same communities the private sector is trying to uplift.

Based on a case study of the UK's first PPP in education, Gibson and Davies (2008) found that attitudinal factors were most critical to Partnership success. The reported attitudinal barriers included local political opposition, public sector culture and the negative image of Partnership as comprising privatization. Scholars such as Cheung *et al.* (2012); Grimsey & Lewis (2004); Zhang (2005) argued that political interference by the public and stake holders is one of the reasons why Partnership fails.

b) Conflicts of Interest

Although PPPs combine the strengths of the partnering sectors, the diverse aims, interests, constituencies and ways of working in each sector can constitute a source of conflict. Reconciling and harmonising these can sometimes be difficult. Such concerns and demands need to be openly addressed at the outset of each Partnership venture. Aligning public and private objectives and interests is a key determinant of Partnership success (Gibson & Davies, 2008). Such alignment can considerably minimise conflicts

between partners' interests (Rosenau, 1999). Partnership should emphasize the overlapping objectives of the different partnering sectors, such as economic growth, access to public services, the relevance of education and effective governance and institutions (Draxler, 2012). Balanced risk sharing and provision of competitive advantages to partnering private corporations can also prevent conflicts of interest (Draxler, 2012).

2.9.2 Practical Challenges

Whereas the ideological challenges might have some shared or similar features across different contexts, the practical challenges are context-specific. The latter are linked to Partnership regulation, management and evaluation.

a) Regulation

The successful implementation of Partnerships in education requires that governments establish a Partnership -conducive environment through creating policies that enable and regulate the involvement of non-state sectors in education. Although the United Nations Global Compact has recently strengthened regulation for Partnership, generally the voluntary and weak nature of current regulatory mechanisms makes it difficult to monitor and enforce the private sector's compliance with these regulations (Draxler, 2012).

Partnership thrives in countries with strong and stable governance and legal systems but suffer in developing countries where adequate regulatory mechanisms are missing. This regulatory fragility hampers the private sector's contribution to or investment in education and raises the public sector's concerns about lack of transparency. There seems to be a paucity of regulations that control transparency in Partnership operations and

those that structure communication between partners regarding goals and outcomes. This can lead to market distortions, project inefficiency and conflicts of interest. Hence, creating binding regulations, although it might seem bureaucratic in particular settings, is essential to ensure responsibilities and commitments are met. Yet, they need to be discharged correctly to guarantee Partnership success, addressing basic transparency and accountability issues such as the formation and management of Partnership, financial structures and outcomes (Draxler, 2012).

Bureaucratic procedures and unnecessary formalities in the public sector are a major Partnership challenge. Red tape can impede innovation in Partnership. Regulations which might seem neutral between public and private providers can be discriminatory because private providers face market forces from which public providers are insulated (Freeman, 2000; Benjamin, 2003). This requires governments to ‘level the playing field for all partners’ (Al-Tubi, 2014). Another relevant Partnership deterrent is the lack of transparent regulation and streamlined procedures for Partnership contracting. Mahmood *et al.* (2013) asserts that this issue has undermined the effectiveness of many Partnership projects in Pakistan.

Lack of capacity by any government to efficiently provide public service is also a factor that discourages the private sector to participate in Partnership. Partnership projects according to Chan *et al.* (2010) may fall apart due to failure on the part of the public sector and private sector participants. The authors argued that government’s limited capacity to handle problems in education poses a serious challenge to the delivery of quality education and discourages the private sector’s involvement in Partnership.

b) Management

Implementing Partnership has drastic consequences for management. Issues such as project planning, finance, governance, partners' accountability and autonomy and evaluation of Partnership projects may constrain Partnership effectiveness (Hofmeister & Borchert, 2004). Planning impediments relate to a lack of clearly defined objectives and not basing Partnership on local needs, which may discourage local participation and limit project sustainability (Hofmeister & Borchert, 2004; Draxler, 2012). Akyeampong (2009) singles out two major management drawbacks of three education Partnership programmes in Ghana that made them fall short of achieving their planned targets for increasing access to education and jeopardized their sustainability: the lack of a long-term public financial security and the absence of Partnership management synchronised with the public sector.

Another managerial cost is the reduced autonomy resulting from working closely with another organisation and the heterogeneity of partners (Bovaird, 2004). However, Bennet *et al.* (2004) perceive some surrender of individual autonomy as inevitable for effective partnerships. Power relations are a common concern in Partnership. The different Partnership typologies and governance continua give authority to different partners proportional to their role in and contribution to Partnership. Ginsburg (2012) suggests a useful framework that tabulates the type and level of Partnership partners, as well as the level of their involvement, to identify the different technical, financial, ideological and power issues. Addressing the issues internal to Partnership facilitates the management of PPP projects and minimises governance obstacles.

c) **Evaluation**

Insufficient monitoring and lack of evaluation can threaten the effectiveness of Partnership. Common Partnership evaluation practices, such as self-reporting, scarce statistical details, the lack of impact evaluations and the absence of on-going and regular project evaluations, constitute major evaluation-related Partnership challenges (Draxler, 2012). Consistent monitoring and regular evaluation are crucial to detect and rectify deficiencies and improve practice (Mahmood, 2013). Monitoring and evaluation procedures must also be agreed upon before implementing Partnership.

Furthermore, reliable impact measures for the intended objectives of Partnership are not always utilised. Evaluation mechanisms need to be focused on outcomes rather than inputs and to observe accountability and regulatory frameworks to accurately measure impact (Draxler, 2012). However, LaRocque (2008) warns that a rigid focus on measurable outcomes such as test scores and drop-out rates might lead to the neglect of other desirable but immeasurable outcomes. Instead, the evaluation of Partnership needs to be supplemented by qualitative approaches that consider the contextual factors (Robertson *et al.*, 2012). Hence, existing models of Partnership need to be evaluated more effectively to establish baseline data and determine whether individual Partnership achieve their intended targets (Grimsey & Lewis, 2005; Keating & Keating, 2013).

Other studies have documented the challenges faced by Partnership in education and training institutions. For example, Prigge (2005) reported that lack of understanding by the education and training institutions on how companies function, the difficulties in negotiating and sustaining mutual effort, incompatible time perspectives between the two organizations, and a potential negative influence on the higher education institution's mission, funds or reputation are challenges that are encountered.

Another study by Elmuti *et al.* (2005) elaborated that poor communication, cultural differences, differing goals and objectives, inconsistency in strategy, and a lack of skilled people and processes to manage the partnership are the main stumbling blocks towards the partnership. On the other hand, Helmy (2014) notes that higher education institutions, including TVETs are being challenged to shift out of historical patterns of operation and to explore partnerships as efficient means of avoiding duplicate services, providing creative solutions for the problem facing colleges, and becoming more accountable. Based on these challenges, Wollenburg *et al.* (2013) recommend allowing enough time and adequate employee/staff training to enhance organisation capabilities in managing partnerships.

2.10 Strategies of Enhancing Partnerships in TVET

Various developing countries including Kenya have sought to increase the involvement of the private sector in the delivery of public service especially with regards to TVET. Therefore, strategies should be developed so as to propagate Partnership in TVET institutions. According to African Development Bank (2006) the following are strategies for improving TVET through Partnership; Enacting laws that improve public – private partnership in national technical vocational education to employment opportunities. Establishment of a council for technical and vocational education and training that is responsible for coherence within the diverse Technical, Vocational Education and Training (TVET) system. Encouraging the innovation of skills traditional apprentice and master artisan nationwide by provision of innovative material to them, Promoting roadside technicians, mechanics, welders, traders, agricultural farmers, tailors, home economics etc. by the government through Technical, Vocational Education and

Training (TVET). Provision of information and enlightenment campaign nationwide towards public private partnership in the Technical Vocational Education and Training (TVET) Programme by the government. Maintaining zero level of corruption and implement all policies relating to Technical, Vocational Education and Training (TVET). This has gone a long way by reducing unemployment in the country (Nyerere, 2009).

According to GoB (2010), there are two approaches for building public-private partnership: the first is to attract investment for projects, where building new infrastructure and expanding existing infrastructure is the major component; the second is to attract innovation and sustainability of public service delivery to the citizens. The choice of the Partnership arrangement for a particular project will depend on its social and economic importance and potential value for money to be generated under such an arrangement. Partnership is expected to foster economic growth by developing new commercial opportunities and increasing competition in the provision of public services, thus encouraging private investment.

2.11 Related Studies

Partnership in education and training has received great recognition across the globe. In the United Kingdom, government adopted the Private Finance Initiatives (PFI) in the early 1990s with the sole aim of constructing and refurbishing of school through lease arrangements and establishing The Academy Sponsors Trust to secure private sponsorship. In Sri Lanka, government effort to make its country 'the wonder of Asia' coupled with the fact that government funds are not sufficient to make Sri Lanka the hub of knowledge in the region led to a new public and private sector partnerships project

which directly contributes to university research. Kumarasinghe (2011) affirmed that public and private sector partnerships are essential for Sri Lanka to be part of the emerging world.

Malik (2010) found that because of the inability to accomplish the gigantic task of providing quality education and meet MDGs and EFA alone, the government of Pakistan supported the use of public-private partnerships in an effort to improve the equity and quality of the education system. Evidence from the Punjab Education Foundation indicated that the marriage between public and private sector through Partnership has been extremely successful due to a combination of private sector efficiency and public sector funding. In Dominican Republic, the Falconbridge Dominicana, a subsidiary of the Canadian mining company, has been involved since 1990 in sponsoring schools under the Falconbridge Foundation School Sponsorship Program. (Bertsch *et al*, 2005).

In Uganda, Partnerships were encouraged in education and training institutions in the late 1990s when government was made to realize that total privatization of education was not feasible in the prevailing economic conditions of the country. This was initiated by TVET service providers operating in the private sector, with their recommendation, that the need to work together with government in the planning, manning and funding of TVET is imperative so as to bring out desire quality and accessibility (Kayongo, 2007). Report from the India Education Review revealed that India has made a remarkable progress in education and training sector over the last five years. The gross enrolment ratio in the eleventh plan increase from 10 - 17. This was possible by the Public Private Partnership (PPP) support to education and training (Anand, 2012).

Similar to other African countries Partnership in Kenya has two wings as formal and informal apprenticeship training. To encourage industries to train their workers in accordance with the new training scheme, a levy was introduced where all medium and large companies would be required to contribute (Smith & Billett, 2005). Those who provided training from their worker would be entitled to a reimbursement at the end of the year. A very small number of youth obtains training through this system (Ferej, 2000). During the apprenticeship period the learners are required to take trade testes at appropriate level of the program.

The informal apprenticeship system in Kenya has its roots in the Indian craftsmen imported in to the country during colonial days, from the construction of railways. After its completion the Indians stayed and formed the basis if the skilled technical manpower in the country mainly for maintaining of the railway.

The development of fully equipped, fully resourced National Polytechnics (NPs), Technical and Vocational Colleges (TVC) and Vocational Training Centres (VTCs) that can deliver much needed technical capacity in a newly devolved Kenya with 47 counties is an emerging challenge (Nyambala, 2015). To ensure the proper delivery of public services and continued delivery of value for money, a water tight contract would have to be developed for this project. It would be advisable to engage the Kenya PPP to participate in the crafting of this contract (Nyambala, 2015).

Since 2005, the Kenyan Ministry of Education has extended financial support to low-fee private schools, providing the same learning and materials supports to both public and private schools. The government of Kenya is encouraging public private partnerships

with secondary-level private providers as a means of achieving universal secondary education (USE) by increasing the number of secondary schools and secondary enrolment (primarily in rural areas). However, the level of Partnership as evident in secondary schools in other developed countries is limited. Despite the fact that Partnership has been identified as an important way of financing education and training institutions from alternative sources as it relates to funding, the opportunities have not been properly harnessed due to dicey dialogues between TVET and private sector as well as inadequate marketing on the part of the institutions.

2.12 Research Gap

Partnership in education and training has constituted a major focus of a significant amount of research in the past two decades. However, the partnership literature is sometimes described as thin and lacking depth and analysis (Teamey, 2007). Although there is a growing body of research on Partnerships in developed countries such as the USA and the UK, Patrinos (2006) points out the paucity of research that investigates Partnerships in developing countries. The researcher also stresses the importance of investigating Partnership initiatives and experiments in developing countries to inform the selection of public policies. Hence, this research hopes to enrich the existing literature by addressing various aspects of Partnerships in the Kenyan TVET context. It also investigates the types of Partnerships within the selected TVET institutions, challenges and strategies surrounding its implementation in TVET. This will aid in shedding some new light on how the concept of Partnership is perceived and practiced in TVET institution in Kenya.

There are also lacunae in the Partnership literature and research that explores and documents actual Partnership practices (Chung & Rose 2010). Batley (2006) identifies relations between the government and private providers as one of the research priorities in the Partnerships. This research was set to explore this issue and fill this research gap as it seeks to identify the nature and types of Partnerships that exist in TVET institutions in Kenya and their influence on quality and relevance of training. In addition, the study sought to determine the challenges associated with this Partnerships as well as strategies of enhancing success of partnerships in Kenyan TVET institutions.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the research design and methodology used. The areas covered include; philosophical views, research approach, research design, study area, population and sample, sampling procedures, research instruments, validity and reliability of instruments, data collection procedures, ethical considerations procedure for data analysis and presentation.

3.2 Research Methodology

3.2.1 Philosophical View

Although philosophical ideas remain hidden in research, they still influence the practice of research and need to be identified (Slife & Williams, 1995). Philosophical view is defined differently by different scholars. Guba (1990) refers to it as a basic set of beliefs that guide action. Denzin, & Lincoln (2011) and Mertens (2014) refer to it as paradigms, (Crotty, 1998) calls it epistemologies and ontologies, While Neuman & Wiegand (2000) calls it broadly conceived research methodologies and Cresswel & Plano (2007) calls it world view.

Pragmatism as a world view is concerned with solution to the problem and not the process or methods (Patton, 1990; Rossman & Wilson, 1985). Pragmatism is not committed to any one system of philosophy and reality. It is applicable to mixed methods research in that inquirers draw liberally from both quantitative and qualitative assumptions when they engage in their research. Pragmatism opens the door to multiple

methods, different world views and different assumptions as well as different methods of data collection and analysis (Creswell & Plano, 2007).

Positivist as a world view represents the traditional form of research. Its assumptions hold true for quantitative research than qualitative. This world view is at times called scientific method (Creswell & Plano, 2007). Post positivism on the other hand represents the thinking after positivism challenging the traditional notion of absolute truth of knowledge (Phillips & Barbules, 2000). It recognizes that we cannot be positive about our claim of Knowledge when studying behavior of humans.

Social Constructivist as a world view holds the assumption that individual seeks understanding of the world in which they live and work. Hence develop subjective meaning of their experiences. Constructivists assert that the role of research is to rely as much as possible on participant's views of situations under study. Questions become broad and general so that participants can construct meaning of situations (Crotty, 1998).

Since this study is more qualitative than quantitative, positivist world view does not offer the best approach for the study. On the other hand pragmatism emphasizes more on the solution to problem rather than the process. Partnership requires one to understand the process hence constructivism world view granted the researcher an opportunity to construct meaning out of the partnership process in their present context.

The theoretical framework for this research was therefore informed by a constructivist paradigm, and it employed descriptive survey design to gain knowledge of the perceptions of participants implementing TVET partnerships (Mertens, 2010). The existing literature on partnerships and how they have evolved over previous decades in

various parts of the world is essential to understanding how TVET institutions should operate in order to meet the needs of a complex and dynamic global work environment.

3.2.2 Research Design

A mixed method involves combining and/or integration of qualitative and quantitative research and data in a research study. Qualitative data tends to be open-ended without predetermined responses while quantitative data usually includes closed-ended responses such as found on questionnaires. The field of mixed methods research is relatively new with major work in developing it stemming from the middle to late 1980s. In 1959, Campbell and Fisk used multiple methods to study psychological traits—although their methods were only quantitative measures. Their work prompted others to begin collecting multiple forms of data, such as observations and interviews (qualitative data) with traditional surveys (Sieber, 1973). Early thoughts about the value of multiple methods—called mixed methods—resided in the idea that all methods had bias and weaknesses, and the collection of both quantitative and qualitative data neutralized the weaknesses of each form of data. Triangulating data sources as a means for seeking convergence across qualitative and quantitative methods was born (Jick, 1979). By the early 1990s, mixed methods turned toward the systematic convergence of quantitative and qualitative databases, and the idea of integration in different types of research designs emerged (Tashakkori & Teddlie, 2010).

Mixed methods approach is grounded on Pragmatic worldview and involves collection of both quantitative and qualitative data sequentially in the design. The researcher bases the inquiry on the assumption that collecting diverse types of data best provides a more

complete understanding of a research problem than either quantitative or qualitative data alone. The study begins with a broad survey in order to generalize results to a population and then, in a second phase, focuses on qualitative, open-ended interviews to collect detailed views from participants to help explain the initial quantitative survey.

3.2.2 Strategy of Inquiry

Strategies of inquiry are models that provide specific direction for procedure in a research design. Others call them approaches (Creswell & Plano, 2007) or research Methodologies (Mertens, 2010). The methodology used in this study is both qualitative and quantitative utilizing interviews, questionnaires and document analysis to gain information regarding the nature of partnerships in place and the successes and challenges associated with those TVET-industry partnerships. Descriptive survey was chosen for this study as it allowed the researcher to describe the partnership's impacting aspects including benefits and challenges in detail.

3.3 Research Study Area

TVET system in Kenya is managed by the state department for technical education and grouped into five regions for administrative purposes namely the coast region, Nairobi region, Mt Kenya Region, Rift Valley region and Western Kenya region. The study was carried out in twelve (12) selected TVET institutions spread within the Rift Valley and Western regions in Kenya. The western Kenya region comprises of former western and Nyanza provinces. The research was carried out in Nine (8) Counties spread within the two TVET administrative regions. The eight Counties were: - Kisumu, Kisii, Bomet/Kericho, Nandi, Uasin Gishu, Trans Nzoia, Bungoma, and Nakuru. Figures 4

shows the former Rift Valley, Western and Nyanza provinces Figure 5 shows the geographical location of TVET institutions within the Counties.



Figure 4: Map of Kenya showing Former Rift valley and Western Provinces

Source: (Google Maps, 2018)

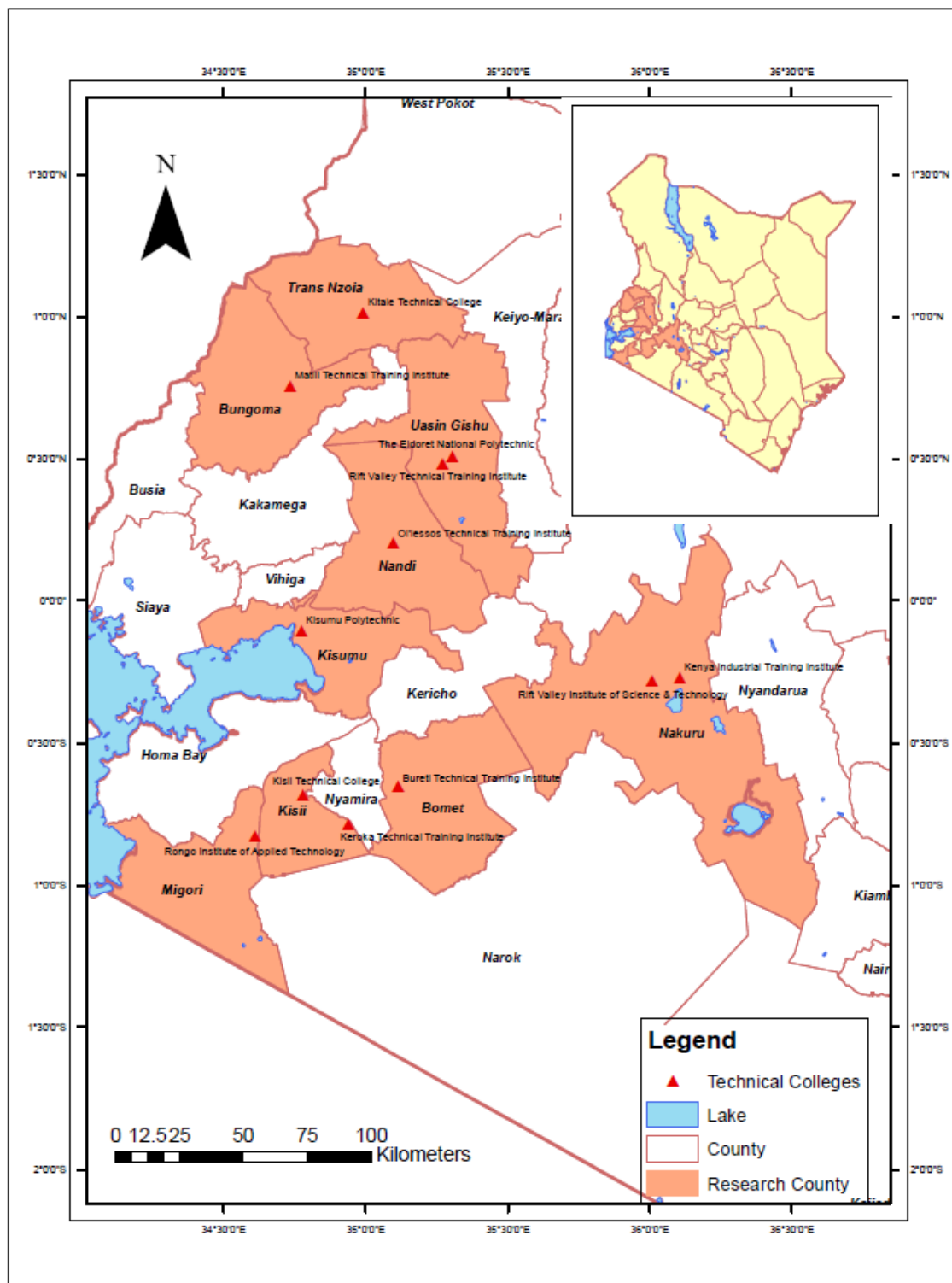


Figure 5: Map showing Location of TVET Institutions in the Counties

Source: (Author, 2018)

3.4 Study Population

TVET system in Kenya is organized for administrative purposes into five regions namely, Coast region, Nairobi region, Mt Kenya region, Rift valley region and Western (former Nyanza and Western provinces) Region. The current number of registered TVET public institutions in the study area is 39 according to data obtained from TVET website.

3.5 Sample and Sampling Procedures

The ever increasing need for a representative statistical sample in empirical research has created the demand for an effective method of determining sample size. To address this concern, Krejcie & Morgan (1970) came up with a table for determining sample size for a given population for easy reference. Sampling of TVET institutions respondents was done based on this table.

3.5.1 Sampling of TVET Institutions

In considering the TVET institutions for the study, purposive random sampling was used. A sample comprising of twelve (12) out of thirty nine (39) registered public TVET institutions (representing 31% of the entire population in the study area) was selected for the study. These institutions were Bureti Technical college in Kericho county, Keroka Technical college in Kisii County, Kisii National polytechnic in Kisii County, Kisumu Polytechnic in Kisumu County, Ramogi Institute of Applied Technology in Kisumu, Ol'Lessos Technical Training college in Nandi county, Rift valley institute of science and Technology in Nakuru County, Kenya industrial training Institute Nakuru County, Rift Valley Technical Training Institute in Uasin Gishu County, Eldoret polytechnic in Uasin Gishu and Kitale National polytechnic in Trans Nzoia County, Matili Technical in Bungoma County.

The institutions were selected based on their unique characteristics such as varying geographical locations, Centre's of Excellence status as well as a rich history of partnership with industry. The selected institutions were considered representative of the TVET system in Rift Valley and Western Kenya regions.

3.5.2 Sampling of Participants from TVET Institutions

Purposive sampling was used in selecting participants from TVET institutions. Administrators who were actively involved in activities focused on promoting partnership within the training context were considered. They included, Principals, Deputy Principals, Academic Registrars, Directors in charge of Research and Extension, Liaison Officers and Heads of Departments. The following procedure was used as selection criteria for participants (1) The participants must be experts and/or professionals involved in partnership activities in their institutions (2) They must belong or have some affiliation to the selected TVET institutions operating in Kenya. Participants who met these criteria were selected for this study. Senior Officials in the ranks of heads of departments were also selected for interview owing to the critical role they play as heads of academic programs.

3.6 Research Instruments

This study utilized the following research instruments; TVET Trainers questionnaires, interview schedule and TVET trainers focused group discussions guide and comprehensive analysis of partnership documents in data collection. These questionnaires and interview schedule questions were developed guided by an established interview protocol that yielded information for answering the research questions. Various authors

have recommended questionnaire as a very effective instrument that has the ability to collect large amount of information in a reasonably quick span of time (Krejcie & Morgan 1970; Orodho, 2009).

The main purpose of using interview schedule and focus group discussion guide was to ensure that sufficient data was collected as noted by Bryman (2006) and Orodho, (2009). Creswell (2009) notes that more than one instrument should be used to enhance triangulation and hence validity and reliability of the study. In each and every instrument, consent form was displayed at the beginning and a closing remark at the end, to ensure ethical considerations. The details of survey questionnaire and interview guide are annexed in appendices 2 and 3.

3.6.1 TVET Trainers Questionnaire

The TVET trainers' questionnaire was the main data collecting instrument for all TVET trainers. The questionnaire included six sections. Section A focused on trainer's personal information namely; sex, age and teaching experience. Section B represented the information required to answer the five research questions. In this section the respondent was required to answer a mixture of structured and unstructured questions. Some of the questions were open-ended while others required rating using a likert scale of 5 in which 1 represented strongly agree, 2 agree, 3 not sure, 4 disagree and 5 strongly disagree as recommended by (Mugenda & Mugenda, 2003).

3.6.2 Interview Guide

An interview guide is a set of questions that an interviewer asks when interviewing respondents and assists in ensuring standardization of the interview situation. The guide

enabled interviewer to ask the same questions in a consistent manner. In order to obtain more complete and comprehensive data the guide was designed to have both structured and open-ended questions. This study used the interview guide to obtain information that was considered relevant for TVET enterprise partnerships.

3.6.3 Trainers' Focus Group Discussion Guide

The focus group discussion technique is a research instrument used for collecting qualitative data (Creswell, 2009; Bryman & Bell, 2014). The present study used FGD as one of the instruments for collecting data. A focused group discussion guide was formulated to guide the discussion. The guide contained six parts. Part one focused on curriculum, part two practical training, part three teachers training, part four equity in access to TVET by students, part five challenges associated with partnerships

3.7 Piloting of Instruments

3.7.1 Piloting

A piloting involved a small scale study designed to test logistics and gather information prior to a larger study. In this study pilot testing exposed deficiencies in the design and procedure anticipated in the study. Trainers and heads of sections and departments from Ziwa Technical training college in Uasin Gishu County was used in pilot testing. During pilot testing trainers' questionnaire were found not sufficient enough to gather requisite data. Interview guide and focus group were developed and incorporated. The discussion with respondents during the pilot testing generated key skills that were considered essential for partnership; the suggestions were incorporated into the questionnaire.

3.8 Validity and Reliability of Instruments

Validity indicates the degree to which an instrument measures what it is supposed to measure. According to Field & Lo (2009) a data collection instrument to be considered valid, if the content selected and included in the questionnaire is relevant to the need or gap established. The primary purpose is to increase the accuracy and usefulness of findings by eliminating or controlling as many confounding variables as possible, which allow for greater confidence in the findings of a given study (Bryman, & Hardy, 2009). Reliability refers to the degree of consistency of scores obtained by a tool or consistency the procedure demonstrates.

A test is said to be valid when it measures what it is supposed to measure. Alternatively, a test whose performance closely resembles with an objectively defined criterion is said to be valid. According to Oluwatayo (2012), an index of validity shows the degree to which a test measures what it purports to measure, when compared with accepted criteria. Drost (2011) identified five different types of Validity namely Operational or Content Validity, Functional or Concurrent Validity, Factorial Validity, Face Validity and Cross Validity. Wiederman (2002) and Giorgio (2002) identified three ways of estimating validity. (1) Content Description Procedures which includes Representation of Content and Face Validity (2). Criterion Prediction Procedures which includes Concurrent Validity and Predictive Validity (3). Construct Identification Procedures which includes Factor Analysis, Internal Consistency, Convergent and Discriminant Validation and Structural Equation Modeling.

On the other hand, the tendency towards consistency from one set of measurements to another is called reliability. If a test is administered for frequent number of times on the same group of subjects or individuals and each time the value of test measurement or test score is almost the same then the test is said to be reliable. According to Ritchie *et al.* (2013) Reliability refers to the consistency of scores obtained by the same persons when they are reexamined with the same test on different occasions, or with different sets of equivalent items, or under other variable examining conditions.

According to Bhattacharjee (2012), there are four general classes of reliability estimates, each of which estimates reliability in a different way. These are Inter-Rater or Inter-Observer Reliability which is Used to assess the degree to which different raters/observers give consistent estimates of the same phenomenon, Test-Retest Reliability Used to assess the consistency of a measure from one time to another, Parallel-Forms Reliability Used to assess the consistency of the results of two tests constructed in the same way from the same content domain and Internal Consistency Reliability Used to assess the consistency of results across items within a test.

Test-retest method and parallel form reliability methods have the disadvantage that they are time consuming. In most cases the researcher wants to estimate the reliability from a single administration of a test. This requirement has led to the measuring of internal consistency, or homogeneity. Internal consistency measures consistency within the tool. Several internal consistency methods exist they include (a) Split Half Reliability method which can be tested using Spearman and Brown Formula, Rulon/Guttman's Formula or Flanagan Formula (b) Cronbach's Alpha (α) Method and (c) Method of rational

equivalence tested using Kuder Richardson - KR20 or Kuder Richardson - KR21 formulae.

All internal consistency measurements have one thing in common, namely that the measurement is based on the results of a single measurement. In order to estimate the internal Consistency Reliability of the questionnaires that was administered on the sample under investigation, Cronbarch's Alpha (α) method was used. Cronbach Alpha is mathematically equivalent to the average of all possible split-half estimates. A statistical analysis computer programme SPSS was used to calculate the Cronbach's Alpha (α).

3.8.1 Validity of Data Collection Instruments

The researcher validated the data collection instruments (i.e. trainer's questionnaires, and interview guide) by subjecting it to a rigorous scrutiny by two senior research experts and professors of curriculum instruction in Moi University. The instruments were also validated by the two supervisors who are experts in TVET. The experts were guided by validations guide attached in appendix IV. After incorporating the expert's comments and corrections, the instruments were returned to the experts who satisfied that it had captured sufficient information that could answer all research questions.

3.8.2 Reliability of Data Collection Instrument

The data collection instruments were subjected to statistical analysis to determine their reliability. The study considered all methods of estimating the reliability discussed above but adopted only on Cronbach alpha A measure of internal consistency. Internal consistency measures consistency within the instrument and questions how well a set of items measures a particular behaviour or characteristic within the test. For a test to be

internally consistent, estimates of reliability are based on the average inter-correlations among all the single items within a test. Orodho (2009) describes that the most popular method of testing for internal consistency in the behavioral sciences is Coefficient alpha. Coefficient alpha was popularized by Cronbach (1951), who recognized its general usefulness. As a result, it is often referred to as Cronbach alpha.

Coefficients of internal consistency increase as the number of items goes up, to a certain point. For instance, a 5-item test might correlate .40 with true scores, and a 12-item test might correlate .80 with true scores (Cortina, 1993). Consequently, the individual item would be expected to have only a small correlation with true scores. Thus, if coefficient alpha proves to be very low, either the test is too short or the items have very little in common. Coefficient alpha is useful for estimating reliability for item-specific variance in a unidirectional test (Cortina, 1993). Cronbach alpha is the most common method of estimating reliability of an instrument (Bryman & Hardy 2009). Most authors recommend that a value of 0.6 to 0.85 as an acceptable value for Cronbach alpha; values substantially lower indicate an unreliable scale.

In reference to the merits and limitation of various reliability tests, this study adopted Cronbach alpha technique and a value of 0.7 as an acceptable value. The Statistical Package for Social Sciences a computer software program was used to compute the alpha. The trainer's questionnaires computation for internal reliability of a 24 item scale was assessed using the Cronbach Alpha technique. The scale yielded an alpha value of 0.8632. This value was acceptable.

3.7 Data Collection Procedures

The study adopted both explorative and descriptive survey design in a bid to understand in detail the nature of existing partnerships between TVET institutions in Kenya. Data was collected by individual interviews, and administration of a questionnaire and Focus group discussions (FGD) to selected participants. The participants included Principals, TVET trainers, Academic Registrars, directors of industrial links, coordinators of industrials training, directors of Research and extension, External liaison officers of TVET institutions.

The respondents were requested to complete the questionnaire after seeking the consent of management. Sufficient time was given before being collecting responses. In situations where the respondent, was not in a position to complete the questionnaire in a day, the questionnaire was left with the respondent to be collected at a later date upon completion. The focus group discussion involved booking an appointment with the help of the heads of department to meet the trainers at a specified time in round table meetings to deliberate on issues as guided by the interview guide. Document analysis included but was not limited to Partnership agreements signed between TVET institutions and Enterprises, policy guidelines and regulations on partnership activities as outlined in institutional quality assurance and standards published procedures. The data collection procedure is summarized in Figure 6

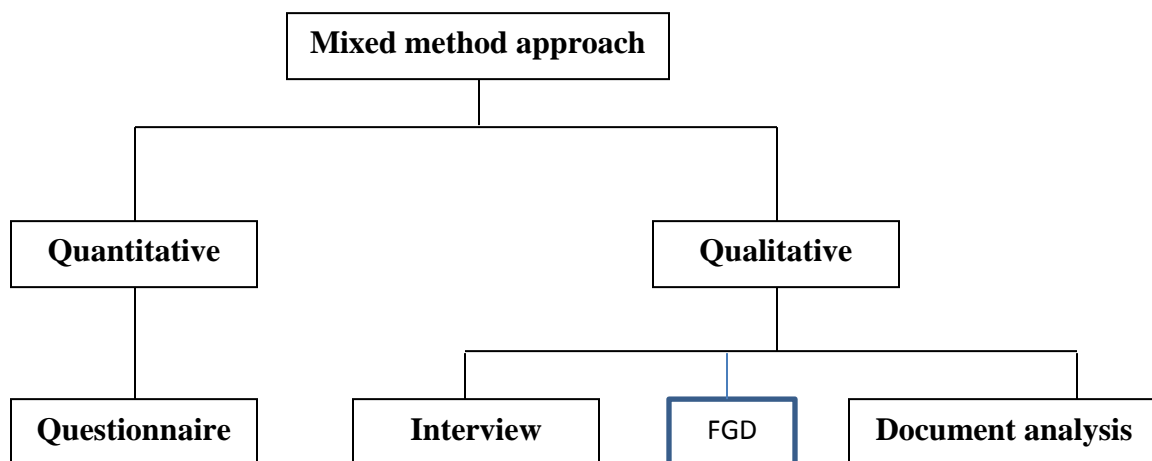


Figure 6: Data Collection Instruments for this Study

Source: Author, (2018)

3.8 Data Analysis

Data analysis entails working on data by breaking into manageable units organizing, synthesizing and searching for patterns. Glaser (2017) defined it as discovering vital points to be learned. According to a study conducted by Moran-Ellis *et al.* (2006) qualitative researchers were reported to use inductive analysis of data to derive meaning from critical themes that emerge from the raw data. Basically, organization of raw data is a challenging task that comprises putting together hundreds of pages of interview transcripts, field notes and documents. Richards (2014) explained that the process of handling large quantities of qualitative data includes sorting and storing physically slips of paper or using one of the several computer software programs designed to help in such tasks.

The researcher ought to devise an audit trail when broken down into manageable levels of the raw data. An audit trail can be explained as a scheme for classifying data chunks as

per their speaker and the context. According to Golafshani (2003), the particular identifiers developed may or may not be used in the research report, but speakers are typically referred to in a manner that provides a sense of context. In most cases, qualitative research reports are considered by the use of voice in the text in form of participants' quotes that illustrate the themes being described.

The next phase of analysis comprises of re-examination of the classes recognized to determine how they are inter-linked. This is normally a complex process that Glaser (2017) termed as axial coding. The main aim of coding is to acquire new understanding of an occurrence or event of concern. During axial coding, the researcher develops a conceptual model, which involves the process of examining whether there is adequate data to back that interpretation. Glaser (2017), further notes that the research's report should be rich firmly woven account that closely estimates the reality it describes.

In real practice, the stages of analysis may occur instantaneously and frequently and not essentially in a linear fashion as described above. During axial coding, the researcher may define whether initial categories identified must be reviewed. This will lead to re-examination of the raw data. Qualitative data was analyzed by grouping into emerging thematic areas while quantitative data was analyzed by calculating frequencies and percentages

3.9 Ethical Considerations

The research protocol was developed to ensure high standard ethical conduct. Respect, treating respondent fairly and confidentiality were the basic guiding principles at all stages of the research. To ensure confidentiality, the researcher did not include or write

the names of respondent on the data instruments except a code which enabled identification of the participants. As much as possible, the researcher strived to ensure privacy during interviews. To ensure that respondents were not coerced into participating against their will, they were clearly informed of the purpose of the study and given an opportunity to read and understand before signing the informed consent form

To avoid suspicions and skepticism during data collection from members of public, the researcher sort research authorization from National commission for Science technology and innovation (NACOSTI). Stringent ethical measures were taken throughout the research process. All participants were informed from the onset of the research that their involvement is voluntary and that they could withdraw at any point, without penalty as proposed by (Denzin & Lincoln 2011).

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS, INTERPRETATION AND DISCUSSION

4.1 Introduction

This chapter presents the results obtained from the study. The findings from selected respondents from TVET institutions were analyzed, interpreted and discussed.

4.2 Information Related to TVET Institutions

Characteristics of public TVET institution considered relevant to this study includes: - characteristics of respondents, TVET institutions categorization and enrolment, the nature, forms and types of active partnerships,

4.2.1 Demographic Information of TVET Respondents

This study sought and categorized TVET respondent's based on their administrative responsibilities and partnership activities. The findings obtained are as summarized in Table 4.1

Table 4. 1: Categorization of TVET Respondents

Category	Frequency	Percentage
Principals	7	17.5%
D/Principals	6	15%
Registrars	8	20%
Director of Research	1	2.5%
HODs	15	37.5%
Industrial Liaison Officers	3	7.5%

Total	40	100%
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Out of 40 respondents, 7(17.5%) were Principals 6(15%) were Deputy Principals, 8(20%) were Registrars, 1(2.5%) was a Director of research and innovations, 15(37.5) were Heads of departments while 3(7.5%) were Industrial training liaisons officers. The findings show that administrators in varied positions in TVET were involved in one way or another in partnership activities.

4.2.2 Information about TVET Institutions

This study sought information on TVET institutions categorization, nature/forms/types of active partnerships. Table 4.2, 4.3 and 4.4 below indicates the categorization in TVET institutions under the study.

Table 4. 2: Summary of TVET Institutions Categories

Category	Frequency	Percentage
National polytechnics	4	25%
Institute of Technology	2	16.6%
Technical Training Institutes	5	41%
Vocational Training Colleges	2	16.6%
Total	12	100%

The findings shows that the study covered both layers of TVET system in the area under study from national polytechnics to the newly established Vocational Training Colleges (Formally referred to as TTIs and ITs)

Table 4.3: Type of TVET Partnership

Type of partnership	Frequency	Percentage
Formal partnerships	31	47.7%
Informal partnerships	34	52.3%
	65	100%

Out of the 65 active partnerships only 31 representing 47.7 % was formalized by way of a MOU and the remaining 34 representing 52.3 % were not formalized. Training partnerships are a complex set of relationships between training providers and individual enterprises or groups of firms. Local training networks form a basis for partnerships which are fluid, dynamic and capable of adapting to demand. Through local networks, local employers are able to secure training services and funds, as well as influence political decisions. Service providers also operate through these networks.

The United States provides one of the best examples of the dynamic role of local initiatives and partnerships (Mitchell, 1998; Herschbach, 2009). Training in the United States is highly decentralized, loosely coordinated, locally administered and strongly market-driven in response to local economic conditions. The closeness of decision-making makes training more relevant and responsive to labour market needs. In Kenya, the local networks are not existent as evidenced by only 47.7% prevalence of formal partnerships and 52.3% partnership in the informal sector. The low level of involvement by Informal local enterprises such as Community organizations can be attributed to their low capacity and organizational mechanism.

Table 4.4: Nature of TVET Partnership

Nature of TVET Partnership	Frequency	Percentage
Partnerships with local private enterprises	15	23.1%
Partnership with County governments	12	18.5%
Partnerships with central government agencies and international donors through (MOEST)	34	52.3%
Partnership with Jua kali enterprises	1	1.5%
Tripartite partnerships involving TVET institutions and local communities or jua kali	3	4.6%
	65	100%

Partnerships with central government agencies and donors were dominant accounting for 52.3%. Private partnerships with TVET were ranked second with a frequency of 15 out of 65 representing 23.1% while County government was third with 18.5%. Tripartite partnerships between TVET institutions Local communities and government agencies or donors had a frequency of 3 representing 4.6% while partnership with Jua kali sector had a frequency of 1 representing 1.5%.

As noted above, the main type of partnership form that exists across all TVET institutions is the partnership with Central government partners through MOEST at 52.3 % prevalence. In most cases this partnership is in capital investment in construction of tuition blocks laboratories and workshops and supply of equipment. Appendix 5 is a summary of the key infrastructural projects and equipment delivered by central government in collaboration with donors.

The findings agree with those of Bennell & Segerstrom (1998) which asserts that by tradition, it has been the primary responsibility of the State to ensure the effective functioning of the training system, particularly as regards training for young persons and the retraining of the unemployed. The central government input as observed in the finding of this study stood at 52.3%. This shows that the Central government partners are the major partner in TVET training in Kenya courtesy of an established tradition that the responsibility of training belongs to the government. Partnership with local private enterprises stood at 23.1%, this is a significant percentage of participation considering that there are few established private enterprises in the area under study.

The development of partnerships can be triggered by major political change in a country. One illustration is Chile's transition to a market economy in the 1970s, which reinforced the role of the private sector and led to the pioneering of new forms of training alliances. As part of the liberalization process, reforms were undertaken with a view to develop a market-driven, enterprise-led training system operating in a competitive market (Mitchell, 1998). The Recent political change and devolution in Kenya saw the establishment of county governments which are regional administrative units closer to the people. These county governments' have proved to be significant partners of TVET education and training with their contribution standing at 18.5%. However most of their partnership activities are skewed towards students' scholarships.

4.2.3 Information of TVET Partners

This study sought information on TVET partner's categorization sector wise. Table 4. 5 below gives a summary of TVET partners sector wise.

Table 4.5: Summary of TVET Partners Categories

Category	Frequency	Percentage
Local private partners		
Sugar industry	5	7.7%
Agrochemical industry	6	9.2%
Dairy industry	3	4.6%
Building and construction industry	3	4.6%
Manufacturing sector	2	3.0%
Other partners		
International partners through MOEST	14	21.5%
Central government agencies	20	30.7%
County governments	12	18.7%
	65	100%

The findings show that local TVET partners were distributed as follows: - in the category of local private partners' agrochemical industries had a frequency of 6 representing 9.2%, Sugar industry had a frequency of 5 representing 7.7%, Dairy and construction industries had equal frequencies of 3 representing 4.6% while manufacturing sector had a frequency of 2 representing 3%. In the category of other partners, International partners had a frequency of 14 representing 21.5% while central government agencies were the leading partner with a frequency of 20 representing 30.7%. County government though newly formed have contributed immensely with a frequency of 12 representing 18.7%

4.3 Performance of TVET and Enterprise Partnership in Curriculum Development

In order to find out the extent at which TVET institution and Enterprises performed in curriculum development processes, the respondents were asked to respond to structured questions related to curriculum development and validation. The structured questions were grouped into five sub variables of the curriculum development process namely; participation in curriculum reviews, use of CBET framework, use of resource persons from enterprise, donation of instructional materials and frequency of curriculum reviews. Descriptive analysis technique in form of counts, frequencies and percentages was used to illustrate partnership activities in curriculum development. Table 6 below is a summary of the findings obtained from the study.

Table 4.6: Performance of TVET Partners Contribution to Curriculum Development.

Perceived performance in Selected Curriculum development and validation aspects	Frequency	Percentage
Participation of enterprise/industry players in KICD curriculum reviews	4	10%
Use of CBET framework proposed by TVET-CDACC during curriculum reviews	6	15%
Use of resource persons from enterprises in curriculum instruction.	3	7.5%
Curriculum Instruction materials received as grants or donations from enterprises	9	22.5%
Frequency at which curriculum reviews	5	12.5%

The finding gives a gloomy picture concerning the contribution of enterprises in the development and review of current KICD curriculum which is in force. A frequency of 4

representing 10% of the respondents believes that industry players were involved in the curriculum development and reviews. The use of CBET framework proposed by TVET-CDACC during curriculum reviews was reported to be low with a frequency of 6 representing 15%. The frequency at which curriculum reviews were carried out was reported to be low at 5 representing 12.5 %. The use of resource persons from enterprise in curriculum instruction is also very low at a frequency of 3 representing 7.5 %. Concerning donation of instructional materials, a frequency of 9 representing 22.5% of TVET institutions was reported to have received such donations from enterprises.

Most respondents believe that the KICD syllabus which is currently in force does not have a lot of input from the industry/enterprise. Another observation that was captured across the divide was that there exists a disconnect between KICD which is the body responsible for curriculum development and KNEC which is the examining body. Two institutions under study reported cases where the candidates were examined in areas beyond their scope. The registrar of one of the institution had this to say:-

Sometimes the Kenya National Examination Council (KNEC) sets exams outside the syllabus. I have witnessed a situation where a design question which is ideally meant for diploma students and above was given to artisan students (Registrar Keroka).

One trainer when asked what he was doing to bridge the gap between curriculum specification and adoption of new technologies in the industry had this to say

You know even us we were taught a lot of theory with little link to the new technologies but what I am doing is to be a bridge myself by sneaking in the new technologies i see in the market in class because I don't have a say in changing the syllabus (FCD in Bureti Technical)

One principal reported a case in which KICD demanded a whopping ksh24,000,000 (Twenty four million) to approve a curriculum they had labored to draft. The findings

portray a picture of a system where the input of the enterprise in curriculum development process does not get the requisite attention it deserves. This situation is most likely caused by differing goals between TVET institutions and Enterprises. As noted in the literature review, Trim (2001) pointed out that the most successful partnerships occur where institutions have similar value systems. The value system and aims of the enterprises are inclined to profits while TVET institutions remain rigid in the face dynamic curriculum development.

Competency-based models of curriculum development and instruction have dominated TVET curricula reform discourse over the last few years. Competency Based Education and Training (CBET) was introduced with the goals of, first, identifying the practical skills that comprise different occupational profiles and the standards of performance required for successful employment; and second, in recent years, incorporation into national qualification systems that provided mechanisms to standardize and update the different qualification profiles required by industry.

CBET is viewed as being training that is focused on the outcomes of the process rather than on its inputs: in other words, the attained competencies. It uses industry competency standards as the basis for TVET curriculum development, and is geared towards developing skills to the standards employers will recognize. CBET is often modular in structure, and includes both on-the-job and off-job components. Many countries in the Asia-Pacific region have introduced a competency-based curriculum in TVET to ensure appropriate adaptation to rapidly changing labour market needs (Maclean *et al.*, 2013; Marope *et al.*, 2015). Countries such as Chile, Colombia and Mexico reformed their initial TVET systems using a competency-based curriculum concept.

As noted earlier in the literature review, the process of curriculum development for TVET in Kenya is coordinated by Curriculum Development Assessment and Certification Council (TVET CDACC) which is a body created by TVET Act No 29 of 2013. The Council is mandated to undertake design and development of competency based curriculum for TVET. This entails: - Coordinating the development of competency based curriculum, Identifying and appointing Sector Skills Advisory Committees (SSACs), Overseeing evaluation of curriculum and support materials for Technical and Vocational Education and Training, approving proposals for application for development of competency based curriculum,

Overseeing printing, publishing and dissemination of curricula and curricula support materials. The curriculum development process under TVET-CDACC was carefully designed with the aim to bring on board experts from the industry to participate in curriculum development process. Skills Specific Advisory Council (SSAC) comprises of experts including those from enterprises with a critical role to play in stage two of curriculum development (refer to figure 3 in chapter two). However not much has been achieved in this area since CDACC is yet to take root and stamp its authority in most geographical areas of the TVET system.

4.4 Contribution of Enterprise Partners in Practical Training

In order to assess the performance of enterprises partnerships on practical training, respondents were asked to respond to structured questions related to practical training in TVET institutions. The structured questions were grouped into four sub variables of practical training support systems namely; Construction of workshops and laboratories, donations of relevant training Equipment, sharing of equipment with enterprises,

industrial training & internship and industrial visits. The contribution by enterprise was divided into two i.e. purely private enterprises and enterprises partly owned by the state. Descriptive analysis technique in form of counts, frequencies and percentages was used to illustrate partnership activities in practical training. Table 7 & 8 below is a summary of the findings obtained from the study

Table 4.7: Level of Partnership in Practical Training by State Related Agencies

Contribution by TVET partners In Practical training support system	(State related agencies)	
	Frequency	Percentage
Laboratories/Workshop construction	12	100%
Donation of training equipment	12	100%
Contributions in industrial training internships, and industrial visits	3	25%
Contribution in equipment sharing	1	8%

The finding gives a gloomy picture concerning the contribution of state owned enterprises in sharing of equipment with a frequency of 1 representing 8% of institutions under study. The contribution in establishment of workshops and laboratories and donation of equipment had frequencies of 12 representing 100 %. The contribution of enterprise towards industrial training, internship and industrial visits had a frequency of 3 representing 25 %. Majority of the respondents believes that government owned or state related enterprises are the major contributors in all aspects of TVET training.

Table 4. 8: Level of Partnership in Practical Training by Private Enterprises

Contribution by TVET partners In Practical training support system	(Private enterprises)	
	Frequency	Percentage
Laboratories / Workshop construction	0	0%
Donation of training equipment	2	16.6%
Contributions in industrial training internships, and industrial visits	12	100%
Contribution in equipment sharing	1	8%

The finding gives a gloomy picture concerning the contribution of private enterprises in establishment of workshops and laboratories. This area was completely nonexistent at 0 frequency representing 0%. The donation of equipment had a frequency of 2 representing 16.6 % of institutions under study while equipment sharing had a frequency of 1 representing 8 %. The contribution of enterprise towards industrial training, internship and industrial visits had the highest frequency of 12 representing 100 % of institutions under study. Majority of the respondents believe that private enterprise contribution is considerable only in the areas of industrial training, internships and industrial visits.

Concerning the aspect of practical training, Prosser and Allen (1925) theory of Vocational Education emphasized the need to develop and maintain a training environment that is as much as possible similar to the work environment. Ejili (2014) observed that work environment is determined by the conditions necessary for production. Some of these conditions are physical like tools and machines and the place

of work. In other words, the training environment must be identical with the occupational environment. This implies that while on-the-job training provides the exact environment, TVET institutions ought to aim at approximating its training environment with that of the world of work. TVET institutions without an organized workshop cannot claim to be providing vocational education. There is therefore a need to supply adequate facilities and equipment similar to those used in the world of work, for training students in vocational education in order to acclimatize them with what is expected of them during employment. Such an environment will go a long way in not only enhancing quality and relevant training, but also reducing the effort required for transiting from school to work.

Connell *et al* (2002) and Amuludun (2016) notes that Institutions of learning ought to establish partnerships with industries to enhance qualitative training, varied practices, production of goods and services, knowledge of the world of work and opportunity for further training, employment and placement. It is neither possible nor desirable for Government to be the sole or even primary financial provider for TVET system. The cost of the equipment required to ensure that those completing training are job-ready is massive. For example, one student station in mechatronics can cost over \$150,000. Simulators are increasingly available, but even these require significant recurrent as well as initial capital funding. The most interesting and innovative partnership in practical training programme in this study is that between Bureti Technical College and Kericho County government. Bureti Technical has arable land that historically was community land controlled and managed exclusively by community elders as a reservoir for thatch grass. The Principal of this institution managed to forge a partnership with the county government of Kericho. The following excerpt explains how he was able to do it.

When the community land reverted to government for establishment of a Technical college, the community developed some resistance because they would lose a source of Thatch for their houses. To diffuse the resistance, I wrote a letter to county government of Kericho requesting for partnership in planting rode grass for training purposes. We entered into an MOU with the CG in which they agreed to till 30 acres and plant rode grass to be used for training farmers in the vicinity. The students enrolled for agriculture are used to teach the farmers. After harvesting, the hay will belong to the technical college for use by own dairy animals and selling to farmers. The governor commissioned the project in 2015 and it is now one of the income generating activities for the college. We use the proceeds from hay to buy instruction materials because it's quick money that does not require a lot of protocol(FCD in T1)”

Figure 7 below the tractor from the county government tractor tilling land in T1 College



Figure 7: County Government in T1 College

4.5: Contribution of Enterprises towards Instructor Training Programs

The purpose of research question three was to assess the contribution of enterprises to Teacher in service training programs in TVET institutions. The respondents were asked to respond to structured questions related to Teacher training programs in TVET institutions. The structured questions were grouped into three sub variables of the Teacher training programs namely; Funding of Teacher training activities in TVET, Industrial Attachment for TVET Teachers, In-service training for TVET trainers. Descriptive analysis technique in form of counts, frequencies and percentages was used to illustrate partnership activities in Teacher training programs. Table 4.9 is a summary of the findings obtained from the study.

Table 4.9: Level of Partnership in Training of TVET Trainers Programs

Trainers training activities	Contribution by TVET partners	
	Frequency	Percentage
Funding of Teacher training activities	0	0%
Industrial Attachment of Teachers	1	8%
In-service training for teachers	3	25%

The finding gives a gloomy picture concerning the contribution of enterprises in TVET trainers training activities. The funding of TVET trainers training activities from enterprise sources was nonexistent 0% in other words no instructor from institutions under study had benefited from training scholarship from the industry. Although there was evidence of prevalence of industrial training for tutors with a frequency of 1 representing 8% of all TVET trainers on scholarships under this study, the enterprise

support was only offering industrial attachments opportunities. Concerning In-service training for instructors, only a frequency of 3 representing 25% of TVET Instructors had undergone such training. It was noted that most TVET trainers especial those who are fresh from college lack both theoretical and practical skills. One principal of a TVET institution under study had this to say: -

We are sometimes disappointed when a graduate teacher fails to differentiate between spanners no 22 and No 20. But we don't blame them their training is wanting. I once wrote a letter to register my frustration with their products to one of the TVET teacher training institutions. You know TVET training is competence based while our TVET teacher training is not competence based. This means trainers have a lot of deficiencies in practical training to handle our students. (Principal of T6 College)

Okolocha (2012) argues that for TVET to meet the economic, social and political trends of the time, a nation must use qualified vocational training professionals/teachers in implementing vocational technical education programs. On the competency of the personnel for Vocational Education, Prosser & Allen, (1925) theory states that Vocational education training program can only be effective if the instructors handling the program have sufficient experiences in the application of relevant skills, knowledge and attitudes in their specific areas of operation.

The implication of this theory to the present study is that the personnel or vocational educator must be competent in the skills s/he is handling or must be a master of those skills theoretically and practically. This is because teachers can only give to the students what they know and what makes up a vocational teacher are the skills and knowledge of the occupation. It follows therefore that in the current dynamic world a competent teacher is the one who constantly undergoes training and retraining to validate his or her skills.

The findings of this study show that TVET trainers do not get sufficient support from the private enterprises in form of funding for their studies. These findings agree with those of (Nzama, 2000; Mekonnen, 2014; Ezenwafor, 2015) which observed that in most developing countries, educators do not have direct contact with the labour market (through short-term) periodic secondments which would modernise and upgrade their practical knowledge on the actual technologies being employed in the workplace, as well as offer them insight into the actual practical needs of the labour market. This knowledge could then be incorporated into lessons or be passed on to colleagues through peer-mentoring. TVET institutions as observed by this study have not developed sufficient modalities for TVET teacher's industrial training partnerships with enterprises. TVET instructors are largely left on their own and expected to be relevant and to produce quality graduates with practical skills that they themselves do not possess. There are a number of reasons why most TVET instructors in the area under study rarely enroll for internship. The main reason given revolves around financial implication while in the field while others cite lack of time.

4.6 Performance of Enterprises in Promoting equity in Access to TVET by Students

Objective four of the study was concerned with promotion of equity in access by enterprises to TVET. Respondents were requested to respond to structured questions related to access to TVET. The structured questions were grouped into two sub variables namely; partnership activities that promote access to TVET and scholarships offered to students by enterprises. Descriptive analysis technique in form of counts, frequencies and percentages was used to illustrate activities that promote access to TVET. Table 10 is a summary of the findings obtained from the study

Table 4.10: Access to TVET by Students

Promoting access to TVET	Frequency	Percentage
Promotional activities	5	41.67%
Students scholarships	9	75%

The finding gives a promising picture concerning the contribution of enterprises in ensuring that access to TVET training by students is promoted. Although there was evidence of promotional activities aimed at improving access to training, the frequency of 5 representing 41.67% was considered to be low. However, in terms of scholarships for TVET students, the frequency of 9 representing 75% was found to be satisfactory.

4.7 Challenges Associated with TVET/ Enterprises Partnership

Research objective five was concerned with the challenges and strategies for TVET/enterprise partnerships. Respondents were requested to respond to structured questions related to TVET partnership challenges. The structured questions were grouped into three sub variables of challenges namely; Challenges of Communication, Challenges of organizational structure and challenges of organizational goals. Descriptive analysis technique in form of counts, frequencies and percentages was used to illustrate challenges associated with TVET partnerships. Table 4.11 below is a summary of the findings obtained from the study

Table 4.11: Challenges in TVET /Enterprises partnerships

Challenges associated with TVET / Enterprises partnerships	Frequency	Percentage
Challenges related to Communication	27	67.5%
Challenges related to differing goals	21	52.5%
Challenges related to Organizational structures	24	60.0%

The main challenge bedeviling partnership is related to communication process and channels between TVET institutions and enterprises. 67.5% of the respondents' believed that communication process needs to be improved. Challenges associated with Organizational structures was rated second with a frequency of 24 representing and a percentage rating of 60% while differing organizational goals had a frequency of 21 representing a percentage rating of 52.5%. Focused group discuss with key informants were scheduled to discuss challenges and available strategies. Below is an excerpt of the proceedings of such discussions

“Our relationship with the industries around us is not that bad, at times we are able to secure industrial attachments for our students. We also access academic visits in these industries for free all we need is booking in advance”

Trainers' believe that partnership between TVET institution and enterprise/industry can be improved by involving industry in curriculum design, development and implementation. The following narratives support these arguments:

“Despite the benefit of industrial attachment and academic visits, the major challenge lies entirely in establishing a mutual partnership, in other words, how best can we seriously engage the industries in our training? Can we jointly develop curriculum with them”(FGD with Trainers inT2 College)

“My suggestion would be incorporating relevant representatives from the industries at departmental level and involving them in curriculum design, development and implementation.” (FGD administrators in RIAT Kisumu)

Table 4. 12: Performance of Selected Partnership Attributes

Perceived performance in Selected TVET Partnership Attributes	Frequency	Percentage
Commitment to partnership by enterprises	9	22.5%
Level of trust between partners	17	42.5%
Participation in programs activities	22	55%
Information sharing	20	50%
Joint conflict Resolution mechanisms	5	12.5%
Interdependence of partners	7	17.5%

The assessment of partnership attributes revealed that participation in program activities was moderately high at 55%. Followed by information sharing at 50%, level of trust between partners was rated at 42.5% while commitment to partnership stood at 22.5%. Joint conflict resolution mechanism was the lowest in rating at only 12.5%.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents conclusion and recommendations based on key findings from data presentation, analysis and discussion as described in chapter four.

5.2 Summary

The section highlights the background information, problem statement, theoretical framework, conceptual framework, related literature, methodology and the key findings. The study was basically about performance of partnerships in TVET in Rift Valley and Western Kenya.

There has been great concern by the Government of Kenya on the need to bring on board other stakeholders to support TVET. Kenya's economic blue print "Vision 2030" of transforming Kenya into newly industrialized nation is premised on a vibrant TVET system that is able to support the economic transformation by producing required manpower to drive the wheels of industrialization. The role of TVET is to equip the ever growing population with relevant skills that will lead to industrialization and self-reliance. To achieve the above goals, the TVET institutions must of necessity be ready and willing to forge partnership other players in a bid to boost the quality and relevance of education and training.

This research was therefore concerned with finding out how TVET partnership with enterprise contributed towards fostering quality and relevant education and training. In

order to address this concern, five research questions were formulated to address the research gap guided by literature review, theoretical framework and researcher's experience in TVET system in Kenya. The study is intended to provide reliable and credible information that will serve as a basis for rationalizing and possibly revitalizing TVET partnerships with enterprises for quality training in Kenya and beyond.

In the formulation of a theoretical perspective for the study, Human capital theory and Proser & Allen Theorems formed the basis of the theoretical framework. A theoretical framework logical flow diagram was presented in chapter one to clearly show how the two theories were integrated to guide the study. The two theories formed the basis of the conceptual framework that guided the empirical analysis in this study.

An intensive review of related literature was conducted with focus on empirical studies on partnership in education and training from the global perspective. The study was informed by a constructivist paradigm, and employed Mixed method research methodology to gain knowledge of the perceptions of participants implementing partnerships with enterprises as proposed by (Mertens, 2010). The existing literature on how partnerships have evolved over previous decades in various parts of the world is essential to understanding how TVET institutions and enterprises can meet the needs of a complex and dynamic global work environment.

In considering the TVET institutions for the study, a sample comprising of twelve TVET institutions was selected for the study. Purposive sampling was used in selecting participants from TVET institutions. Administrators who were actively involved in activities focused on promoting partnership within the training context were considered.

They included, Principals, Deputy Principals, Academic Registrars, Directors in charge of Research and Extension, Liaison Officers and Heads of Departments. Three data collection instruments were used to collect data from participants these were; TVET officials questionnaire, focus group discussion guide and interview guide. The instruments were pilot tested at Ziwa Technical Training College for validity and reliability. Ethical and logistical issues were adhered to in the entire process.

Research question one sought to find out the extent to which TVET institutions and enterprises collaborate in curriculum development and validation processes. The finding gave a gloomy picture concerning the contribution of enterprise in the current KICD curriculum which is in force. The frequency at which curriculum reviews were carried out was reported to be very low and involvement of enterprise was reported as dismal. Many respondents believed that the process is centralized at KICD headquarters in Nairobi.

Research question two sought to assess the contribution of TVET partners to practical training in TVET institutions. The findings indicate that the contribution of enterprises in establishment of workshops and laboratories, donation of equipment and equipment sharing was quite low (below 30%). However, the contribution of enterprise in industrial training and internship was excellent (100 %). Majority of the respondents believed that enterprise contribution is considerable only in the areas of industrial training and internships.

Research question three sought to assess the contribution of enterprises to in-service teacher training programs in TVET institutions. The finding gave a gloomy picture

concerning the contribution of enterprise in TVET trainers training activities. No instructor from institutions under study had benefited from training scholarship from the industry/Enterprise. However, industrial training for TVET trainers was the only area where enterprise support was evidenced in form of offering industrial attachments opportunities and not funding to trainers.

Research question four was concerned with finding out the contribution of TVET partners in promoting equity in access to TVET training by students. The finding gives a promising picture concerning the contribution of enterprises in ensuring that access to TVET by students is promoted. 75% of the institutions under study had a considerable fraction of their students receiving scholarship from enterprises. Promotional activities were also reported to be active.

Research question five sought to investigate the challenges associated with TVET partnership with enterprise and available strategies for enhancing future partnerships. The findings revealed that the main challenge bedeviling partnerships is related to communication process and channels between TVET intuitions and enterprises. Challenges associated with Organizational structures were rated second while differing organizational goals were rated third.

5.1 Conclusion

Partnership in TVET is a mode of collaboration/ cooperation in which actors from the public and private sector (Enterprises) and TVET institutions bring together expertise and resources to achieve certain training goals. In such a partnership, the concerned parties

i.e. public and private sector actors jointly define goals, activities, roles, and responsibilities to be supported.

Partnerships act as bridges to link education and training to employers (Savas, 2000). The forms and modalities of Partnerships vary widely. They can be formal and structured, or informal and flexible (Tansen, 2012). They can consist of TVET inputs into enterprise training efforts or enterprise inputs into public TVET training programs. They may also involve intermediary institutional mechanisms through which enterprises are contracted to deliver training services in accordance with public policies, procedures, or priorities as a result of the introduction of incentives or the provision of public financing (Mitchell, 1998).

Many countries have implemented a number of measures such as the recognition of informal learning, national qualifications frameworks, campaigns on the value of TVET and competency based approaches, to further increase and improve the supply of skills entering the workforce. Alongside this international trend, Kenya has developed a comprehensive National Qualifications Framework (NQF) with clearly outlined expected competency standards. Each of these components provides an opportunity to embed industry engagement which in the longer term can lead to the development of strong partnerships.

The skill development strategy should aim at fostering national level action at developing partnerships under the overall responsibility of government, within the framework of an institutionalized collaboration between TVET institutions and enterprises (Aggarwal, & Gasskov, 2013). In developing world, TVET institutions operate in a resource

constrained training environment (African Union 2007; Hartl, 2009). There is therefore a need to develop stronger partnerships with enterprises as an essential component for making the system better responsive to growing skill demands, and better capacitated for contributing to industrial and socio-economic development (Yeshaneh, 2014).

Governments in developing countries therefore ought to meet the challenge of establishing and strengthening public TVET institutions through Partnerships with industry and enterprises, with the objective to impart relevant skills and foster entrepreneurship. Public policies especially in developing world can draw upon the work of international agencies like the World Bank, UNESCO & ILO in this important area of education and training.

In industrialized countries, private enterprises and entrepreneurs collaborate with public TVET educational institutions with the objective of not making profit out of education but contributing to skills development through TVET. This requires enduring national commitment and sustained national investment in this area of strategic importance. Policy reforms including regulatory frameworks and the setting of industry-wide standards for consistent delivery of TVET initiatives ought to be given priority. There is need of a paradigm shift where private partners should be seen as key stakeholders playing a complementary role with the aim of revitalizing and strengthening TVET system in skills development.

In conclusion, there is significant positive influence on the quality of education and training in TVET institution under study that is derived directly or indirectly from both informal and formal partnerships in place. However, more can be done if the TVET

institutions can carefully analyzing and seek to establish partnership with key stakeholders within their vicinity with the knowledge that Education is a social responsibility and should be shared by all stakeholders in education including corporate sector. County and national government on the other hand ought to realize that they are the beneficiaries of quality TVET products and must therefore take a leading political role in embracing private sector contributions in education and training through formulation of policies that encourages such partnerships.

5.2 Recommendations

Performance of partnerships between TVET institutions and enterprises can be achieved by first analyzing the factors that enhances partnership. For ease of understanding, the recommendations of this study have been arranged logically based on the specific objective of the study as outlined in chapter one. A general recommendation is then given to sum up the recommendations.

5.2.1 Specific Recommendations Based on Objectives of the Study

1. There is need to ensure that all partnerships are institutionalized and legitimized through formal agreements and or memorandum of understanding to stem out the risk of running into conflicts and to enhance commitment to partnerships.
2. Curriculum planners should review curriculum at regular intervals in the light of needed skills in modern industries. During such reviews, Industry/enterprise ought to be consulted to provide specific advice on curriculum based on skills in demand in various occupations. This can be done by decentralizing roles, power, and authority of Curriculum Development Assessment and Certification (CDACC) to county levels.

3. In order to improve practical training, TVET institutions, ought to form strong partnership with industries/ enterprises to facilitate collaborative training. Such partnerships are likely to facilitate a seamless transfer of skills from industry to TVET institutions.
4. There is need to institutionalize industry based in-service training for teachers/trainers to equip and expose trainers to latest technologies in the market. Institutions should collaborate with industries for the retraining of teachers in the use of modern equipment.
5. Partnerships ought to be founded on sound structures. They should be institutional and be based on long term plans.

5.2.3 General Recommendations

1. Partnerships ought to be established based on mutual interests and a shared vision and not on dependencies with clearly articulated roles, responsibilities and modalities for sharing risks and benefits.
2. Government should enact a policy framework that encourages enterprises to adopt an institution in their catchment, identify the equipment needs of such institution for possible donation of same and/or opening their doors to the institution for trainees' work study programmes.
3. Conferences, workshops and seminars ought to be organized by TVETA to sensitize all stakeholders on the need for collaboration if TVET education and training is to be meaningful.

5.3 Suggestions for Further Research

The following are suggestions for further research.

1. To understand better the views of enterprises on partnerships, further research ought to be conducted in a bid to shed more light on how best the industry players can be incentivized in order to take an active role in TVET partnerships.
2. There is need to carry out a study on the life cycle of partnerships in TVET institution in a bid to understand how best to establish and sustain them.

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APPENDIXES

Appendix I: krejcie & Morgan, 1970 Table

<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	100000	384

Note.—*N* is population size. *S* is sample size.

Source: Krejcie & Morgan, 1970

Formula for determine sample size

$$S = \frac{X^2 NP (1-P)}{d^2 (N-1) + X^2 P (1-P)}$$

S=required sample size

X=the table value of chi-square for 1 degree of freedom at the desired confidence level (3.841)

N=the population size

P=the population proportion (assumed to be .50 since this would provide the maximum sample size)

D= the degree of accuracy expressed as a proportion (.05)

Source: (krejcie & Morgan, 1970)

Appendix II: Interview Guide

Part One: TVET Institution Questionnaire

1. What are the active partnerships between industries/enterprise and your institution in training related activities?
2. Comment on the performance of the following partnership attributes in your institution
 - Commitment to partnership
 - Level of trust between partners
 - Participation in programs activities
 - Information sharing
 - Joint conflict Resolution mechanisms
 - Interdependence of partners
3. What is your preferred area of collaboration with enterprise players to foster quality of education and training?

Part Two: Partnership in Curriculum Development/Validation

4. Rate the participation of enterprise/industry players in curriculum review
5. Comment on the use of resource persons from enterprises in curriculum instruction.
6. List the instruction materials that you have received as grants of donations from enterprises

Part Three: Partnership in Practical training

7. Comment on partnerships in the following areas
 - a) Construction of workshops and Laboratories by enterprises
 - b) Sharing/donation of equipment and training materials with enterprises
 - c) Industrial training, visits and internship

Part Four: Partnership in TVET Teacher Training Activities

8. Comments on scholarships offered to TVET trainers for skills upgrading by enterprises
9. Comment on TVET trainers industrial training and internship

Part Five: Challenges Facing TVET /Enterprises Partnerships

Challenges related to communication

10. How does your current communication process/channel influence your partnership with industries
11. How often do you communicate and exchange ideas with you industry/enterprise partners?
12. At what level of the organizational hierarchy does the communication between industry and your institution take place?

Challenges related to differing goals

13. What are the goals that you share with your partnering industries?
14. Do you think there is a convergence between your institutional goals and those of the industry? If no what needs to be done to ensure they converge?

15. How does the industry players benefit from the achievement of your institutional goals?

Challenges related to Organizational structures

16. What formal clearance documentations are required before your students can be allowed to access industries in your partnership circles
17. To what extent does your Organizational/institutional structure promote and /or impede cooperation with industry players in training.
18. How flexible is your organizational structure of your institution in supporting partnership activities?
19. How flexible is the organizational structure of your partnering industries in supporting partnership activities?

Strategies for overcoming TVET/Enterprise partnership challenges

20. What strategies and /or skills are required by TVET providers to enhance partnerships with Industry for fostering quality and relevance?
21. What kind of training programs exists to enhancing partnership in training?
22. What strategies do you think if they are implemented can enhance partnership between industry and your institution?

Appendix III: TVET Administrators Questionnaires

R 3. TVET Administrators Questionnaires Q. No.....

Introduction

I am keter Julius, a researcher seeking to carry out a research on the influence of Partnership quality of education and training in Technical, vocational education and training programs in Rift Valley and Western Kenya region. The study is intended to give an insight understanding of partnership between TVET institutions and enterprise and their influence on quality of training.

All information submitted shall be treated with utmost confidentiality. Respondents are encouraged to be free when answering questions. I wish to appreciate your efforts in advance for finding time to participate in this study. This is not a test and therefore there are neither 'right' nor 'wrong' answers. In case you need some clarification on any matter concerning this questionnaire feel free to seek clarification through 0722-430-162 or email address legemet2000@yahoo.com. Respondents are required to read and understand the contents of the research before signing the informed consent form (Appendix 1.5)

Section A: Institutions background information

Part One: TVET institutions demographic Information

This part seeks to gather background information of TVET respondents and institutions involved in partnership with enterprises for purposes of training. You are requested to

provide as accurate information as possible by ticking (/) the best response where appropriate.

Section B: Demographic information on TVET Partnerships

1. What category of administrative responsibility best describes your current position in your institution.

Category	Score
Principals	
D/Principals	
Registrars	
Director of Research	
HODs	
Industrial Liaison Officers	
Others specify	

2. Score the category that best describes your institution as per the TVETA register

Category	Score
National polytechnics	
Institute of Technology	
Technical Training Colleges	
Vocational Training Colleges	

3. List the number of active partnerships between your institution and enterprises indicating whether it is formal or informal

Area of Partnership	Partnering institutions Name	Formal	Informal
Curriculum development			
Practical training			
Teacher Training			
TVET access			

4. Partnership in training can take different forms and may involve different stakeholders. Indicate by ticking (1, 2 or 3) the choice that best describes your opinion on the type of partnership that exist between your institution/ department and industry/Enterprise players in the table below. State (1) for none, (2) for Existence and (3) for not sure,

Response	Score
Non	1
Exist	2
Not sure	3

For example score “1” if there is none in the table below

Nature of partnership	Score
partnership with local Private enterprises	
partnership with local community organizations	
Direct partnership with international partners	
partnership with County governments	
partnership with central government agencies	
Formal partnership with regional training institutions	
partnership with Jua Kali enterprises	

SECTION B: AREAS OF PARTNERSHIP

Part One: Partnership in Curriculum Development and Validation

1. Rate the participation of enterprise/industry players in curriculum review by Stating very common, common, not sure, rare, and very rare on the following statements in regard to participation in curriculum review.

Response	Score
Not common	1
common	2
Not sure	3
Rare	4
Very rare	5

For example if it is not sure score “3” in the table below

Curriculum Development and Review		Score
a)	How often do you invite industry representative in curriculum development/reviews	
b)	How often do you hold stakeholders conference on curriculum review	
c)	How often does your institution carry out joint evaluations of programs with industry /Enterprise players?	
d)	How often do you invite resource persons from enterprises to assist in curriculum instruction?	

2. List the instruction materials that you have received as grants of donations from enterprises

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3. List the joint training programs currently undertaken by your institution in collaboration with industry/Enterprise players in curriculum development and validation

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Part Two: Partnership in practical trainings

4. List the number of Laboratories/ workshops/ classrooms co-funded by your institution in partnership with enterprises.

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5. Comment if there is a program of Sharing of equipment and or any other instructional materials with enterprise

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6. List the nature of equipment donated by enterprises to your institution for instructional purposes

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7. In your own words comment on the contributions of enterprise partners in bridging the gap between theory and practical training through industrial training.

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8. In your own words comment on the contributions of enterprise partners in bridging the gap between theory and practical training through internship

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Part Three: Enterprises contribution towards TVET Teacher training programs.

9. How many TVET teachers have benefited from industry/enterprise scholarships for further training.....

-
10. List existing TVET teachers training programs in your institution for upgrading skills in the industry/enterprise?

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Part Four: Enterprises contribution towards promoting access to TVET.

11. What partnership activities does enterprise partners engage in to promote access to TVET in your institution?

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12. How many students have benefited from enterprise scholarships in your institution?

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Part Five: Challenges and Strategies for TVET / Enterprises Partnerships

13. Challenges related to Communication process/channels on partnerships

Communication process/channels can pose a great challenge to the success of Partnership between training institution and industry/enterprise players. Indicate by scoring “1” for strongly agree, “2” for Agree, “3” for Not Sure, “4” for Disagree, and “5” for Strongly disagree the choice that best describes your opinion on the influence of communication on partnership that exist between your institution and industry/Enterprise players in the table below.

Response	Score
Strongly agree	1
Agree	2
Not sure	3
Disagree	4
Strongly disagree	5

For example if you strongly agree with a statement below score “1”

Communication process/channels on partnerships	Score
Formal communication channels greatly impede partnership in training	
Informal communication channels greatly impede partnership in training	
Frequent communication between partnering institutions staff can positively influence partnership for quality training	
Organizations that strictly follows organizational hierarchy of communication slows down hence impede partnership activities	
Training institutions that strictly follows organizational hierarchy of communication slows down hence impede partnership activities	
Organizations that strictly insist on formal clearance documents from their partnering training institutions to allow students access industries likely are not popular with training institutions	

14. Challenges related to Organizational/Institutional structure on partnership

Organizational/Institutional structure can pose a great challenge to the success of Partnership between training institution and industry/enterprise players. Indicate by scoring “1” for strongly agree, “2” for Agree, “3” for Not Sure, “4” for Disagree, and “5” for Strongly disagree the choice that best describes your opinion on the influence of Organizational/Institutional structure on partnership that exist between your institution and industry/Enterprise players in the table below.

Response	Score
Strongly agree	1
Agree	2
Not sure	3
Disagree	4
Strongly disagree	5

For example if you strongly agree with a statement below score “1”

Organizational/institutional structure	Score
Training institutions organizational structures are rigid hence impedes meaningful partnership endeavors with industry/Enterprise players	
Organizational structures of industry/enterprises are rigid hence impedes meaningful partnership endeavors with training institutions	
Organizational/Institutional structures does not play any role in the promotion of partnership between industry/Enterprises and training institution	

15. Challenges related to Organizational/Institutional goals on partnership

Organizational/Institutional goal can pose a great challenge to the success of Partnership between training institution and industry/enterprise players. Indicate by scoring “1” for strongly agree, “2” for Agree, “3” for Not Sure, “4” for Disagree, and “5” for Strongly disagree the choice that best describes your opinion on the influence of Organizational/Institutional goal on partnership that exist between your institution and industry/Enterprise players in the table below.

Response	Score
Strongly agree	1
Agree	2
Not sure	3
Disagree	4
Strongly disagree	5

For example if you strongly agree with a statement below score “1”

Organizational/institutional goals	Score
Organizational goals in most cases differs with institutional goals hence impedes partnership in training	
Training institutions are not keen in involving industry players in the formulation of shared goals	
Most industry players are not keen to assist training institutions achieve their goals of delivering quality and relevant training	
Most industry players are keen to assist training institutions deliver quality training but are limited by their self-interest i.e. pursuit of profits	

16. Rate the performance of the following partnership attributes by Stating Not important, fairly important, slightly important, and Very important on the following statements in regard to success of partnership.

Response	Score
Not important	1
Fairly Important	2
Important	3
Very Important	4
No idea	5

For example if it is not important score “1” in the table below

	Partnership Attribute	Score
1	Commitment to partnership by the management of your organization	
2	Coordination of program activities	
3	Level of trust between partners	
4	Participation in programs activities	
5	Information sharing	
6	Joint conflict Resolution mechanisms	
7	Interdependence of partners	

17. Summarize in your own words what you consider as the major impediments to meaningful partnership between your institution and enterprises?

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18. **Strategies required by TVET providers to enhance partnerships with Industry/Enterprise**

a) In your own words briefly highlight the strategies and /or skills that you think are required by TVET providers to enhance partnerships with Industry/Enterprise

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b) What are the institutional policies that exist to enhance partnership?

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c) What are the organizational policies of the industry players that exist to enhance partnership?

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d) What do you think are the requisite skills required to foster partnership between industry and training institutions?

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e) What kind of training programs exists to enhancing partnership in training in your institution?

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f) What kind of activities do you undertake in collaboration with your industry players to enhance partnership?

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Appendix IV: Validation Form for Research Instrument**V.F**

No.....

Introduction

I am keter Julius, a researcher seeking to carry out a research on the influence of Partnership quality of education and training in Technical, vocational education and training programs in Rift Valley and Western Kenya region. The study is intended to give an insight understanding of partnership between TVET institutions and enterprise and their influence on quality of training. The purpose of this form is to guide you in validating all the data collection instruments to ensure that data collected will answer the following research questions.

Research Questions

1. How is the performance of TVET and enterprise partnership in Curriculum development and validation?
2. What is the contribution of enterprise partners in TVET practical training?
3. What is the contribution of Enterprises towards TVET teacher training programs?
4. What is the contribution of enterprises in promoting access to TVET?
5. What are the challenges associated with TVET institutions partnership with Enterprises?

Guidelines

1. Does the instrument contain sufficient information to address the research question one?

Yes []

No []

If No, indicate the information that is needed?

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2. Does the instrument contain sufficient information to address the research question two?

Yes []

No []

If No, indicate the information that is needed?

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.....

3. Does the instrument contain sufficient information to address the research question three?

Yes []

No []

If No, indicate the information that is needed?

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4. Does the instrument contain sufficient information to address the research question four?

Yes []

No []

If No, indicate the information that is needed?

.....
.....

5. Does the instrument contain sufficient information to address the research question five?

Yes []

No []

If No, indicate the information that is needed?

.....
.....

6. Does the instrument have grammatical errors?

Yes []

No []

If Yes, Specify

.....
.....

7. Is the length of the instrument appropriate?

Yes []

No []

If No, Suggest what can be done

.....

.....
8. Is the content of the instrument logically organized?

Yes []

No []

If No, Suggest what can be done

.....
9. Kindly specify key issues that require to be addressed in all the instruments and

Indicate your recommendation by marking the appropriate number.

Instrument Key Issues Recommendation

Instrument	Key issues	Recommendation
R1: Curriculum Questionnaire		<p>4 = Instrument Acceptable as it is</p> <p>3= Instrument Acceptable with minor editing</p> <p>2= Instrument acceptable with specific revisions to be made</p> <p>1=Instrument Rejected</p>
R2: Practical training Questionnaire		<p>4 = Instrument Acceptable as it is</p> <p>3= Instrument Acceptable with minor editing</p> <p>2= Instrument acceptable with specific revisions to be made</p> <p>1=Instrument Rejected</p>
R3: Teacher Training Questionnaire		<p>4 = Instrument Acceptable as it is</p> <p>3= Instrument Acceptable with minor editing</p> <p>2= Instrument acceptable with specific revisions to be made</p> <p>1=Instrument Rejected</p>
R5: Access to TVET Questionnaire		<p>4 = Instrument Acceptable as it is</p> <p>3= Instrument Acceptable with minor editing</p> <p>2= Instrument acceptable with specific revisions to be made</p> <p>1=Instrument Rejected</p>

R6:Challenges and Strategies Questionnaire		4 = Instrument Acceptable as it is 3= Instrument Acceptable with minor editing 2= Instrument acceptable with specific revisions to be made 1=Instrument Rejected
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Thank you So Much

Validations general comment

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Appendix V: Informed Consent Form

The main aim of this study is to evaluate the influence of partnerships on quality of education in TVET institutions located in Rift valley and western Kenya. This study is expected to shade light on the influence of partnership on education and training. There will be no noticeable risks to respondents associated with the study.

I, the undersigned, confirm that (please tick box as appropriate):

1.	I have read and understood the information about the study , as provided in the Information Sheet dated _____.	<input type="checkbox"/>
2.	I have been given the opportunity to ask questions about the study and my participation.	<input type="checkbox"/>
3.	I voluntarily agree to participate in the study.	<input type="checkbox"/>
4.	I understand I can withdraw at any time without giving reasons and that I will not be penalised for withdrawing nor will I be questioned on why I have withdrawn.	<input type="checkbox"/>
5.	The procedures regarding confidentiality have been clearly explained (e.g. use of names, pseudonyms, anonymisation of data, etc.) to me.	<input type="checkbox"/>
6.	If applicable, separate terms of consent for interviews, audio, video or other forms of data collection have been explained and provided to me.	<input type="checkbox"/>
7.	The use of the data in research, publications, sharing and archiving has been	<input type="checkbox"/>

	explained to me.	
8.	I understand that other researchers will have access to this data only if they agree to preserve the confidentiality of the data and if they agree to the terms I have specified in this form.	<input type="checkbox"/>
9.	Select only one of the following:	<input type="checkbox"/>
	I would like my name used and understand what I have said or written as part of this study will be used in reports, publications and other research outputs so that anything I have contributed to this project can be recognised.	<input type="checkbox"/>
	I do not want my name used in this project.	
10.	I, along with the Researcher, agree to sign and date this informed consent form.	<input type="checkbox"/>

Participant:

Name of Participant

Signature

Date

Researcher:

Name of Researcher

Signature

Date

Appendix VI: Summary of TVET Partnerships

S/no	Institution	Project	Funding bodies	Status
1	RVTTI	Tuition complex	GOK through MOEST	Completed and operational
2	RVTTI	Library complex	GOK through MOEST	Completed and operational
3	RVTTI	Electrical engineering labs and workshops	Economic stimulus project (ESP) by GOK through MOEST	Completed and operational
4	Bureti	Tuition complex	ADB	Operational
5	RIAT	Aquaculture labs	Trilateral partnership GTZ, Marshap Israel and GOK	operational
6	Riat	Aquaculture labs, equipment and drilling of boreholes	Ministry of fisheries, CDACC, farmers, processors	ongoing
S/no	Institution	Curriculum instructional materials	and partners	Status
7	Keroka	Review of KCIT	Kplc	
8	Keroka	Review of KCIT	GTZ	
9	Riat	aquaculture	Ministry of fisheries, CDACC, farmers, processors	ongoing
10	Riat	Aquaculture sharing of labs, farms and technical advice	Lake basin development authority LBDA	ongoing
11	Kisumu poly	Civil engineering materials	Crown paints	

12	Lessos technical	Sharing of Labs	Kapsabet hospital	district	ongoing
13	Lessos technical	Practical training during routine maintenance for engineering students	Emrock tea factory		
14	Lessos technical	Industrial training for Biochemistry, cytology and paracitology	MTRH		ongoing
15	Lessos technical	Industrial training for Biochemistry, cytology and paracitology	KEMRI branch	Kisumu	ongoing

Practical Training Equipment and infrastructure

S/no	Institution	Equipment	Funding bodies	Status
16	RVTTI	Smart classrooms	Devotra (Netherlands) in collaboration with GOK through MOEST	Ongoing
17	RVTTI	Equipping Automotive workshops	of Devotra (Netherlands) in collaboration with GOK through MOEST	Complete and operational (2010-2014)
18	RVTTI	Equipping Electrical workshops	of Devotra (Netherlands) in collaboration with GOK through MOEST	Complete and operational (2010-2014)
19	RVTTI	Equipping Welding workshops	of Devotra (Netherlands) in collaboration with GOK through MOEST	Complete and operational (2010-2014)
20	RVTTI	Equipping Building, civil and carpentry workshops	of Devotra (Netherlands) in collaboration with GOK through MOEST	Complete and operational (2010-2014)
21	RVTTI	Equipping Automotive workshops	of GOK through Kenya Education Sector support program (KESSP)	Complete and operational (2007)
22	Bureti	Equipping Electrical	of ADB	complete

	Technical	workshops			
23	Keroka	Equipping workshop	of GOK through Kenya Education Sector support program (KESSP)	complete	
24	Keroka	Construction of labs and workshop	GOK	complete	
25	Kisumu poly	Equipping Building, civil and carpentry workshops	of Devotra (Netherlands) in collaboration with GOK through MOEST	Complete and operational (2010-2014)	
26	Kisumu poly	Establishment of garment training workshops fully equipped	of Comesa in collaboration with jua kali and Kisumu poly	Complete and operational	

s/No	Organization(s)	Scholarship activity	Target areas	No of persons sponsored
27	Safaricom, Kenya Commercial Bank, Chase Bank	Charity run to assist needy students	All fields	50 students benefited
28	County government of Uasin Gishu	Training (Tuition)	Building, electrical and mechanical	600 students from Uasin Gishu county
29	NITA	Student training scholarships	All engineering fields	
30	LAPSSSET	Student training scholarships	all	
31	Kenya plusphor	Student training scholarships	Mechanical, welding and automotive	
32	Mumias Sugar	Training of Apprentice	Customerised training	
33	Muhoroni Sugar	Training of Apprentice	Customerised training	

34	Nzoia Sugar	Training Apprentice	of	Customerised training	
35	West kenya Sugar	Training Apprentice	of	Customerised training	
36	Different county governments	Student Bursaries		All	
37	Different constituencie s	Student scholarships	training (CDF)	All	
38	Hotel Industries (Noble, Comfy)	Staff upgrading	skills	Basic skills in food and berverages	20
39	Kengen (Sontu miriu)	Staff upgrading	skills	Customerised training	
40	CPC	Staff upgrading	skills	Customerised training	
41	KCC	Staff upgrading	skills	Customerised training	
42	ADB	Staff training		Engineering	3
43	NYS	Youth on selected fields		all	10
44	Sony	Staff training		engineering	15
45	Chinise government	Staff training		engineering	4
46	HELB	Students		All fields	
47	CDF	Students		All fields	
48	GTZ, Marshap & GOK	Students and staff scholarship for oversees training (Germany and Israel)		Aquaculture	several
49	Butali sugar	Staff training		Engineering	several

50	Muhoroni	Staff training		Engineering	several
51	James Finlay	Artisans training	for	Engineering	16
52	Jua sector	kali Students		Mechanical courage for learners	
53	RTS bullet factory	Staff training		Engineering	

Appendix VII: Summary of TVETA Approved courses in the institutions covered by study

S/N	Name of Institution	Category	Type	County
o.				
32.	Matili Technical Training Institute P.O. Box 76 – 50204 Kimilili Kimilili webuye Rd matilitechnicalcollege@yahoo.c o.ke 0202351507	Technical Vocational College	Public	Bungoma
	1. Diploma in Mechanical Engineering (Production Option) (KNEC) For a maximum of 30 trainees			
	2. Certificate in Mechanical Engineering (Production Option) (KNEC) For a maximum of 30 trainees			
	3. Diploma in Electrical and Electronics Engineering (Power Option) (KNEC) For a maximum of 20 trainees			
	4. Diploma in Supply Chain Management (KNEC) For a maximum of 40 trainees			
	5. Certificate in Supply Chain Management (KNEC) For a maximum of 20 trainees			
	6. Diploma in Business Administration (KNEC) For a maximum of 40 trainees			
	7. Diploma in Automotive Engineering (KNEC) For a maximum of 20 trainees			
	8. Certificate in Automotive Technology (KNEC) For a maximum of 20 trainees			
	9. Diploma in Civil Engineering (KNEC) For a maximum of 20 trainees			
	10. Diploma in Building Technology (KNEC) For a maximum of 20 trainees			
	11. Certificate in Building Construction (KNEC) For a maximum of 20 trainees			
	12. Certificate in Masonry (KNEC) For a maximum of 20 trainees			

13. Diploma in Business Management (KNEC) For a maximum of 20 trainees
 14. Certificate in Business Administration (KNEC) For a maximum of 20 trainees
 15. Diploma in Information Communication Technology (KNEC) For a maximum of 40 trainees
 16. Certificate in Information Communication Technology (KNEC) For a maximum of 20 trainees
 17. Diploma in Computer Science (KNEC) For a maximum of 20 trainees
 18. Certificate in Computer Science (KNEC) For a maximum of 20 trainees
 19. Diploma in Fashion Design and Garment Making (KNEC) For a maximum of 15 trainees
 20. Certificate in Fashion Design and Garment Making Technology (KNEC) For a maximum of 15 trainees
 21. Artisan in Garment Making (KNEC) For a maximum of 15 trainees
 22. Diploma in Human Resource Management (KNEC) For a maximum of 20 trainees
 23. Certificate in Human Resource Management (KNEC) For a maximum of 20 trainees
 24. Artisan in General Fitter (KNEC) For a maximum of 20 trainees
 25. Artisan in Welding and Fabrication (KNEC) For a maximum of 15 trainees
 26. Artisan in Electrical Installation (KNEC) For a maximum of 20 trainees
 27. Certificate in Plumbing (KNEC) For a maximum of 15 trainees
 28. Artisan in Carpentry and Joinery (KNEC) For a maximum of 20 trainees
 29. I, II in Certified Public Accountants (KASNEB) For a maximum of 30 trainees
 30. Certificate in Information Communication Technology Technician (KASNEB) For a maximum of 20 trainees
 31. Diploma in Accounting Technicians Diploma (KASNEB) For a maximum of 20 trainees
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S/N	Name of Institution	Category	Type	County
o.				
521.	Rift Valley Technical Training Institute P.O. BOX 244-30100 ELDORET 0733244240 0704244244 0729621773	Technical Vocational College	Public	Uasin Gishu
	1. Accounting Technician Diploma (KASNEB) for a maximum of 30 trainees			
	2. Artisan in Carpentry And Joinery (KNEC) for a maximum of 20 trainees			
	3. Craft Certificate In Agricultural Engineering (KNEC) for a maximum of 20 trainees			
	4. Craft Certificate In Agriculture (KNEC) for a maximum of 100 trainees			
	5. Craft Certificate In Automotive Engineering (KNEC) for a maximum of 100 trainees			
	6. Craft Certificate In Building Technology (KNEC) for a maximum of 110 trainees			
	7. Craft Certificate In Communication Technology Tech (KASNEB) for a maximum of 30 trainees			
	8. Craft Certificate In Electrical Installation (KNEC) for a maximum of 200 trainees			
	9. Craft Certificate In Food And Beverage (KNEC) for a maximum of 150 trainees			
	10. Craft Certificate In Human Resource Management (KNEC) for a maximum of 20 trainees			
	11. Craft Certificate In Information Science (KNEC) for a maximum of 75 trainees			
	12. Craft Certificate In Information Technology (KNEC) for a maximum of 130 trainees			
	13. Craft Certificate In Mechanical Engineering (KNEC) for a maximum of 75 trainees			

14. Craft Certificate In Medical Laboratory Technology (KNEC)/(KMLTTB) for a maximum of 130 trainees
 15. Craft Certificate In Petroleum Geosciences (KNEC) for a maximum of 20 trainees
 16. Craft Certificate In Science Laboratory Technology (KNEC) for a maximum of 80 trainees
 17. Craft Certificate In Social Development (KNEC) for a maximum of 40 trainees
 18. Craft Certificate In Supply Chain Management (KNEC) for a maximum of 40 trainees
 19. Craft Certificate In Welding And Fabrication (KNEC) for a maximum of 60 trainees
 20. Diploma In Accountancy (KNEC) for a maximum of 25 trainees
 21. Diploma In Agricultural Engineering (KNEC) for a maximum of 40 trainees
 22. Diploma In Agriculture (KNEC) for a maximum of 70 trainees
 23. Diploma In Analytical Chemistry (KNEC) for a maximum of 50 trainees
 24. Diploma In Applied Biology (KNEC) for a maximum of 90 trainees
 25. Diploma In Architecture (KNEC) for a maximum of 60 trainees
 26. Diploma In Automotive Engineering (KNEC) for a maximum of 150 trainees
 27. Diploma In Building Technology (KNEC) for a maximum of 200 trainees
 28. Diploma In Business Management (KNEC) for a maximum of 120 trainees
 29. Diploma In Chemical Engineering (KNEC) for a maximum of 30 trainees
 30. Diploma In Civil Engineering (KNEC) for a maximum of 250 trainees
 31. Diploma In Computers Studies (KNEC) for a maximum of 70 trainees
 32. Diploma In Food And Beverage Production, Sales And Service Management (KNEC) for a maximum of 140 trainees
 33. Diploma In Human Resource Management (KNEC) for a maximum of 50 trainees
 34. Diploma In Information Communication Technology (KNEC) for a maximum of 230 trainees
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35. Diploma In Information Science (KNEC) for a maximum of 150 trainees
 36. Diploma In Mechanical Engineering (Plant) (KNEC) for a maximum of 90 trainees
 37. Diploma In Mechanical Engineering (Production) (KNEC) for a maximum of 70 trainees
 38. Diploma In Medical Engineering (KNEC) for a maximum of 70 trainees
 39. Diploma In Medical Laboratory Technology (KNEC)/(KMLTTB) for a maximum of 180 trainees
 40. Diploma In Nutrition And Dietetics (KNEC) for a maximum of 440 trainees
 41. Diploma In Petroleum Geosciences (KNEC) for a maximum of 50 trainees
 42. Diploma In Pharmaceutical Technology (KNEC)/(PPB) for a maximum of 150 trainees
 43. Diploma In Social Work And Community Development (KNEC) for a maximum of 110 trainees
 44. Diploma In Supply Chain Management (KNEC) for a maximum of 130 trainees
 45. Diploma in Electrical And Electronics Engineering (Instrumentation And Control) (KNEC) for a maximum of 115 trainees
 46. Diploma in Electrical And Electronics Engineering (Power) (KNEC) for a maximum of 420 trainees
 47. Artisan in Electrical Installation (KNEC) for a maximum of 70 trainees
 48. Higher Diploma In Applied Biology (KNEC) for a maximum of 20 trainees
 49. Artisan in Masonry (KNEC) for a maximum of 30 trainees
 50. Artisan in Motor Vehicle (KNEC) for a maximum of 20 trainees
 51. Artisan in Plumbing (KNEC) for a maximum of 80 trainees
-

S/N	Name of Institution	Category	Type	County
o.				
525.	The Eldoret National Polytechnic P.O Box 4461-30100, Eldoret Tel: 0714871871685/ 0738092126 registrar@tenp.ac.ke www.tenp.ac.ke Langas Kapsabet- Kisumu Rd	National Polytechnic	Public	Uasin Gishu
	1. Diploma in Accounting Technician Diploma (KASNEB) For a maximum of 80 trainees			
	2. Professional in Public Accountants (CPA) Part I Section I and II (KASNEB) For a maximum of 80 trainees			
	3. in Information and Communication Technology (KASNEB) For a maximum of 40 trainees			
	4. Certificate in Information Communication Technology Technician (KASNEB) For a maximum of 40 trainees			
	5. 5.Diploma in Software Development (CITY & GUILDS) For a maximum of 30 trainees			
	6. Certificate in Electrical and Electronics Engineering (CITY & GUILDS) For a maximum of 30 trainees			
	7. Diploma in Electrical and Electronics Engineering (CITY & GUILDS) For a maximum of 30 trainees			
	8. Diploma in Technician Diploma in Motor Vehicle Systems (CITY & GUILDS) For a maximum of 30 trainees			
	9. Craft in Mechanical Engineering (CITY & GUILDS) For a maximum of 30 trainees			

10. Certificate. In Medical Laboratory Sciences (KMLTTB) For a maximum of 30 trainees
 11. Diploma in Medical Laboratory Sciences (KMLTTB) For a maximum of 30 trainees
 12. Craft in Science Laboratory Technology (KNEC) For a maximum of 30 trainees
 13. Craft in General Agriculture (KNEC) For a maximum of 30 trainees
 14. Diploma in General Agriculture (KNEC) For a maximum of 30 Trainees
 15. Diploma in Applied Biology (KNEC) For a maximum of 30 trainees
 16. Diploma in Entrepreneurial Agriculture (KNEC) For a maximum of 30 trainees
 17. Diploma in Environmental Science (KNEC) For a maximum of 30 trainees
 18. Diploma in Food Science Technology (KNEC) For a maximum of 30 trainees
 19. Higher Diploma in Applied Biology (KNEC) For a maximum of 30 trainees
 20. Craft in Tour Guiding and Operations (KNEC) For a maximum of 50 trainees
 21. Craft in Secretarial Studies (KNEC) For a maximum of 40 trainees
 22. Craft in Supply Chain Management (KNEC) For a maximum of 80 trainees
 23. Diploma in Accountancy (KNEC) For a maximum of 80 trainees
 24. Diploma in Banking and Finance (TEP) (KNEC) For a maximum of 80 trainees
 25. Diploma in Business Management (KNEC) For a maximum of 80 trainees
 26. Diploma in Secretarial Studies (KNEC) For a maximum of 40 trainees
 27. Diploma in Supply Chain Management (KNEC) For a maximum of 80 trainees
 28. Diploma in Tourism Management (KNEC) For a maximum of 80 trainees
 29. Craft in Petroleum Geoscience (KNEC) For a maximum of 50 trainees
 30. Diploma in Analytical Chemistry (KNEC) For a maximum of 30 trainees
 31. Diploma in Chemical Engineering (KNEC) For a maximum of 30 trainees
 32. Diploma in Petroleum Geoscience (KNEC) For a maximum of 30 trainees
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33. Higher Diploma in Analytical Chemistry (KNEC) For a maximum of 30 trainees
 34. Craft in Building Construction (KNEC) For a maximum of 30 trainees
 35. Higher Diploma in Building Construction (KNEC) For a maximum of 30 trainees
 36. Diploma in Architecture (Modular) (KNEC) For a maximum of 30 trainees
 37. Diploma in Building Construction (KNEC) For a maximum of 30 trainees
 38. Diploma in Land Survey (KNEC) For a maximum of 30 trainees
 39. Diploma in Cooperative Management (KNEC) For a maximum of 80 trainees
 40. Diploma in Applied Statistics (KNEC) For a maximum of 50 trainees
 41. Diploma in Computer Studies (KNEC) For a maximum of 40 trainees
 42. Diploma in Information Communication Technology (KNEC) For a maximum of 40 trainees
 43. Craft in Information Communication Technology (KNEC) For a maximum of 40 trainees
 44. Craft in Electrical & Electronic Technology (KNEC) For a maximum of 30 trainees
 45. Diploma in Electrical and Electronic Engineering (Telecommunication Option) (KNEC) For a maximum of 30 trainees
 46. Diploma in Electrical & Electronic Engineering (Power Option) (KNEC) For a maximum of 30 trainees
 47. Higher Diploma in Electrical & Electronic Engineering (Power Option) (KNEC) For a maximum of 30 trainees
 48. Diploma in Electrical & Electronics Eng. (Instrumentation & Control Option) (KNEC) For a maximum of 30 trainees
 49. Craft in Human Resource Management (KNEC) For a maximum of 80 trainees
 50. Craft In Information Studies (KNEC) For a maximum of 80 trainees
 51. Craft in Sales & Marketing (KNEC) For a maximum of 80 trainees
 52. Diploma in Human Resource Management (KNEC) For a maximum of 80
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trainees

53. Higher Diploma in Human Resource Management (KNEC) For a maximum of 50 trainees
 54. Higher Diploma in Entrepreneurship Development (KNEC) For a maximum of 50 trainees
 55. Diploma in Information Studies (KNEC) For a maximum of 80 trainees
 56. Diploma in Project Management (KNEC) For a maximum of 80 trainees
 57. Diploma in Sales & Marketing (KNEC) For a maximum of 80 trainees
 58. Diploma in Medical Engineering (KNEC) For a maximum of 30 trainees
 59. Diploma in Pharmaceutical Technology (KNEC) For a maximum of 30 trainees
 60. Craft in Catering and Accommodation (KNEC) For a maximum of 20 trainees
 61. Craft in Food & Beverages, Production Sales and Service (KNEC) For a maximum of 20 trainees
 62. Diploma. In Catering & Accommodation Management (KNEC) For a maximum of 20 trainees
 63. Diploma. In Food & Beverage Management (KNEC) For a maximum of 20 trainees
 64. Diploma in Nutrition & Dietetics Management (KNEC) For a maximum of 20 trainees
 65. Craft in Community Development and Social Work (KNEC) For a maximum of 50 trainees
 66. Diploma in Community Development and Social Work (KNEC) For a maximum of 50 trainees
 67. Craft in Automotive Engineering (KNEC) For a maximum of 30 trainees
 68. Diploma in Mechanical Engineering (Plant Option) (KNEC) For a maximum of 30 trainees
 69. Diploma in Mechanical Engineering (Production) (KNEC) For a maximum of 30 trainees
 70. Diploma in Mechanical Engineering (Automotive Option) (KNEC) For a
-

maximum of 30 trainees

71. Diploma in Plant and Services Engineering (KNEC) For a maximum of 30 trainees

72. Higher Diploma in Mechanical Engineering Plant/Production/Automotive Option) (KNEC) For a maximum of 30 trainees

S/N	Name of Institution	Category	Type	County
o.				
54.	ITEN Vocational Training Centre P.O Box 255-30700 Iten Tel: 0726411245 Email: itenyp@gmail.com Iten Town	Vocational Training Centre	Public	Elgeyo Marakwet
1.	NVCET L.1 in Motor Vehicle Technology (KNEC) for a maximum of 50 trainees			
2.	TTG III in Motor Vehicle Mechanics (NITA) for a maximum of 42 trainees			
3.	NVCET L.I in Electrical/ Electronic Technology (KNEC) for a maximum of 48 trainees			
4.	TTGIII in Electrical Wireman (NITA) for a maximum of 40 trainees			
5.	NVCET L.1 in Building Technology (KNEC) for a maximum of 36 trainees			
6.	TTG III in Masonry (NITA) for a maximum of 30 trainees			
7.	NVCET in Fashion Design & Garment Making (KNEC) for a maximum of 30 trainees			
8.	TTGIII in Tailoring & Dressmaking (NITA) for a maximum of 20 trainees			
9.	ARTISAN in Plumbing (KNEC) for a maximum of 20 trainees			
10.	TTGIII in Plumbing and PF (NITA) for a maximum of 20 trainees			

9. Craft in supply chain management (KNEC) for a maximum of 30 trainees
 10. Dip in supply chain management (KNEC) for a maximum of 30 trainees
 11. Craft in Electrical and electronics Engineering (KNEC) for a maximum of 20 trainees
 12. Dip in Electrical and electronics Engineering (KNEC) for a maximum of 20 trainees
-

Appendix VIII: Research Authorization Letter



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

9th Floor, Utalii House
Uhuru Highway
P.O. Box 30623-00100
NAIROBI-KENYA

Ref. No. **NACOSTI/P/17/91736/15508**

Date: **5th April, 2017**

Julius Kipkogei Keter
Moi University
P.O. Box 3900-30100
ELDORET.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on *“Public private partnership as a strategy for enhancing quality and relevance in education and training. A study of TVET institutions and enterprises in Kenya,”* I am pleased to inform you that you have been authorized to undertake research in **Kisumu, Nakuru, Nandi and Uasin-Gishu Counties** for the period ending **27th March, 2018.**

You are advised to report to **the County Commissioners and the County Directors of Education, selected Counties** before embarking on the research project.

On completion of the research, you are expected to submit **two hard copies and one soft copy in pdf** of the research report/thesis to our office.


BONIFACE WANYAMA
FOR: DIRECTOR-GENERAL/CEO

Copy to:


The County Commissioners
Selected Counties.

The County Directors of Education
Selected Counties.

Appendix IX: Research Permit

THIS IS TO CERTIFY THAT: Permit No : **NACOSTI/P/17/91736/15508**
MR. JULIUS KIPKOGEI KETER Date Of Issue : **5th April, 2017**
of MOI UNIVERSITY, 7096-30100 Fee Received : **USD 18.90**
ELDORET, has been permitted to conduct
research in Kisumu, Nakuru, Nandi,
Uasin-Gishu Counties
on the topic: PUBLIC PRIVATE
PARTNERSHIP AS A STRATEGY FOR
ENHANCING QUALITY AND RELEVANCE
IN EDUCATION AND TRAINING. A STUDY
OF TVET INSTITUTIONS AND
ENTERPRISES IN KENYA
for the period ending:
27th March, 2018

Applicant's Signature


Director General
National Commission for Science, Technology & Innovation