

**INSTITUTIONAL FACTORS INFLUENCING ACQUISITION OF  
VOCATIONAL SKILLS BY TRAINEES IN PUBLIC VOCATIONAL  
TRAINING CENTRES IN KAKAMEGA COUNTY, KENYA**

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**A Thesis submitted in partial fulfillment for the requirements of the award of  
the Degree of Masters in Educational Management and Policy Studies of  
Masinde Muliro University of Science and Technology**

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## DECLARATION

This thesis is my original work prepared with no other than the indicated sources and support and has not been presented elsewhere for a degree or any other award.

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## **DEDICATION**

This Thesis is dedicated to my caring and loving family.

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## **ABSTRACT**

Vocational Training Centers (VTCs) are anchored in the Technical Vocational Education and Training ACT (2013), which emphasis on imparting vocational and technical skills. The purpose of this study was to determine the institutional factors influencing acquisition of vocational skills by trainees in public vocational training centres in Kakamega County. The objectives of the study were: to establish the influence of instructors' capacity on acquisition of vocational skills, to establish the influence of financial resources on acquisition of vocational skills, to establish the influence of training facilities on acquisition of vocational skills and to establish the influence of instructional strategies on acquisition of vocational skills. The study was guided by contemporary theory of human capital which was postulated by Becker (2009). The study adopted a descriptive survey. The target population of the study was 1740,60 county polytechnic principals, 480 instructors and 1200 second year finalist trainee. A sample size of 282 was picked consisting of 18 county polytechnic principals, 144 instructors and 120 second year finalist trainees as the respondents. Stratified random, purposive and simple random sampling was employed. Questionnaires were used to collect data from county polytechnic principals, instructors and trainees. Piloting was done in related institutions and Cronbach alpha was used to calculate the co-efficient of correlation to ensure reliability of the research instruments. Data was analyzed using frequencies, percentages and chi-square. The study established that instructors were inadequate and the existing ones lacked in-service industrial attachment to update their skills& knowledge however the existing instructors were qualified and experienced. Financial resources were also inadequate to cater for training facilities and payment of more BOM instructors, tools & Equipment were inadequate and not up to date and this instructors to use teacher -centered methods of instructing. However, the respondents concurred that instructing strategies such as demonstration, fieldwork, work based, question and answer method as well as project work had a high influence on acquisition of vocational skills by trainees in public vocational training centers in Kakamega County. On basis of the findings, it was recommended that there is need to develop policies on relevant and up to date training facilities, Instructors' capacity building in terms of in-service courses and industrial attachment in order to obtain technology transfer and practical skills exposure. More so vocational training centres to develop a policy on funding especially through income generating activities and lastly ministry of education to develop a policy on instructional strategies to encourage use of demonstration, project work - based study, field work question and answer method and group discussions strategies as opposed to lecture for maximum acquisition of vocational skills by trainees in VTCs

## TABLE OF CONTENT

<b>DECLARATION.....</b>	<b>ii</b>
<b>CERTIFICATION.....</b>	<b>ii</b>
<b>COPYRIGHT.....</b>	<b>iii</b>
<b>DEDICATION.....</b>	<b>iv</b>
<b>ACKNOWLEDGEMENT.....</b>	<b>v</b>
<b>ABSTRACT.....</b>	<b>vi</b>
<b>LIST OF TABLES.....</b>	<b>xi</b>
<b>LIST OF FIGURES.....</b>	<b>xii</b>
<b>LIST OF ABBREVIATIONS &amp; ACRONYMS.....</b>	<b>xiii</b>
<b>CHAPTER ONE.....</b>	<b>1</b>
<b>INTRODUCTION.....</b>	<b>1</b>
1.1 BACKGROUND TO THE STUDY.....	1
1.2 STATEMENT OF THE PROBLEM.....	4
1.3 PURPOSE OF THE STUDY.....	4
1.4 STUDY OBJECTIVES.....	5
1.5 HYPOTHESIS.....	5
1.6 SCOPE.....	6
1.7 LIMITATIONS.....	6
1.8 SIGNIFICANCE OF THE STUDY.....	7
1.9 JUSTIFICATION OF THE STUDY.....	8
1.10 THEORETICAL FRAMEWORK.....	8
1.11 CONCEPTUAL FRAMEWORK.....	9

1.12 ASSUMPTIONS.....	11
1.13 OPERATIONAL DEFINITION OF TERMS .....	11
<b>CHAPTER TWO .....</b>	<b>14</b>
<b>LITERATURE REVIEW .....</b>	<b>14</b>
2.1 INTRODUCTION.....	14
2.2 INSTRUCTORS’ CAPACITY AND ACQUISITION OF VOCATIONAL SKILLS BY TRAINEES IN PUBLIC VTCs.....	14
2.3 FINANCIAL RESOURCES AND ACQUISITION OF VOCATIONAL SKILLS BY TRAINEES IN PUBLIC VTCs.....	16
2.4 TRAINING FACILITIES AND ACQUISITION OF VOCATIONAL SKILLS BY TRAINEES IN PUBLIC VTCs.....	18
2.5 INFLUENCE OF TEACHING STRATEGIES ON ACQUISITION OF VOCATIONAL SKILLS BY TRAINEES IN PUBLIC VTCs.....	20
2.6 SUMMARY OF THE LITERATURE REVIEW AND KNOWLEDGE GAP .....	21
<b>CHAPTER THREE .....</b>	<b>24</b>
<b>RESEARCH METHODOLOGY .....</b>	<b>24</b>
3.1 INTRODUCTION.....	24
3.2 RESEARCH DESIGN .....	24
3.3 STUDY AREA .....	25
3.4 STUDY POPULATION .....	25
3.5 SAMPLING PROCEDURE AND SAMPLE SIZE .....	26
3.5.1 <i>Sampling Procedures</i> .....	26
3.5.2 <i>Sample Size</i> .....	27
3.6 DATA COLLECTION METHODS.....	27

3.6.1 Questionnaires.....	28
3.7 VALIDITY OF RESEARCH INSTRUMENT .....	29
3.8 RELIABILITY OF INSTRUMENTS .....	29
3.9 PROCEDURE FOR DATA COLLECTION .....	30
3.10 DATA ANALYSIS.....	30
3.11 ETHICAL AND LEGAL CONSIDERATION.....	33
<b>CHAPTER FOUR.....</b>	<b>34</b>
<b>DATA PRESENTATION, ANALYSIS AND DISCUSSION .....</b>	<b>34</b>
4.1 INTRODUCTION .....	34
4.2 RESPONSE RATE .....	35
4.3 DEMOGRAPHIC INFORMATION OF RESPONDENTS.....	36
4.3.1 Gender of all Respondents.....	36
4.3.2 Age of the Respondents.....	37
4.3.3 Courses Taken by Trainees.....	38
4.3.4: Enrolment in Trade Areas/Course .....	39
4.3.5. Location of the Vocational Training Centre.....	40
4.3.6 Status of Vocational Training Centres .....	40
4.3.7 Type of Vocational Training Centres .....	40
4.3.8 Highest Academic Qualification of Instructors and Principals .....	41
4.4 INFLUENCE OF INSTRUCTORS' CAPACITY ON ACQUISITION OF VOCATIONAL SKILLS.....	42
4.5 INFLUENCE OF FINANCIAL RESOURCES ON ACQUISITION OF VOCATIONAL SKILLS.....	48
4.6 INFLUENCE OF TRAINING FACILITIES ON ACQUISITION OF VOCATIONAL SKILLS ....	53

4.7 INFLUENCE OF INSTRUCTIONAL STRATEGIES ON ACQUISITION OF VOCATIONAL SKILLS.....	61
<b>CHAPTER FIVE .....</b>	<b>70</b>
<b>SUMMARY, CONCLUSIONS AND RECOMMENDATIONS .....</b>	<b>70</b>
5.1 INTRODUCTION .....	70
5.2 SUMMARY OF THE STUDY .....	70
5.2.1 <i>Influence of instructors' capacity on acquisition of vocational skills by trainees in vocational training centres in Kakamega County.</i> .....	71
5.2.2 <i>Influence of financial resources on acquisition of vocational skills</i> .....	71
5.2.3 <i>Influence of training facilities on acquisition of vocational skills</i> .....	71
5.2.4 <i>Influence of Instructional Strategies on Acquisition of Vocational Skills.</i> .....	72
5.3 CONCLUSION .....	73
5.4 RECOMMENDATIONS .....	74
5.5 SUGGESTIONS FOR FURTHER RESEARCH .....	75
<b>REFERENCES.....</b>	<b>76</b>
<b>APPENDICES .....</b>	<b>83</b>

## LIST OF TABLES

Table 1: Distribution of Target Population .....	25
Table 2: Sample Size for Participants .....	27
Table 3: Summary of Data Analysis per Objective .....	32
Table 4: Instrument Response Rate .....	35
Table 5: Gender of all Respondents.....	36
Table 6: Age Bracket of Respondents .....	37
Table 7: Courses Taken by Trainees.....	38
Table 8: Enrolment in Trade Areas/ Courses.....	39
Table 9: Location of the Vocational Training Centres .....	40
Table 10: Status of Vocational Training Centres.....	40
Table 11: Type of Vocational Centre.....	40
Table 12: Principals Academic Qualifications .....	41
Table 13: Instructors Academic Qualification .....	42
Table 14: Instructors' Response on Instructors Capacity .....	43
Table 15: Principals' Response on Instructors' Capacity .....	44
Table 16: Principals Response on Instructors Capacity by Yes, No and Undecided.....	45
Table 17: testing hypothesis on influence of instructors' capacity on trainees' acquisition of vocational skills in public vocational centres .....	47
Table 18: Principals' Responses on Influence of Financial Resources on Acquisition of Vocational Skills .....	49
Table 19: Principals' Responses on Influence of VTCs' Training Facilities on Acquisition of Vocational Skills.....	54
Table 20: Instructors' Responses on Influence of VTCs' Training Facilities on Acquisition of Vocational Skills.....	56
Table 21: Trainees' Responses on Influence of VTCs' Training Facilities on Acquisition of Vocational Skills.....	57
Table 22: Key Factors from Principals and Instructors Opinion on how Adequacy of Training Facilities Influence on Trainees Skills Acquisition.....	61
Table 23: Principals' responses on influence of VTCs' instructional strategies on acquisition of vocational Skills .....	62
Table 24: Instructors' Responses on Influence of VTCs' Instructional Strategies on Acquisition of Vocational Skills .....	63
Table 25: Factors Influencing Choice of Commonly Used Teaching Method in VTCs ....	64
Table 26: Trainees' responses on influence of VTCs' instructional Strategies on Acquisition of Vocational Skills (Values in %).....	65
Table 27: Trainees' Response on Level of Influence of Instructing Strategies on Acquisition of Vocational Skills .....	66
Table 28: Testing hypothesis on influence of instructional strategies on trainees' acquisition of vocational skills.....	67
Table 29: Trainees, Instructors and Principals Suggestions on Possible Ways in which a Vocational Training Centres (VTCs) can Enhance Acquisition of Vocational Skills by its Trainees .....	68

## **LIST OF FIGURES**

Figure 1: Conceptual Framework .....	10
Figure 2: Enrolment per Trade Area .....	39
Figure 3: Bar Chart Showing Principals' Response on Influence of Training Facilities on Trainees Skills Acquisition.....	55
Figure 4: Bar Chart Showing Trainees' Responses on Influence of Training Facilities on their Skills Acquisition.....	59

## **LIST OF ABBREVIATIONS & ACRONYMS**

GMR	- Global Monitoring Report
GoK	- Government of Kenya
KENPRO	- Kenya Projects Organization
KNBS	- Kenya National Bureau of Statistics
KTTC	- Kenya Technical Teachers College
MOYAS	- Ministry of Youth Affairs & Sports
NCKK	- National Council of churches of Kenya
OECD	- Organization for Economic Co-operation and Development
TIVET	- Technical Industrial Vocational Education and Training
TVET	- Technical and Vocational Education and Training
UN	- United Nations
UNCEF	- United Nations Children Education Fund
UNDP	- United Nations Development Programme
UNESCO	-United Nations Education, Scientific and Cultural Organization
VTC	-Vocational Training Centre
VET	- Vocational Education and Training

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background to the Study

Vocational training centers provide a broadly defined TVET avenue to educate students in order to obtain practical skills, know-how and comprehension necessary for their work in a specific occupation, trade or occupation group (Atchoereria & Delluc 2001). Technical and vocational schooling was also identified as essential to improved competitiveness and to contribute in modern societies to social inclusiveness, poverty reduction and development (UNESCO, 2006).

In times of fast social and technological change, TVET is becoming increasingly relevant worldwide. Kiriimi (2012) announced that TVET has been granted further attention through enough funding from many developed, emerging countries such as Italy, Brazil, China, Sweden and Japan. It contributes to early exposure of students to professional training and a tradition of scientific research and compliance. Throughout Europe, for example, at least 50% of high-school students receive some form of professional or vocational training. The figure is 35-40% in China, India and Southeast Asia, while it is less than 20% in Africa (Nyerere, 2009).

Oyebade, Oladpo and Adetoro (2011) felt that quality in education can be assessed on the basis of the effectiveness and efficiency of teachers. The infrastructures and materials required for effective learning and teaching should be adequate and accessible, the graduates should also be prepared to face life's challenges and to solve social difficulties. The quality of education of trainees can be accomplished by adequately financing TVET institutions with

adequate facilities and competent and experienced teachers using effective and effective methods of teaching (Dasmani, 2011). (Dasmani, 2011) Similar factors such as suitable functionality, the right number of qualified and competent television educators, appropriate educational strategies and a learner-centered environment, as well as funding for quality TVET programs, also arose from Anyakwo (2012) and Aworanti (2012).

In Africa, Nelson (2010) reported that it is becoming increasingly significant that the various Poverty Reduction Strategy documents produced by governments in cooperation with the world bank now reflect the African Governments ' commitment to technical and professional education and training. However, only a few states are enabled at a level that can support quality training for technical and professional education. Only 0.5% of its budget for technical education is spent in Ethiopia, and 1% spending in Ghana, Mali, and Gabon, 10% and 12.7% (Atchoarena, 2001.). Afeti (2014) indicated that after years of neglect, technical and vocational education and training has returned to the developing agenda of numerous African countries, motivated by complex reasons including the World Bank's budgetary constraints and criticisms of its leadership and focus in the early 1990ies. Okoro (2007) results, however, show that lack of funds, lack of services, mismanagement of assets and lack of qualified staff, including a serious impact on the quality of education, are not being properly communicated between young people in Nigeria.

Kenya was not left out in TVET, since it acknowledged that well-educated and well-trained labor is necessary to tap the productivity and developed capacity (MOEST, 2005). Nevertheless, Mureithi (2008) observed, the unemployment rate of young people from the age of 15 to 30 is reported to be 67%, of whom 90% are not only unemployed, but also

deficient in jobs. This called for the enhancement of technical training and education in youth polytechnics.

The Sessional Paper No. 1 of 2014 (Republic of Kenya) acknowledges VTCs as a key area of education for meeting the 2030 dream. Similarly, the government and its other partners were supported in developing the facilities through the provision of facilities, equipment, the recruitment of professional instructors and the subsidizing of school fees to make them affordable to Kenya's young people (MOYAS 2007). The government also finds VTCs to be essential educational institutions, providing incentives for primary-school leavers to gain analytical skills and knowledge and to boost their employability. Given this, the public understanding is that the level of training in public VTCs is weak, questioning how can the economy of Kenya grow and develop if most of the students who engage in VTCs do not have a standard level of job skills.

Centers for professional education in Kenya are relocated and are therefore controlled by county governments. The Kakamega County Government has 60 VTCs and funds them in training facilities, scholarships for schooling and teacher jobs. This campaign aims to provide professional technical skills for as many trainees as possible. Despite these steps, there is a shortage of recruitment of trainees in these VTCs (Kakamega County VTCs study 2017). The study will seek to determine how instructors' capacity, adequacy of financial resources, training facilities as well as instructional strategies as the institutional factors influence acquisition of vocational skills by trainees in VTCs in Kakamega County with a view of generating useful information to ensure VTCs are functional, given that skills and knowledge are the engines of economic growth and social development of any nation (Goel, 2010).

## **1.2 Statement of the Problem**

Kenya has laid a great emphasis on TVET as one of the vehicles for socio-economic and technological transformation especially in the realization of her Vision 2030 (Kerre, 2010). However, the skill gap is worrying trend in the country and every education and training stakeholder is talking about competency of graduates. Kakamega County hence graduates engage in menial jobs.

Vocational Training Centres (VTCs) mandate is to provide relevant skills to the trainees for self-employment or supply of skilled human resource for the industry. Unfortunately, the existing institutional infrastructure, staffing capacity, financing resources and instructional strategies in public VTCs are unable to effectively produce high practical competent graduates.

According to Kakamega County Director Vocational Education office - report 2018, there was low acquisition of vocational skills by trainees which negatively impacted on the quality of graduate being channeled to labour market. Little empirical evidence exists on institutional factors influencing quality training of students in vocational training centers in Kakamega County. It was against this gap that the study to determine institutional factors influencing acquisition of vocational skills by trainees in public vocational training centers in Kakamega County.

## **1.3 Purpose of the Study**

The purpose of this study was to determine the institutional factors influencing acquisition of vocational skills by trainees in public vocational training centers in Kakamega County.

#### **1.4 Study objectives**

The study will be guided by the following objectives;

- i. To establish the influence of instructors' capacity on acquisition of vocational skills by trainees in public vocational training centers in Kakamega County.
- ii. To establish the influence of financial resources availability on acquisition of vocational skills by trainees in public vocational training centers in Kakamega County.
- iii. To establish the influence of training facilities on acquisition of vocational skills by trainees in public vocational training centers in Kakamega County.
- iv. To establish the influence of instructional strategies on acquisition of vocational skills by trainees in public vocational training centers in Kakamega County.

#### **1.5 Hypothesis**

- H<sub>O1</sub> Instructors' capacity has no significant influence on acquisition of vocational skills by trainees in public vocational training centers in Kakamega County.
- H<sub>O2</sub> Financial resources have no significant influence on acquisition of vocational skills by trainees in public vocational training centers in Kakamega County.
- H<sub>O3</sub> Training facilities have no significant influence on acquisition of vocational skills by trainees in public vocational training centers in Kakamega County.
- H<sub>O4</sub> Instructional strategies have no significant influence on acquisition of vocational skills by trainees in public vocational training centers in Kakamega County.

## **1.6 Scope**

A scope or delimitation is the act of restricting a study to a certain geographical area or subject (Kombo, 2006). The study sought to determine the institutional factors influencing acquisition of vocational skills by trainees in public vocational training centers in Kakamega County given that Kakamega Education task force report 2014 had observed un-conducive institutional factors having negatively influenced training in vocational training centres and gave recommendations on the same. In this case only public vocational training centres were involved in the study. This was due to the fact that public vocational training are similar in management to a large extent as provided by the legal documents and policy framework enlisted by ministry of education, kakamega county. The respondents included vocational training centres (VTC) principals, instructors and second year trainees. The study will concentrate on instructors' capacity, financial resources, training facilities and instructing strategies as the institutional factors that influence acquisition of vocational skills by trainees in public vocational training centers in Kakamega County.

## **1.7 Limitations**

Kakamega county has a large geographical area and vocational training centres in Kakamega county are widely spread across the county. Therefore this geographical aspect forced the researcher not to collect data from all vocational training centres. To overcome the said limitation, the researcher sampled the VTCs using stratified sampling method.

The tight schedules of some of the respondents also affected the number of respondents for the study given that the respondents were expected to fill a questionnaire. This was countered by the researcher being flexible to fit in the respondent's schedule.

## **1.8 Significance of the Study**

Kenya is facing challenges of unemployment and vocational training centers can be part of solution to this problem, since they equip students with vocational skills which are readily consumable by the community. Establishing institutional factors influencing acquisition of vocational skills by trainees in vocational training centers is paramount since it will enable education stakeholders to address the issues and impart high quality skills in VTC's trainees since low quality training has several negative consequences on both individual and society in terms of economic, social and psychological dimensions.

Though other previous researchers have investigated on general challenges in vocational institutions, this study would provide information on institutional factors that influences trainees' acquisition of vocational skills in public vocational training centers in Kakamega County in terms of instructors capacity, financial resources, training facilities and teaching strategies. Findings of the study would have significant implications for the future of vocational training centers in Kakamega County and in the country as a whole. The findings would also be of assistance to the Kakamega county stakeholders to unravel useful insights in the use of scarce resources for the promotion of skills for sustainable development, which would enable the county to achieve Kenya's vision 2030.

In addition, it will enlighten the Board of Management (B.O.M) on the existing resources in their VTC's and how they impact on quality of training of the trainees. Besides, the study will enable the Kakamega County government to have a better understanding of factors affecting trainees' quality training in vocational training centers and formulate new vocational training centres policies as well as improving on the already existing policies,

towards better provision of quality training to intervene such as VTC,s training staff policy, funding policy as well as training facilities policy.

The recommendation of the study would also provide useful knowledge to vocational training centres administrators, instructors, students and other educational stakeholders on ways of ensuring high quality training in VTCs .The study finding would also be useful to scholars as a reference material for VTCs. Lastly , the findings would be useful to the general growth in literature on issues related to acquisition of vocational skills.

### **1.9 Justification of the Study**

Vocational training centers(VTCs) are meant to equip trainees with technical and entrepreneurial skills in order to create employment. To actualize this, the government of Kenya (GOK) has intervened through putting in place policy on provision of quality training, provision of tuition subsidy, employment of instructors and provision of infrastructure in VTC's. However, despite these government efforts, the VTC's graduates are not employable due to lack appropriate skills for employment (Kamau, 2013).

### **1.10 Theoretical Framework**

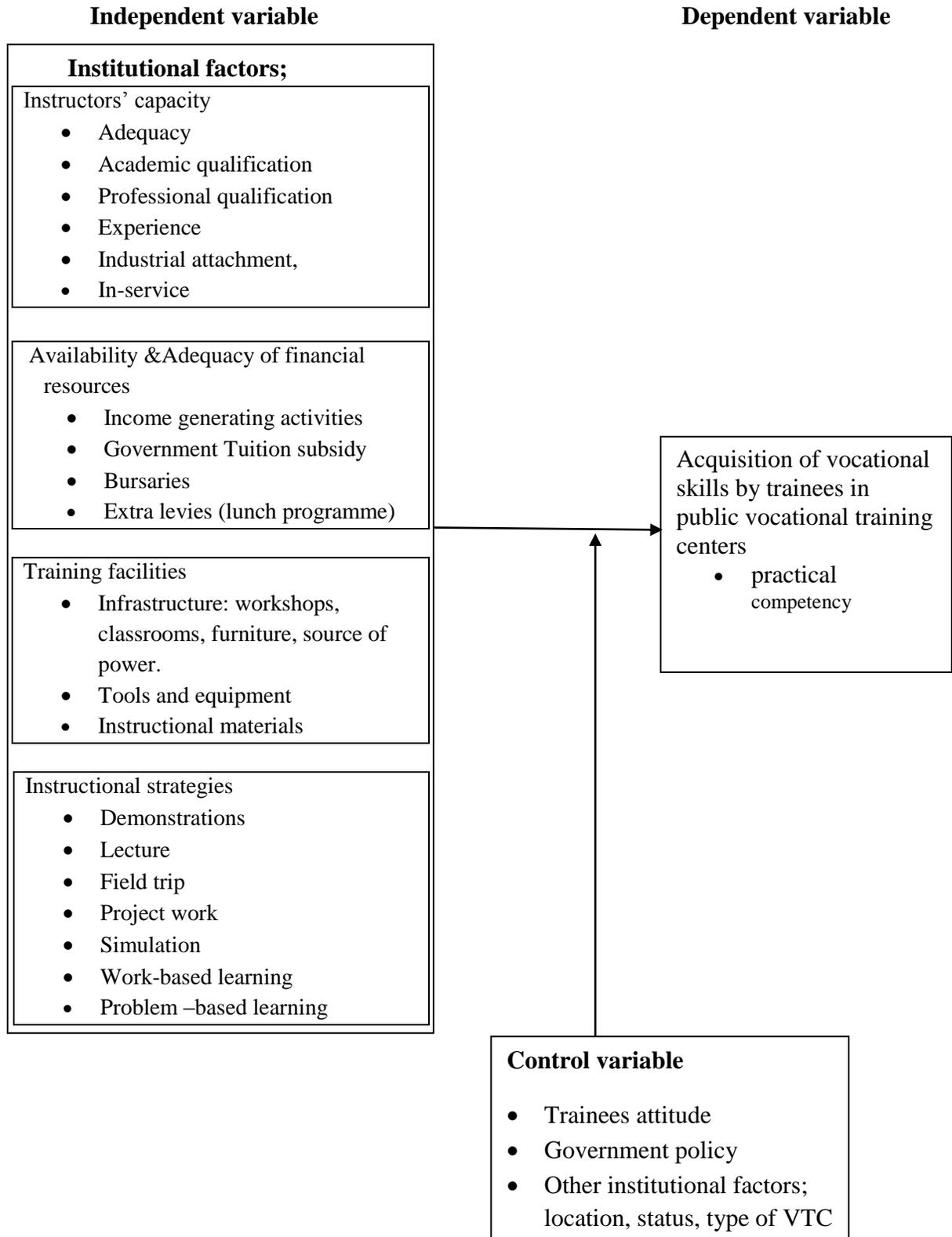
The study was based on human capital theory. The contemporary theory of human capital can be traced back to the 1960s & 1970s. Becker, (2009) gave a view on the concept and formation of human capital, and the role of human capital in the economy. Human capital theory holds that the welfare of a society requires financial capital, labour and natural resources as well knowledge and skills of individuals. This theory assumes that increased

knowledge and skill will yield improved economic outcomes for both individuals and societies.

Education and training is a mportant component of human capital theory since it leads to imparting knowledge and skill. Human capital theory that urgues education and training enhances human characteristics which increases productivity, performance, efficiency, lifelong earnings, and other lifetime direct and indirect benefits as productivity-augmenting role of education. The applicability of the theory in the study is attributed to the fact that it focuses on acquisition of knowledge and vocational skills to increase individual productivity which requires education and training of trainees in VTCs.

### **1.11 Conceptual Framework**

This study was guided by conceptual framework constructed from reviewed literature review on institutional factors influencing trainees acquisition of vocational training in VTCs. It diagrammatically presents the relationship between institutional factors as the independent variables while the acquisition of vocational skills was the dependent variables in the study as indicated in Figure 1. The framework presupposed that when the institutional factors are condusive, then the trainees acquisition of vocational skills is improved.



**Figure 1: Conceptual Framework**  
**Source: Author (2018)**

The institutional factors were indicated through instructors' capacity, financial resources, training facilities and instructing strategies. The ultimate influence of institutional factors was indicated through competence of trainee from the public vocational training centers. In this case therefore, institutional factors acted as training inputs and trainees acquisition of vocational skills in public vocational training centers were the training output which were influenced by the status of institutional factors . for example where conducive institutional factors existed then it implied highly competent graduates at the end of training cycle. However, the variables were controlled by trainees' attitude, Government policy, and other institutional factors.

### **1.12 Assumptions**

This study was carried out on the basis that; first, all respondents would cooperate and provided reliable responses. Questionnaire which was used for data collection had some self reporting questions and the researcher assumed that the responses were made with sincerity. To control on this ,the researcher explained the objective of the questionnaires and encouraged the respondents to be honest as their responses would be used for study purposes only.

Secondly, all public VTCs have similar institutional factors and lastly, trainees' acquisition of vocational skills depends on instructors' capacity availability & adequacy of financial resources, training facilities and instructional strategies.

### **1.13 Operational Definition of Terms**

The following definition of terms was applicable only to this study:

**Institutional factors** – instructor capacity, financial resources, Training facilities as well as instructional strategies used by vocational training centres to impart vocational skill to trainees.

**Instructors** – teaching staff in a vocational training centres

**Instructors' capacity**- characteristics of instructors which includes adequacy, instructor qualifications, teaching experience in-service & industrial attachment as well as ICT skills.

**Training facilities**- physical facilities, tools and equipment as well as teaching and learning resources deemed necessary for high acquisition of vocational skills.

**Instructional Strategies** – teaching methods adopted by the institution to impart skill to her trainees

**Skill** – developed proficiency acquired through specific training.

**Skill gap** – type or level of skill acquired is different from that required to adequately perform the job.

**Vocational skills** – relevant practical skills acquired by a trainee in a public vocational training Centre.

**Public Vocational training centers** - community based hands- on institutions that benefit from government support and offer vocational & technical training up to artisan level.

**Trainee** - A person who attends a vocational training Centre to acquire a practical skill

**Multi-grade teaching** - students at different levels of learning are taught in the same workshops, laboratories or classrooms.

**Vocational Education** –education meant to equip trainee for jobs in designated (manual or practical) trades or occupation.

Conducive institutional factors-where public VTCs instructors' capacity, financial resources, training facilities and instructional strategies are favorable to support trainees' practical competencies.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter presents both literature review and summary of literature review as guided by the objectives of the study. The literature review is drawn from books, journals, articles and research theses.

#### **2.2 Instructors' Capacity and Acquisition of Vocational Skills by Trainees in Public VTCs**

International Labour Organization (ILO) report on indicators on quality (2012) points out that, the effectiveness of the TVET programmes, which is a measure of the quality of the training, reflects exactly what happens in the classrooms. There is need to consider the educational, occupational background and training of instructors as a proxy for quality. The report further indicated that, re-training and upgrading of instructor's skills is vital for the success of TVET which in turn enhances the quality of graduates.

The professional and pedagogical competence of the technical instructor is key to impart quality vocational skills. Kigwilu and Githinji (2015) revealed that teacher qualifications and work experience have a high influence on the implementation of Artisan and Craft curriculum. Moreover, low qualification of instructors in vocational training centres negatively affected provision of quality education & training in vocational training centres. This implies that the TVET institutions should employ more qualified instructors. Nieto (2003) posits that teachers must be trained, prepared for public service and provided with

opportunities for professional development. MOEST (2003) report recommended that the government should provide VTC instructors with skill upgrading, in service training and attachment schemes. However, as noted by Kamau (2013), a research carried out in Kiambu Sub County revealed that, majority of instructors in the public vocational institutions under study were inadequately trained or not trained at all in technical trades and pedagogy. Moreover, instructors in TVET institutions rarely go for in-service (Bourgonje and Tramp 2011) which enables the practicing instructor to update his/her professional knowledge, skills and interest (Khatete, 2010).

Teachers in VET institutions lack necessary industry-based technological skills updated through industrial attachment (Nyerere, 2009). Similarly, Karemu & Gongera (2014) affirms that teachers in Kiambu County lack exposure to newest technology and as well as necessary skills and therefore needs refresher courses. Mbugua *et al.* (2012) posited that in Kenya most TVETs operate with inadequate teaching staff which compromises the quality of teaching and learning since the short fall in the number of teachers is addressed through hiring part-time teachers, multi-grade teaching, and students individualized learning engagements. The findings concur with Mayabi 2014, who revealed that, although, the government has recruited qualified instructors in the VTCs to supplement the ones employed by the BOG, they are still few. Consequently, this affects the interactive capacity between the students and the teachers' hence poor quality of training and acquisition of skills.

Chelimo (2005) notes that, schools with low teacher–pupil ratio greatly give individual attention to the pupils and there is increased interaction which enables the learners to be motivated. Contrary, Njoki (2014) reveals that in Nairobi County, TVET institutions are

understaffed especially in technical disciplines which lead to ill preparation of students for work.

### **2.3 Financial Resources and Acquisition of Vocational Skills by Trainees in Public VTCs**

Inadequate finance investment in training facilities could be an impediment in acquisition of skills by students because will have fewer opportunities to practice with tools and machines (Hicks, Kremer, Mbiti & Miguel 2011). According to Nyerere (2009), several countries, developed and developing such as Italy, Brazil, China, Sweden and Japan have given more recognition to technical, vocational education and training through adequate funding.

However, in Kenya, over the past two decades, TVET institutions have continued to receive less financial allocations from the government than the estimated annual expenditure.

Consequently, physical facilities are dilapidated and lack maintenance. Equipment used for training in most institutions is outdated while vital aspects of the training support system are wanting, posing negative impact on the quality of TVET programme (Ngome, 2009).

Diaa (2006) observed that finance is a key pillar upon which the educational system depends on in achieving its goals and implementing its plans; despite this, since independence TVET subsector has attracted very low at and budget provision in Kenya resulting in poor infrastructure and facilities and a low status overall (Ngome,2003). Moreover, underfunding has caused poor service delivery, poor image and compromised training leading to technology shock of trainees in the labor market (Otieno 2009).

In 1980s most countries received inadequate budget towards vocational training thus the vocational institutions introduced cost sharing measures (DFID, 2006) which was made to

reduce high public expenditure in education (Otieno,2004). In line this, Muriithi, (2013) established that at basic level, the financing of education and training is the responsibility of the government and parents. This gave youth polytechnics in Kenya a big blow because technical education is expensive due to tools and equipment required for education and training (Orodho 2002).

Kenya Education Sector Support Program (KESSP) (Republic 2005) of Kenya, noted inadequate funding of the TVET sub-sector has aggravated the situation. Consequently, leading to mismatch between the skills learned and the skills demanded by the industries, inadequate physical facilities for training coupled with lack of sufficient modern equipment and expensive training materials and textbooks.

In South Africa, fees is seen as a barrier to education (Veriava, 2002). Therefore, school budgets are funded by allocations from state revenue and school fees is required to supplement these budgets to enable schools to run smoothly. Njihia (2005) affirmed that under funding of educational programs in the technical training institutions has greatly jeopardized their capacity to offer quality training thereby eroding their external efficiency in the job market because the quality of graduates is compromised.

Ngerechi (2003) observed that TVET is a very expensive undertaking in terms of: equipment, physical facilities, training materials and teacher's salaries hence financing of TVET programmes has always been shared amongst government, local communities, beneficiaries, religious and private organizations, donors and private business. However, the main source of finance, is from tuition fees paid by the trainees of these institutions (Nishimura and Orodho, 2002). Therefore, the reason for introduction of safety nets such as bursaries and

constituency development fund in the technical education sector was important in providing quality education programmes and training (Kirimi,2012)

Van Myk (2003) revealed that any education is doomed to fail, if it lacks support from both the beneficiaries and its implementers. Nevertheless, Tuition subsidy was introduced to increase students' access to education (MOEST, 2003). However, Garriga and Keightley (2007) posits that while the subsidy enables students from poor backgrounds to enroll in education and training institutions the tuition subsidy is inadequate since there are ancillary costs such as transport costs, lunch and examination fees that the trainees are supposed to cater for, that the poor trainees are unable to raise.

Moreover, Ibrahim (2012), pointed out, that apart from financing partners, institutions especially youth polytechnics should embark on viable alternative sources of finance to be cater for their training programs. The KESSP document of 2005 noted most youth polytechnics lack adequate facilities and equipment and materials due to inadequate funds hence proposed that, this situation can be alleviated if the youth polytechnics can generate funds from income generation activities. This is supported by Njihia (2005). Mwiria et al. (2007), found out that income generation in national polytechnics goes a long way in provision of teaching and learning facilities and also supplementing lecturers' salaries hence lifting their morale to teach and train students.

#### **2.4 Training Facilities and Acquisition of Vocational Skills by Trainees in Public VTCs**

Adequate provision of school facilities in relation to the students' population is paramount given that the quality of education is affected by the availability or non-availability of physical facilities (Likoko, *et al.*, 2013). In London, successful teaching and learning took

place in school buildings that were safe, clean, quiet, comfortable and healthy (Gurney, 2007). This concurs with Owiye (2005), who stated that provision of material inputs like staffrooms, computers, classrooms, and toilets are important for the efficiency of education in those institutions. Generally, the state of existing infrastructure is wanting (UNESCO, 2006)

Udofia (2012) noted that there is significant relationship between workshop equipment for training and acquisition of employable skills. Also Umar and Ma'aji (2010) concurs that TVET institutions in Nigeria perform below standards due to non -availability, poor management or utter neglect of the tools & equipment for effective imparting of skills to trainees.

In Kenya, Muthaa (2012), revealed that TVET institutions operate with inadequate workshop facilities, which are under equipped. This scenario compromises the relevance of skills acquired because Most of the training equipment in this institutions do not match equipment found in industries and business organizations. More so, the TVET policy in Kenya noted that obsolete training equipment has led to poor training quality and acquisition of skills hence mismatch of skills among graduates (GoK, 2012; Nyerere, 2009).

Mureithi, (2008) revealed that VTCs fail to offer hands on skills due to inadequate training facilities. In light of this, Bwisa (2014) also observed that, in Vocational training centres, motor mechanics course is instructed using obsolete equipment, non-functional old engine models as well as by instructors without adequate exposure to modern technology. Therefore, modern training equipment need to be provided in the vocational training centres since outdated training equipment hinder trainees from learning modern technologies.

According to Mobegi, (2007), availability of modern and relevant training equipment affects the relevance of employable skills acquired by students. In Nairobi region. Njoki (2014) revealed that most of the TVET institutions had adequate teaching and learning resources but teaching facilities were not well equipped. In the same vein, Njati (2011) studied the impact of vocational training for rural development in Nyabene District Kenya and found out that the youth polytechnics (YPs) needed to be equipped with the necessary infrastructural materials for them to function effectively.

Dasmani (2011) affirms that TVET institutions have inadequate training equipment which are outdated and inferior to those used in industries. This compels TVET instructors to opt for lecture method with limited practical training hence leading to irrelevance of skills acquired by students.

## **2.5 Influence of Teaching Strategies on Acquisition of Vocational Skills by Trainees in Public VTCs**

Vocational skills can only be imparted through the use of appropriate and effective instructional strategies and techniques. A good teaching strategy for acquisition of vocational skills must bring out innovation and make the lesson trainee-centred activity (Okoye,2010). Moreover, Yinusa,2014 opined that in terms of practical skills acquisition, institutions should use teaching methods that bring out the manufacturing process & exploration of materials in to class room situation.

Acquisition of quality practical skills by trainees, demands use of suitable instructional strategies complemented with qualified and experienced instructors, well-equipped workshops& classrooms as well as adequate provision of instructional materials (Tumba &

Shuaibu, 2016). In this view, Akuezulo (2007) revealed that vocational education, is hands on in nature hence it is appropriate to use learner-centered approaches. In the same vein, Johannsen (2012) stated that, training of practical skills is effective if the trainees are exposed to the actual working condition.

In Nigeria, studied by Ajibade 2009 and Olokede & Olusaje (2009) established that the already known teaching strategies in technical and vocational practical skills instructions include Lecture method, Enquiry method, Demonstration method Discussion method, Assignment method, Project method, Electronic learning method, Field-trip method, Discovery method and Problem solving method. However, Audu (2014) revealed that effective and efficient teaching methods for students to acquire skills include: Demonstration, Work based learning (Attachment), Simulation, Fieldtrip, Context -based learning, Discussion and Problem based learning and Project work.

## **2.6 Summary of the Literature Review and knowledge gap**

Literature review involved studies at international, regional and national levels which focused on factors that influence quality of training in TVET institutions, vocational training centres inclusive. Institutional factors are critical since they determine the quality of training in given institution. Githinji and Kigwilu (2015), Neto (2003), Kamau (2013) and Khatete (2010) pointed out that most of teachers in TVET institutions lack technology awareness, never had in-service training, some lack pedagogy skills and some were not trained at all.

As noted by Mbugua *et al.* (2012), Mayabi (2014), Njoki (2014) and Chelimo (2005), inadequate instructors in technical disciplines has negative impact on quality of training since the short fall is addressed by use of part time teachers and multi-grade teaching which negatively affect the interactive capacity between trainees and teachers hence poor quality of training. However, these studies did not establish whether instructors were qualified and had ICT skills

Otieno (2009), Ngome (2003), Njihia (2005) noted that underfunding has compromised TVET training and quality of graduate. contrally, Ngerechi (2003) and Karimi (2013) noted that education in TVET is costly and is usually funded by all stakeholders in order to provide quality education programmes and training. Ibrahim (2012), Njihia (2005), and Mwiria *et al.* (2007) revealed institutions should be encouraged to have viable income generating activities to generate income of their own. However, these studies did not establish whether the public vocational training centres receive tuition subsidy consistently.

Moreover, studies that showed TVET institutions had inadequate training facilities compromise quality of skills acquired by trainees (Dasmani, 2011; Mbugua *et al.*, 2012 and Mobegi, 2007). Gurney (2007); Lukoko *et al.* (2013); Owiye (2005); Muthaa *et al.* (2012), Nyerere (2009), Mureithi (2008), Bwisa (2014), Njati (2011) and Njoki (2014). However, these studies did not uncover influence of availability of training facilities such as power (electricity) and furniture on acquisition of vocational skills by trainees in public vocational training centres.

The literature reviewed on teaching strategies especially in Africa countries indicated that most of institutions have adopted theoretical strategies as opposed to practical methods

(Kennedy, 2011). Thus this current study sought to establish any concurrence or divergence with the findings given the differential features between technical institutes and public vocational training centres.

Finally, basing on the literature reviewed on this chapter on technical education from other researchers, the findings were quite informative, though none focused on institutional factors influencing acquisition of vocational skills by trainees in public vocational training centres in Kakamega County. In fact, most of the studied have been done in technical training institutions which are higher than vocational training centres as per TVET categories of institution and therefore, this study intends to fill this gap.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter presents research methodology which was employed in this study under the following sub sections: research design, study area, target group, sampling procedures & sample size, data collection methods, validity, reliability, data analysis techniques and ethical considerations.

#### **3.2 Research Design**

Blumberg *et al* (2008) described a research design as a plan, structure and strategy of investigation to obtain answers to research hypothesis and control variance. The study adopted descriptive survey research design. Orodho (2003) stated that the descriptive study is a method which enables a researcher to collect data from the sample of individuals by administering questionnaires and or interviews in order to determine the current status of the population with regard to one or more variables. In addition, descriptive survey determines and reports the way things are (Gall & Borg, 2007). The researcher was interested in the vocational skills acquired by trainees in public vocational training centres (VTCs) and how it was influenced by institutional factors. The questionnaires enabled the researcher to establish effect of the independent variable on the dependent variable. Survey research design settled on, because the study sought to obtain information that described the participants' views about institutional factors influencing acquisition of vocational skills by trainees in public VTCs in Kakamega County.

### 3.3 Study Area

The study was carried out in public VTCs in Kakamega County. The public VTCs in Kakamega County was purposely selected as unit of study because VTCs are devolved functions (Kenya constitution 2010) and It was first county to come up with education task force report in 2014. The researcher noted that the said report was very informative but had scanty information pertaining VTCs. This made it necessary to carry out a study in the area to establish how institutional factors influence trainees' acquisition of vocational skills in public VTCs in the county. Kakamega County is in former Western province and borders Bungoma County to the north, Nandi County to the East, Vihiga County to the South and Siaya County to the West.

### 3.4 Study Population

The population of the study consisted of sixty (60) public VTCs with a total of 1740 respondents; (60) public VTCs principals, 1200 second year finalist VTCs trainees and 480 instructors. According to statistics obtained from Director Vocational Training Centres Office - Kakamega County for the year 2017. Finalist trainees were used in the study because they had better experience compared to first year students.

Therefore, the target population would be summarized as indicated;

*Table 1: Distribution of Target Population*

<b>Category of Respondents</b>	<b>Target population</b>	<b>Percentage</b>
Principals	60	100%
Instructors	480	100%
Second Finalist Trainees	1200	100%
<b>Total</b>	<b>1740</b>	<b>100%</b>

**Source: Director Vocational Training Centres Office, 2018- Kakamega County**

The trainees and instructors were included as primary or consumer respondents, While the public VTCs principals were included as informed respondents. Otieno (2005), opined the importance of two categories of respondents. This is based on fact that consumers or primary respondents know the needs and dissatisfaction that point to the difficulties or opportunities in using a service or good. On the other hand, informed respondents have vast theoretical knowledge and practical experience to draw upon.

### **3.5 Sampling Procedure and Sample Size**

#### ***3.5.1 Sampling Procedures***

Stratified random sampling was used to sample vocational training centres (VTCs) and simple random sampling was used on trainees and instructors whereas purposive sampling was adopted in selecting the public VTCs principals. This was done after obtaining a list of all public VTCs operating within Kakamega County from the Office of the director VTCs, Kakamega County.

The study used 30 % to sample VTCs, VTCs principals and instructors. Mugenda and Mugenda (2003) noted that a sample of between 10 and 30 percent is adequate for a population of below 1000. Ten percent (10 %) was used to sample the students since the population was large (Kombo, 2006). The public VTCs principals were purposely selected since they have core responsibility on public VTCs management function. According to Kombo and Tromp (2006), a researcher is consciously allowed to include a people he/she believes to be reliable for the study.

### 3.5.2 Sample Size

Sampling is a process of selecting a number of individuals or objects from a population such that the selected group contains elements representative of the characteristics found in the entire group (Orodho and Kombo, 2002). A sample size of 282 respondents was selected for this study as indicated:

**Table 2: Sample Size for Participants**

<b>Category of Respondents</b>	<b>Target population</b>	<b>Sample size</b>	<b>Percentage</b>
Principals	60	18	30%
Instructors	480	144	30%
Second year Trainees	1200	120	10%
<b>Total</b>	<b>1740</b>	<b>282</b>	<b>16%</b>

The data indicates 16% representation. This was considered appropriate as affirmed by (Kothari, 2002; Cooper and Schindler, 2003) who opined that the sample of at least 10% of the target population was representative.

### 3.6 Data Collection Methods

The study was conducted with aid of primary data from second year trainees, principals and instructors in Kakamega County. The data from second year trainees, instructors and county polytechnic principals was collected using questionnaires. The use of questionnaires was adopted because they were affordable to administer, in a short time, to respondents' who were sparsely spread in Kakamega County.

### ***3.6.1 Questionnaires***

The questionnaires assisted the researcher to obtain quantitative data. Self-administered questionnaires were filled by second finalist trainees, instructors and county polytechnic principals. The questionnaires were used to save on time and to ensure that no interviewer bias (Kombo and Tromp, 2006). There were three different sets of questionnaires for finalist trainees, instructors and county polytechnic principals. The questionnaires were organized according to the research objectives. Questions were prepared in the form of a five-point rating scale (*Likert scale*) to allow the respondents to give their opinion and suggestion, apart from demographic information and the open-ended questions. Questionnaire was found appropriate for this study because it was relatively cheap and faster to collect data from Kakamega County where respondents were sparsely spread (Smith, 2012). The subsequent discussion provides a detailed description of the questionnaires.

#### ***3.6.1.1 Principals' Questionnaire***

Principals questionnaire had five parts. Part A dealt with demographic information about the Principals and VTC. Part B interrogated the instructors' capacity. Part C sought information on availability and adequacy financial resource/financial position of VTCs influencing acquisition of vocational skills Part D sought to adequacy of training facilities that influence acquisition of vocational skills. Part E sought information on instructional strategies influencing acquisition of vocational skills, Part F sought information on trainees' acquisition of vocational skills and suggestions in which training in VTCs can be improved.

#### ***3.6.1.2 Instructors' Questionnaire***

The instructors' questionnaire was divided into five parts. Part A dealt with demographic information pertaining the instructors. Part B interrogated the instructors' capacity. Part C

sought to adequacy of training facilities that influence acquisition of vocational skills. Part D sought information on instructional strategies influencing acquisition of vocational skills, Part E sought information on trainees' acquisition of vocational skills and suggestions in which training in VTCs can be improved.

### ***3.6.1.3 Trainees' Questionnaire***

Trainees' questionnaire had four parts. Part A sought for trainee's demographic information. Part B sought for information on the adequacy of training facilities in VTCs. Part C sought information on instructional strategies influencing acquisition of vocational skills. Part D sought information on trainees' acquisition of vocational skills and suggestions in which training in VTCs can be improved.

## **3.7 Validity of Research Instrument**

Validity refers to the extent to which instruments measure what they are intended to measure (Osen and Onen 2009). Therefore, the research instruments were developed under guidance of my supervisors in Education, Planning and Management Department at Masinde Muliro University of Science and Technology. The supervisors reviewed and analyzed the contents of the questionnaires in order to improve content validity of the instrument. The researcher then incorporated all suggestions and recommendations.

## **3.8 Reliability of Instruments**

Reliability refers to the degree of consistency of results after repeated trials (Mugenda and Mugenda, 2003). The test items were administered to the same persons after one week to test stability of instrument over time, (Kasomo, 2015). Therefore, reliability was determined by a test-retest technique where by the researcher administered pilot questionnaires twice in two

separate occasion in public county polytechnics which were not among the sampled county polytechnics. The data which was collected through piloting was tested using Cronbach Alpha and had an internal consistency reliability coefficient of 0.715. A score of above 0.7 was deemed to mean that the instrument was reliable since Mohsen Tavakol & Reg Dennick (2011) stated that any score between 0.7 and 0.9 is acceptable.

### **3.9 Procedure for Data Collection**

The researcher obtained authorization letter at Masinde Muliro University of Science and Technology (MMUST) to proceed to data collection. After clearing with the university, the researcher obtained a research permit from National Commission for Science, Technology and Innovation, that allowed her to proceed with data collection in Kakamega County. Then researcher then presented introduction letter to Director VTCs – Kakamega County who then granted permission for research to be conducted in the public VTCs in Kakamega County.

The researcher, then contacted principals of the sampled public VTCs and agreed on schedule especially on dates of visiting each public VTC. Before administering the questionnaire on the agreed dates, the researcher explained the purpose of the study to the principals, instructors and second finalist trainees who had been sampled and invited them to fill the questionnaires which were self-administered. The instruments were collected by the researcher on the same date of administering them.

### **3.10 Data Analysis**

According to Kombo & Tromp, (2009), data analysis refers to examining data collected in a research and making deductions and inferences. The study obtained descriptive data which was analyzed quantitatively specifically by use of frequency distribution, percentages and chi

square. Chi square was found appropriate for the study since the data obtained was ordinal in nature. Data analysis was based on the research hypothesis of the study.

**Table 3: Summary of Data Analysis per Objective**

<b>A. Independent Variables</b>					
<b>Research objective</b>	<b>Variables</b>	<b>Measurement scale</b>	<b>Data collection technique</b>	<b>Nature of analysis</b>	<b>Analysis technique</b>
To establish the influence of instructors' capacity on acquisition of vocational skills by trainees in public vocational centres in Kakamega county	Instructors' capacity;	ordinal	questionnaire	descriptive	Percentages Frequencies chi-square
To ascertain the influence of availability of financial resources on acquisition of vocational skills by trainees in public vocational centres in Kakamega county	Availability of financial resources	ordinal	questionnaire	descriptive	Percentages Frequencies chi-square
To establish the influence of training facilities on acquisition of vocational skills by trainees in public vocational centres in Kakamega county	training facilities	ordinal	questionnaire	Descriptive and inferential	Percentages Frequencies chi-square
To examine the influence of instructional strategies on acquisition of vocational skills by trainees in public vocational centres in Kakamega county	instructional strategies	ordinal	questionnaire	descriptive and inferential	Percentages Frequencies chi-square
<b>DEPENDENT Variables</b>		<b>Measurement scale</b>	<b>Data collection technique</b>	<b>Nature of analysis</b>	<b>Analysis technique</b>
acquisition of vocational skills		ordinal	Questionnaire	Descriptive and inferential	Percentages Frequencies chi-square

### **3.11 Ethical and Legal Consideration**

Before proceeding to data collection, a permit was obtained from National Commission of Science, Technology and Innovation and introductory letter from MMUST. Then copies of the permit and letter were presented to the authorities where research was carried out. A letter of transmittal was also presented to the respondents.

Besides, respondents were briefed on the intended research and the researcher sought their consent before administering the instruments. For purposes of confidentiality of the participants, the respondents were not required to identify themselves on the data collection instruments. The respondents were requested to provide honest responses on voluntary basis. Every respondent was treated with respect and assured that the data to be collected was only to be used for the purpose of this research.

## CHAPTER FOUR

### DATA PRESENTATION, ANALYSIS AND DISCUSSION

#### 4.1 Introduction

This chapter presents the presentation, analysis and discussion of the findings of this study. The analysis was carried out with the guidance of the research objectives. The objectives of the study were; a) To establish the influence of instructors' capacity on acquisition of vocational skills by trainees in public vocational training centers in Kakamega County. b) To ascertain the influence of financial resources availability on acquisition of vocational skills by trainees in public vocational training centers in Kakamega County. c) To establish the influence of training facilities on acquisition of vocational skills by trainees in public vocational training centers in Kakamega County. d) To examine the influence of instructional strategies on acquisition of vocational skills by trainees in public vocational training centers in Kakamega County. The hypotheses of the study sought were: H<sub>01</sub> Instructors' capacity has no significant influence on acquisition of vocational skills by trainees in public vocational training centers in Kakamega County. H<sub>02</sub> Financial resources have no significant influence on acquisition of vocational skills by trainees in public vocational training centers in Kakamega County. H<sub>03</sub> Training facilities have no significant influence on acquisition of vocational skills by trainees in public vocational training centers in Kakamega County. H<sub>04</sub> Instructional strategies have no significant influence on acquisition of vocational skills by trainees in public vocational training centers in Kakamega County.

In this chapter, the research findings were presented in three sections. The first section dealt with the questionnaire return and observation rate. The second section presented the

background information of the respondents while the third section dealt with the research findings, presentations and interpretations. The study was of descriptive survey nature and data was therefore largely analyzed using percentages and chi square then presented using descriptive methods, that is, pie charts, bar graphs and tables.

#### **4.2 Response Rate**

All the respondents who were given questionnaires returned them promptly. However not all questionnaires distributed were fully completed. Questionnaires that were half answered the researcher treated them as not responded to were therefore discarded and not used in data analysis. A sizable number of the respondents targeted gave their responses to the research instruments and the returned fully filled questionnaires were rated as indicated in table 5:

***Table 4: Instrument Response Rate***

<b>Respondent questionnaire</b>	<b>Sample</b>	<b>Actual response</b>	<b>Percentage</b>
Second year trainees	120	93	78%
Instructors	144	105	72%
County polytechnic principals	18	18	100%
<b>Total</b>	<b>282</b>	<b>216</b>	<b>77%</b>

**Source: Field data (2018)**

According to Table 4.1, the average response rate 216(77%). This response rate was considered sufficient to provide credible responses, since according to Mugenda and Mugenda (2003) a response rate above 50.0% can adequately be used in establishing the research objectives and answering research hypothesis.

### 4.3 Demographic information of Respondents

Data was collected on respondents in terms of age, gender, academic qualifications of principals and instructors. At the same time, it assessed category and status with regards to the vocational training centres. The responses from respondents are presented below.

#### 4.3.1 Gender of all Respondents

The study sought to find out the gender of the respondents. This information was important for the study since gender has been established to influence acquisition of vocational skills in certain vocational courses (Kigwilu, 2014). The respondents were asked to state their gender whose results were as indicated in Table 6.

**Table 5: Gender of all Respondents**

	Principals		Instructors		Second trainees		year
	Frequency	%	Frequency	%	Frequency	%	
Male	11	61.1	52	50	55	59.1	
Female	7	38.9	53	51	38	40.9	
<b>Total</b>	<b>18</b>	<b>100</b>	<b>105</b>	<b>100</b>	<b>93</b>	<b>100</b>	

**Source: Field data (2018)**

Table 6 shows that majority of the students (59.1 %) were male and the rest (40.9 %) were female. The above table also illustrate that (49.5 %) of instructors were male while female tutors were only (50.5%). Another indication on the table is that the heads of the institutions were mostly men since 61.1 percent were male heads with the female ones being only (38.9%). Therefore, the table clearly shows that number of male vocational institutional heads is almost double that of female gender.

#### 4.3.2 Age of the Respondents

The research evaluated the age of the various respondents and the findings were as presented below:

**Table 6: Age Bracket of Respondents**

	<b>Principal</b>		<b>Instructors</b>		<b>Second year trainees</b>	
	Frequency	%	Frequency	%	Frequency	%
< 15	0	0	0	0	10	10.8
16-25	0	0	9	8.6	76	81.7
26- 35	7	38.9	19	18.1	7	7.5
36- 45	7	38.9	44	41.9	0	0
46-55	4	22.2	23	21.9	0	0
>56	0	0	10	9.5	0	0
<b>Total</b>	<b>18</b>	<b>100</b>	<b>105</b>	<b>100</b>	<b>93</b>	<b>100</b>

From Table, (10.8 %) of the students were below 15 years. Those aged 16-25 years were (81.7 %) and 26-35 years were (7.5%) and none were above age 36 years. This implies most of students were young adults who were ready to acquire vocational skills to empower themselves.

Only 9(8.6 %) of the instructors were below 25 years, 18.1% were 26-35, 41.9% were between 36-45, and 21.9% between 46-55years and 5.9 % were above 56 years. This implies that on average, the instructors were at various career growth stages hence likely to bring on board their new and existing knowledge & experiences to create versatile instructing force for high acquisition of vocational skills (Kagwilu,2014).

None of county principals was either above 56 years or below 25years of age. Majority ranged from age 26 years to 55 years with 38.9 percent in the age bracket of 26-35 years; and other 38.9 percent in the bracket of 36- 45 years while only 22.2 percent were in the age bracket of 46-55 years. This shows that majority of the vocational training centres heads

were above 26 years were likely to make informed decisions pertaining institutional factors that influence acquisition of vocational skills

#### **4.3. 3 Courses Taken by Trainees**

There are several courses offered in VTCs as indicated in table 8, below.

**Table 7: Courses Taken by Trainees**

	<b>Frequency</b>	<b>Percent</b>
Appropriate carpentry & Joinery	6	6.5
Agribusiness	1	1.1
Building Construction Technology	13	14
Fashion Design & Garment Making	18	19.4
Hair Dressing & Beauty Therapy	10	10.8
Motor Vehicle Technology	9	9.7
Electrical & Electronics	15	16.1
Information Communication Technology	9	9.7
Metal Processing Technology	5	5.4
Food Processing	7	7.5
<b>Total</b>	<b>93</b>	<b>100</b>

**Source: Field Data, 2018**

From the above table 8, the courses undertaken by trainees in VTCs included fashion design & garment making, carpentry & joinery, Electrical and electronics, building technology, food processing, information communication technology, hair dressing & beauty therapy, metal processing, Agribusiness and motor vehicle technology. The table further shows that agribusiness is the least enrolled course.

#### 4.3.4: Enrolment in Trade Areas/Course

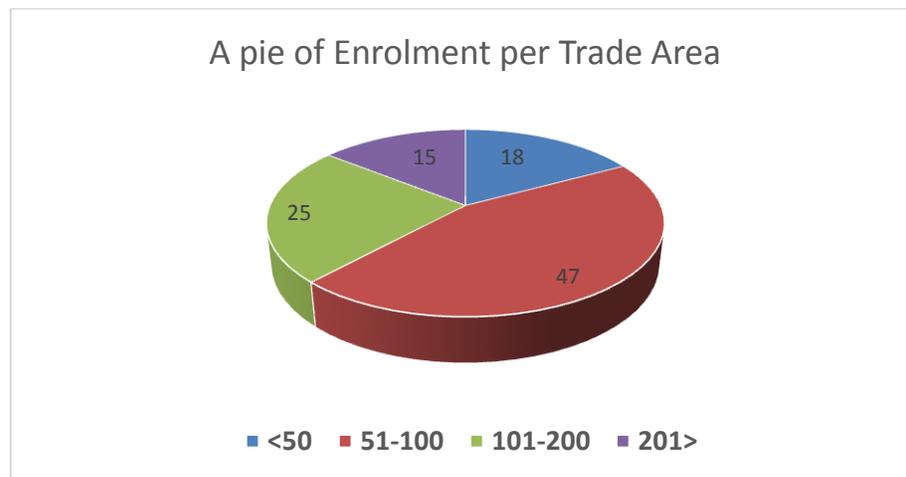
A comparison of trades undertaken and age brackets of trainees is captured in table 9.

**Table 8: Enrolment in Trade Areas/ Courses**

	Frequency	Percent
<50	18	17.1
51-100	47	44.8
101-200	25	23.8
201>	15	14.3
<b>Total</b>	<b>105</b>	<b>100</b>

**Source: Field Data, 2018**

According to the table 9, majority of instructors (44.8%) had class sizes of between 51-100 trainees while the lowest trade area had 14.3%. This implies high instructor –trainee ratio given that the standard instructor- trainee ratio is 1:20. The findings contradicts Chelimo (2005) who noted that low teacher /pupil ratio greatly give individual attention to the pupil and there is increased interaction. This information is simplified in the pie chart below;



**Figure 2: Enrolment per Trade Area**

#### 4.3.5. Location of the Vocational Training Centre

The VTCs physical location within Kakamega County is as indicated in Table 10 below.

**Table 9: Location of the Vocational Training Centres**

	<b>Frequency</b>	<b>Percent</b>
Urban	2	11.1
Rural	16	88.9
<b>Total</b>	<b>18</b>	<b>100</b>

**Source: Field Data, 2018**

According to table 10 above, 88.9% of VTCs were located in rural areas while 11.1% were located in urban areas.

#### 4.3.6 Status of Vocational Training Centres

The VTCs were categorized as either centre of excellence or others as indicated in table 11.

**Table 10: Status of Vocational Training Centres**

	<b>Frequency</b>	<b>Percent</b>
Centre of Excellence	4	22.2
Others	14	77.8
<b>Total</b>	<b>18</b>	<b>100</b>

**Source: Field Data, 2018**

From the table 11 above, 14(77.8%) of VTCs are not centres of excellency while 4(22.2%) are centres of excellence.

#### 4.3.7 Type of Vocational Training Centres

**Table 11: Type of Vocational Centre**

	<b>Frequency</b>	<b>Percent</b>
Day	16	88.9
Valid Boarding	2	11.1
<b>Total</b>	<b>18</b>	<b>100</b>

**Source: Field Data, 2018**

As depicted by table 12 above, 88.9% of VTCs are day institutions while 11.1% are boarding institutions. This can be attributed probably due to availability of infrastructure

#### ***4.3.8 Highest Academic Qualification of Instructors and Principals***

The instructors and principal were required to indicate their highest academic qualification they had acquired. The academic qualifications were classified as, masters, degree, diploma, certificate and any other qualifications. The results were presented in Table 13 and Table 14.

***Table 12: Principals Academic Qualifications***

	<b>Frequency</b>	<b>Percent</b>
Bachelors	2	11.1
Higher Diploma	3	16.7
Diploma	11	61.1
Cert	2	11.1
<b>Total</b>	<b>18</b>	<b>100</b>

**Source: Field Data, 2018**

From the table 13, none of the principals had academic qualification of Masters degree. Majority of principals (61.1 %) had diploma, 16.1 % higher diploma, 11.11 % Degree and 11.11 % had Certificate. This implies that since principals also impart skills to trainees, majority had high qualifications. The findings were contrary to those of Moturi, Onderi and Mwebi (2015). Teaching staff in vocational training centres had low qualifications.

**Table 13: Instructors Academic Qualification**

	<b>Frequency</b>	<b>Percent</b>
Masters	1	1
Bachelors	5	4.8
Higher Diploma	1	1
Diploma	64	61
Certificate	31	29.5
Others	3	2.9
<b>Total</b>	<b>105</b>	<b>100</b>

**Source: Field Data, 2018**

As depicted in table 14, except thirty-four (34) - 33.4% of instructors, the other instructors had qualification of Diploma and above. 29.5% of instructors had certificates, 61.0 % had diploma, 1.0% higher diploma and 4.8% had degree and 1.0% had masters. This implies the instructors were academically qualified. The findings did not agree with those of Kamau (2013) that noted instructors in youth polytechnics (vocational training centres) were not trained.

#### **4.4 Influence of Instructors' Capacity on Acquisition of Vocational Skills**

The first objective of the study sought to find out the influence of instructors' capacity on acquisition of vocational skills. Thus the researcher evaluated instructors' adequacy in a trade area, attendance to in-service courses, frequency of transfers, possession of professional training, refresher industrial attachment, work experience, pedagogical knowledge and possession of computer skills. The responses were as shown on the table 15.

**Table 14: Instructors' Response on Instructors Capacity**

Statements	SA	A	N	D	SD
	f (%)	f(%)	f(%)	f(%)	f(%)
The instructors are adequate in your trade area	3(2.85%)	14(13.3%)	10(9.5%)	51(48.6%)	27(25.7%)
All instructors have attended in- service course	5(4.8%)	4(3.8%)	15(14.3%)	40(38.1%)	41(39.0%)
All instructors have attended a professional training	38(36.2)	25(23.8)	5(4.8%)	30(28.5)	7(6.7%)
Instructors usually go for industrial attachment to be abreast with new technologies	3(25.7%)	8(7.6%)	21(20.0%)	25(23.8%)	48(45.7%)
All instructors have adequate work experience	7(6.7%)	38(36.2)	20(19.0%)	30(28.6%)	10(9.5)
Instructors have pedagogical knowledge	7(6.7%)	24(22.9%)	31(29.5%)	34(32.4%)	9(8.6)
Instructors have ICT skills	5(4.8%)	30(28.6%)	20(19.0%)	27(25.7%)	23(21.9)

**Source: Field Data, 2018**

From the table 15 above, on adequacy of instructors in their trade areas, 25.7% of instructors strongly disagreed, 9.5% remained neutral and only a paltry of 2.9% strongly agreed. By reducing the Likert scale response to Yes, No and Neutral, a total of 78(74.3%) instructors disagreed as compared to 17(16.2%) who agreed with only 10(9.5%) remaining undecided.

In terms of in-service training, 77.1% disagreed 14.3% were neutral and 8.6 agreed that they had attended in-service. Pertaining transfer of instructors, 52.4% disagreed, 16.2% were undecided and 31.4% agreed. On instructors having professional training, 50.5% instructors disagreed, 19.1% were undecided and 30.5% agreed. Concerning instructors attending industrial attachment, 69.53% instructors disagreed, 20% were undecided and 10.5% agreed they attended industrial attachment. On work experience, 42.9% agreed, 19.1% were

undecided and 35.2% disagreed they had enough experience. In terms of pedagogical skills, 41.0% disagreed, 29.5% were neutral and 29.5% agreed. Lastly, on possession of ICT skills, 47.6. % disagreed, 20 % were undecided and 19.4% agreed.

**Table 15: Principals' Response on Instructors' Capacity**

	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>
	<b>f</b>	<b>F</b>	<b>F</b>	<b>F</b>	<b>F</b>
The instructors are adequate in your VTC	2	2	2	9	3
All instructors in your VTC have attended in- service course	1	2	0	4	11
All instructors in your VTC have attended a professional training	3	6	1	4	4
Instructors in your VTC usually go for industrial attachment to be abreast with new technologies	2	1	1	5	9
All instructors in your VTC have adequate work experience	2	4	3	9	0
All Instructors in your VTC have pedagogical knowledge	1	4	3	9	1
All instructors in your VTC have ICT or computer skills	1	5	2	7	3

**Source: Field Data, 2018**

By converging the Likert scale responses of agree and strongly agree to Yes and, disagreed and strongly disagreed to No then leaving neutral as is; we would have a summary of the responses as captured in table 17 below.

**Table 16: Principals Response on Instructors Capacity by Yes, No and Undecided**

	<b>Yes</b>	<b>Undecided</b>	<b>No</b>
The instructors are adequate in your VTC	4(22.20%)	2(11.10%)	12(66.70%)
All instructors in your VTC have attended in- service course	3(16.70%)	0(0.00%)	15(83.30%)
The instructors do not transfer from this institution often	11(61.10%)	0(0.00%)	7(38.90%)
All instructors in your VTC have attended a professional training	9(50.00%)	1(5.60%)	8(44.40%)
Instructors in your VTC usually go for industrial attachment to be abreast with new technologies	3(16.70%)	1(5.60%)	14(77.80%)
All instructors in your VTC have adequate work experience	9(50.00%)	3(16.70%)	6(33.30%)
All Instructors in your VTC have pedagogical knowledge	5(27.80%)	3(16.70%)	10(55.60%)
All instructors in your VTC have ICT skills	6(33.30%)	2(11.10%)	10(55.60%)

**Source: Field Data, 2018**

From this converged table17, 22.2% of county principals agreed that instructors were adequate, 11.1% were undecided and 66.7% disagreed. On whether the instructors have attended in-service, 16.7% of county principals were in agreement, 0.0% undecided and 83.0% were not in agreement.

Pertaining transfers of instructors, 61.1% of principals were in agreement that instructors do not transfer, 0.0% were undecided and 38.9% were not in agreement that instructors do not transfer. On possession of professional training, 50.0% of county principals responded that instructors have professional qualification, 2.6% were neutral and 44.4% responded that instructors did not have professional qualification. 16.7% were in agreement that instructors usually attend industrial attachment, 2.6% were undecided while 83.33% were in disagreement.

In terms of work experience, 50.0 % agreed that instructors had work experience, 16.7% were undecided and 33.3% disagreed. Also 27.8% principals were in agreement that instructors have pedagogical knowledge, 16.67% were neutral and 55.56% disagreed. Lastly 33.33% agreed that instructors had ICT skills, 11.11% were undecided and 55.56% disagreed.

Most of principals and instructors disagreed that instructors were inadequate in VTCs. This inadequacy was also confirmed by high trainee-instructor ratio as illustrate in table 9. This was in agreement with Mbugua *et al.* (2012), Mayabi (2014), Njoki (2014) and Chelimo (2005) findings that in Kenya most TVETs operate with inadequate teaching staff which compromises the quality of teaching and learning hence poor acquisition of skills by learners. Moreover, majority of principals and instructors disagreed that instructors have attended in-service. This concurred with Bourgonje and Tramp (2011), Khatete (2010) findings which revealed that teachers in Vocational Education and Training (VET) institutions rarely go for in-service trainings to enable them to improve on instructional and professional knowledge, skills and interest. On the other hand, most of principals agreed that instructors had professional qualifications: this was opposite to Kamau (2013), findings which revealed that, majority of instructors in the public vocational institutions under study were inadequately trained or not trained in technical trades.

On industrial attachment, both principals and instructors disagreed that instructors have attended industrial attachment. The finding is in conformity with Nyerere (2009) and Karemu & Gongera (2014) which revealed that teachers in VET institutions lack necessary industry-based technological skills and newest technology updated through industrial attachment. Also most of principals and instructors disagreed that instructors had pedagogical knowledge

and adequate work experience. This finding was similar to that of Githinji and Kigwilu (2015) which revealed that teacher pedagogical skills and teaching experience have a high influence on the implementation of Artisan and Craft curriculum. Lastly majority of instructors and principals agreed that most of instructors have no ICT skills. This finding contradicted The Kenya Vision 2030 which proposes intensified application of science technology and information to raise productivity and efficiency (GoK, 2007).

### Testing of the Hypothesis

**H<sub>01</sub>:** Instructors’ capacity has no significant influence on acquisition of vocational skills by trainees in public vocational training centers in Kakamega County.

A chi-square test was carried out to find out whether or not financial resources have influence on trainees’ acquisition of vocational skills at significant level of 0.05 as shown in table 18.

**Table 17: testing hypothesis on influence of instructors’ capacity on trainees’ acquisition of vocational skills in public vocational centres**

<b>Chi-Square Tests</b>			
	Value	df	Asymp. Sig. (2-sided)
Chi-Square	30.792 <sup>a</sup>	34	0.626
Likelihood Ratio	36.953	34	0.334
Linear-by-Linear Association	0.229	1	0.632
N of Valid Cases	105		

**Source: Field Data, 2018**

A chi square was conducted to establish the influence of instructors’ capacity on trainees’ acquisition of vocational skills. The results showed;  $X^2(34, N=105) = 30.79, P=0.626$ . Therefore, the hypothesis that instructors’ capacity has no significant influence on acquisition of vocational skills by trainees in public vocational training centers in Kakamega County

failed to be rejected since P-value (0.626) was greater than 0.05 alpha level associated with 95% confidence level. This implied that there was weak evidence to accept the hypothesis that instructors' capacity has influence on trainee acquisition of vocational skills in public vocational training centres in Kakamega County. This study concurred with Mayabi (2014) who confirmed that government has recruited qualified instructors but were inadequate in the VTCs.

#### **4.5 Influence of Financial Resources on Acquisition of Vocational Skills**

The second objective of the study sought to find out the influence of financial resources on acquisition of vocational skills. To analyze the influence of financial resources on acquisition of vocational skills, the researcher evaluated adequacy of finances for training trainees, payment of levies by parents to pay staff salaries, financial assistance from VTCs sponsors for tools and equipment, availability of bursaries from ward fund to purchase of furniture, grants from donors for construction of workshops and classrooms, availability of Income Generating Activities to generate income for the VTC and lastly Government tuition subsidy for procuring instructional materials. The responses were as illustrated on the table 18.

**Table 18: Principals’ Responses on Influence of Financial Resources on Acquisition of Vocational Skills**

<b>Items</b>	<b>SA f</b>	<b>A f</b>	<b>N F</b>	<b>D F</b>	<b>SD F</b>
The VTC has adequate financial resources to offer quality training	0 (0%)	1 (5.6%)	7 (38.9%)	5 (27.8%)	5 (27.8%)
There VTC has viable income generating activities to more practical work	1 (5.6%)	1 (5.6%)	0 (0%)	10 (55.6%)	6 (33.3%)
The parents pay extra levies in time	1 (5.6%)	1 (5.6%)	1 (5.6%)	9 (50%)	6 (33.3%)
The VTC receives government tuition subsidy consistently to procure instructional materials	1 (5.6%)	3 (16.7%)	2 (11.1%)	5 (27.8%)	7 (38.9%)
The VTC receives bursaries from ward fund	1 (5.6%)	2 (11.1%)	3 (16.7%)	11 (61.1%)	1 (5.6%)
VTC sponsors provide financial assistance for tools and Equipment	1 (5.6%)	3 (16.7%)	3 (16.7%)	7 (38.9%)	4 (22.2%)
The VTC receives grants from development partners for construction of standard infrastructure	1 (5.6%)	2 (11.1%)	2 (11.1%)	9 (50%)	4 (22.2%)
VTC’s financial resources influences trainees acquisition of vocational skills	8 (44.4%)	8 (44.4%)	1 (5.6%)	1 (5.6%)	0 (0%)

**N=18**

**Source: Field Data, 2018**

The findings of the study revealed 27.8% of the principals strongly disagreed that VTCs have adequate financial resources, 38.9% were neutral and only 5.6% were of the view that VTC

is well funded. On availability of viable VTC's income generating activities, majority of principals (55.6%) disagreed, none was neutral and 11.1% agreed. The findings concur with Njihia (2005), Mwiria et al. (2007) & Ibrahim (2012), who pointed out that institutions especially youth polytechnics should look for viable alternative sources of finances by mobilizing new sources of funds to be financiers of their training programs such as provision of teaching and learning facilities and supplementing lecturers' salaries among others.

In terms of parents' timely payment of extra levies, majority of respondents (50.0%) disagreed, 5.6% were undecided and 5.6% were in agreement. The findings depict that fee payment may not be the main source of finance in VTCs. This finding disagreed with Nishimura and Orodho (2002) that the main source of finance is from tuition fees paid by the trainees.

On whether the VTCs, received government subsidy consistently, majority (38.9%) strongly disagreed, 11.1% were neutral and 16.7% agreed. The findings of the study were in agreement with Ngome (2003) who posited that since independence, TVET subsector has generated little attention and budget provision in Kenya resulting in poor infrastructure and facilities and a low status overall.

In terms of funding from bursaries from ward fund, 11(61.1%) of the principals disagreed that the VTCs receive funds from ward fund, 2 (11.1%) agreed.

On VTCs' financial assistance from sponsors' majority of principals (38.9%) disagreed, 16.7% agreed and 16.7% were undecided. This implied that VTCs' sponsors gave very little financial support.

In terms of VTCs benefiting from grants from development partners, majority of principals (50.0%) disagreed, 11.1% agreed with 11.1% being neutral. Lastly majority of principals (44.4%) strongly agreed that financial resources influences trainees’ acquisition of vocational skills.

**Testing of the Hypothesis**

This particular objective was meant to test if financial resources have any influence on trainees’ vocational skills acquisition.

**H<sub>02</sub>:** Financial resources have no significant influence on acquisition of vocational skills by trainees in public vocational training centers in Kakamega County.

A chi-square test was conducted to determine the influence of financial resources on acquisition of financial resources on trainees’ acquisition of vocational skills at significant level of 0.05.

**Table 20: Testing hypothesis on influence of financial resources on trainees’ acquisition of vocational skills**

<b>Chi-Square Tests</b>			
	Value	df	Asymp. Sig. (2-sided)
Chi-Square	32.308a	18	0.020
Likelihood Ratio	25.228	18	0.119
Linear-by-Linear Association	8.459	1	0.004
N of Valid Cases	18		

The results showed  $\chi^2(18, N=18) = 32.31, P=0.02$ . Therefore, the hypothesis that financial resources have no significant influence on acquisition of vocational skills by trainees in public vocational training centers in Kakamega County was rejected. This was as a result of *P*-value (0.02) being greater than 0.05 alpha level associated with 95% confidence level. This implied that financial resources influence trainees acquisition of vocational skills by

trainees in public vocational training centers in Kakamega County. The findings of the study indicate that most of principals agreed there was inadequate financial resources in VTCs for training. The findings were in agreement with Otieno (2009) and Njihia (2005) findings that under funding of educational programs in the technical training institutions has greatly jeopardized their capacity to offer quality training thereby eroding their external efficiency in the job market because the quality of graduates is compromised.

The study also established that fees payment by parents was poor, Government subsidy was inconsistent, funding from bursaries was very little, financial support from VTCs sponsors and grants from Developing Partners was almost lacking. The findings depict that generally the financial resources in VTCs are inadequate, which implies that the VTCs may not be able to acquire adequate instructors, training facilities which are some of indicators of quality training. The findings of the study concurred with Hicks, Kremer, Mbiti & Miguel (2011) that inadequate finance investment in instructional training facilities could hinder learning outcomes among students as they could have fewer opportunities to practice with tools and machines.

Further, the principals were asked to give effects of inadequate financial resources in VTCs and their responses were as indicated in the table 21.

***Table 21: Effects of Insufficient Financial Resources in Vocational Training Centres***

<b>Effect of Insufficient Fund Response</b>	<b>Frequency (f)</b>	<b>Percentage (%)</b>
Unable to improve infrastructure	14	78
Demoralized leaners drop out	18	100
Negatively affects motivation of instructors	16	89
Unable to procure modern tools and equipment	18	100
Unable to engage in co-curricular activities	9	50
Unable to repair/maintain machines	18	100

Inadequate training materials	17	94
Ineffective learning	18	100
Lack of fair remuneration of BOM staff	10	56
Optimum training is not attained	18	100

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**N=18**

**Source: Field Data, 2018 (Principals' Questionnaire)**

From table21, it emerges that inadequate funds impact negatively on provision of quality training in VTCs in Kakamega County. In addition, the findings imply that majority of the VTCs are in dire need of extra funds to effectively conduct their training programmes. These findings are in line with Otieno (2009) findings that revealed that underfunding has led to poor service delivery, poor image and compromised training leading to technology shock of trainees in the labor market.

#### **4.6 Influence of Training Facilities on Acquisition of Vocational Skills**

The third objective of the study sought to find out the influence of training facilities on acquisition of vocational skills. To analyze the influence of training facilities on acquisition of vocational skills, the researcher evaluated VTCs' adequacy of training facilities, relevance of tools and equipment, availability of standard workshops and classrooms, provision of adequate and relevant instructional materials, availability of relevant source of power to the courses offered. Lastly on availability of up to date tools and Equipment. The responses were as illustrated on the table22:

**Table 19: Principals' Responses on Influence of VTCs' Training Facilities on Acquisition of Vocational Skills**

<b>Responses</b>	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>
The VTC has adequate tools & equipment	1 (5.6%)	1 (5.6%)	3 (16.7%)	5 (27.8%)	8(44.4%)
The VTC has relevant tools and equipment	2(11.1%)	1 (5.6%)	0 (0%)	7(38.9%)	8(44.4%)
The workshops in your field are available and suitable	0 (0%)	3 (16.7%)	3 (16.7%)	1 (5.6%)	11(61.1)
Adequate and relevant instructional materials are provided	3 (16.7%)	1 (5.6%)	5 (27.8%)	2 (11.1%)	7(38.9%)
The class rooms are suitable and adequate	5 (27.8%)	3 (16.7%)	4(22.2%)	4(22.2%)	2 (11.1%)
The VTC's source of power relevant to the courses offered	2 (11.1%)	2 (11.1%)	2 (11.1%)	6(33.3%)	6(33.3%)
The VTC's furniture is adequate and suitable	2 (11.1%)	3 (16.7%)	0 (0%)	7(38.9%)	6(33.3%)
The Tools and Equipment are adequate and up to date	1(5.6%)	3 (16.7%)	1 (5.6%)	5 (27.8%)	8 (44.4%)
Training facilities influence on trainees' acquisition of vocational skills	8(44.4%)	5(27.8%)	1(5.6%)	3(16.7%)	1(5.6%)

**Source: Field Data 2018**

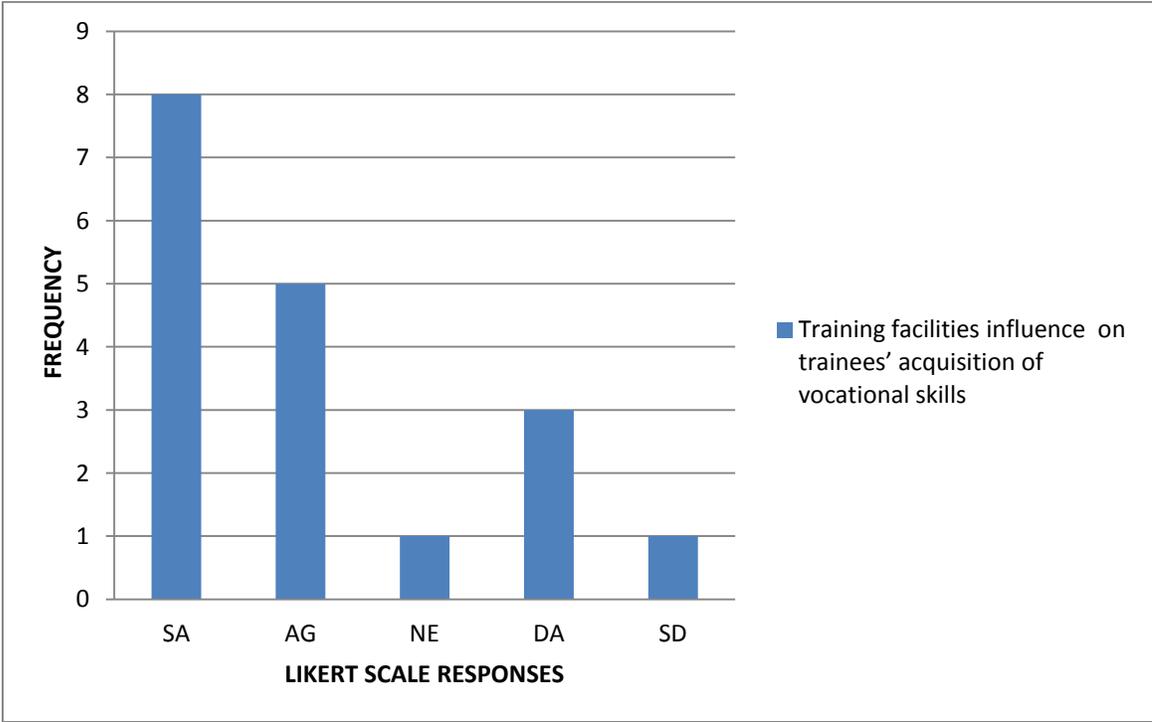
Majority of principals 44.4% strongly disagreed that VTCs have adequate training facilities, 5.6% agreed while 16.7% were neutral. On relevance of tools and equipment 44.4% of principals strongly disagreed, 5.6% agreed and none was undecided. The findings were in agreement with GoK, 2012; Nyerere, 2009 that revealed curriculum implementation with obsolete training equipment leads to poor training quality and acquisition of skills leading to mismatch of skills among graduates.

On availability and suitability of workshops and classrooms, 61.1% strongly disagreed while 16.7% agreed. Further, the findings revealed that on VTCs provision of relevant instructional materials, 38.9% of principals strongly disagreed while at the same time 16.7% strongly

agreed that VTCs have adequate instructional materials. This left 27.8% of principals undecided. On VTCs availability of relevant source of power, majority of principals 33.3% strongly agreed against 11.1% who disagreed. In terms of adequacy and suitability of furniture, majority of principals 33.3% strongly disagreed meaning suitable furniture stands as a challenge in VTCs. A number of principals 44.4% also strongly disagreed that tools and equipment were technologically up to date compared to those in industries while 5.6% strongly agreed.

Lastly most of principals 44.4% strongly agreed that training facilities influence acquisition of vocational skills as compared to 5.6% who strongly disagreed on the same. This relationship is clearly demonstrated in figure 5 as indicated below:

**Influence of Training facilities on acquisition of vocational skills**



**Figure 3: Bar Chart Showing Principals’ Response on Influence of Training Facilities on Trainees Skills Acquisition**

**Table 20: Instructors' Responses on Influence of VTCs' Training Facilities on Acquisition of Vocational Skills**

<b>Responses</b>	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>
The VTC has adequate tools & equipment	9(8.6%)	8(7.6%)	18(17.1%)	27(25.7%)	43(41%)
The VTC has relevant tools and equipment	13(12.4%)	6(5.7%)	20(19%)	25(23.8%)	41(39%)
The workshops in your field are available and suitable	13(12.4%)	8(7.6%)	24(22.9%)	16(15.2%)	44(41.9%)
Adequate and relevant instructional materials are provided	25(23.8%)	5(4.8%)	24(22.9%)	10(9.5%)	41(39%)
The VTC's source of power relevant to the courses offered	59(57.8%)	33(31.4%)	4(3.8%)	4(3.8%)	5(4.8%)
The VTC's furniture is adequate and suitable	10(9.8%)	8(7.6%)	9(8.5%)	21(20.0%)	57(54.2%)
The Tools and Equipment are adequate and up to date	16(15.2%)	5(4.8%)	9(8.6%)	46(43.8%)	29(27.6%)
Training facilities influence on trainees' acquisition of vocational skills	8(44.4%)	5(27.8%)	1(5.6%)	3(16.7%)	1(5.6%)

**Source: field data 2018**

The findings of the study revealed that majority of instructors 41.0% strongly disagreed that the VTCs have adequate training tools & Equipment, only 8.6% strongly agreed and 17.1% were neutral. Moreover, majority of instructors 39.0% strongly disagreed that the VTCs have relevant tools as compared with 12.4% who strongly agreed and 19.0% were neutral. On availability and suitability of workshops and classrooms, 41.9% of instructors strongly disagreed and 22.9% were indecisive. On the other hand, 12.4% of instructors were of view that there were suitable classrooms and workshops. When asked on adequacy of instructional materials, 39.0% strongly felt that there were inadequate instructional materials. However, 23.8% strongly agreed that instructional materials were adequate. This left 22.9% undecided on the matter. In terms of availability of relevant source of power supporting courses offered

in VTCs, the opinion tilted towards positive concurrence with 57.8% strongly agreeing with a minority of 4.8% strongly disagreeing. On adequacy of furniture 54.2% of instructors strongly disagreed, 8.5% were undecided and only 9.5% strongly felt that furniture was adequate in VTCs. Furthermore, the findings also revealed that 27.6% of instructors strongly disagreed with half of this number (15.2%) strongly agreeing on tools status. A small percentage (8.6%) could not make up their minds. Lastly most of instructors (24.8%) strongly agreed that training facilities influence trainees' acquisition of vocational skills, as depicted in table 23.

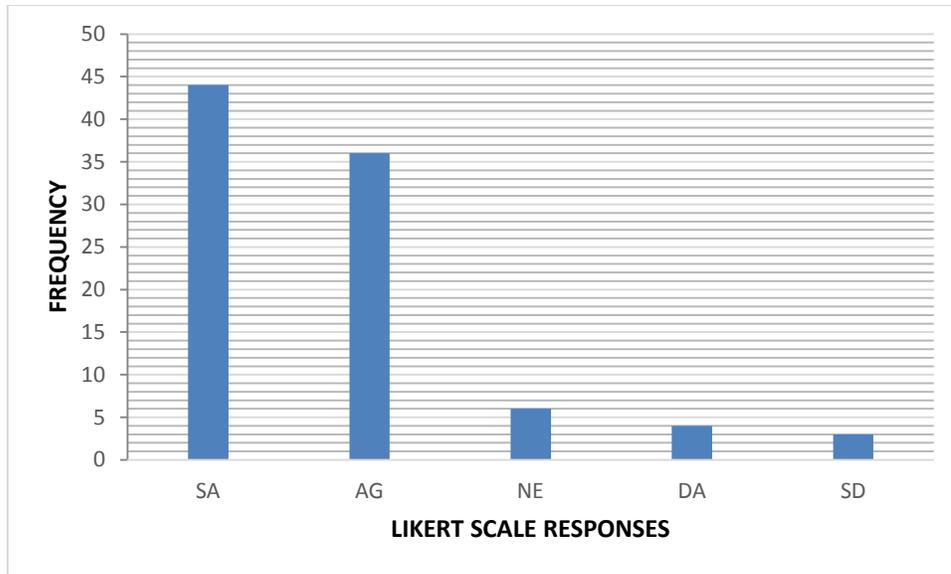
**Table 21: Trainees' Responses on Influence of VTCs' Training Facilities on Acquisition of Vocational Skills**

<b>Responses</b>	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>
The VTC has adequate tools & Equipment	10.80%	14(15.1%)	21(22.6%)	26(38.7%)	22(19.3%)
The VTC has relevant and up to date tools and equipment	3(3.2%)	5(5.3%)	5(5.3%)	3(32.3%)	50(53.8%)
The workshops in your field are available and suitable	8(16.8%)	(8.6%)	14(15.1%)	25(26.7%)	8 28(30.1%)
Instructional materials are adequate for practicals	14(43%)	17(18.3%)	17(18.3%)	30(47.5%)	15(13.6%)
The class rooms are suitable and adequate	9(8.4%)	23(24.7%)	14(15.1%)	30(0%)	17(18.3%)
There is reliable source of power/electricity	40(43%)	24(25.8%)	10(10.8%)	14(17.7%)	5(4.9%)
The VTC's furniture is adequate and suitable	14(15.1%)	16(17.2%)	11(11.8%)	34(57.5%)	18(17.3%)
Training facilities influence on trainees' acquisition of vocational skills	44(47.3%)	36(38.7%)	6(5.6%)	4(4.3%)	3(3.2%)

**Source: Field Data, 2018**

The findings of the study revealed that majority of trainees 38.7% disagreed that, the VTCs have adequate and relevant training facilities while 15.1% agreed and 22.6 % were neutral. Contrary, most of trainees 53.8% disagreed that the VTCs have relevant& up to date tools and equipment while 3.2% strongly disagreed and 5.3% were undecided. On the other hand majority of trainees 26.7% disagreed that workshops and classrooms were available and suitable while 8.6 % agreed and 15.1% were neutral. The findings further revealed that, majority of trainees 47.8% disagreed that adequate and relevant instructional materials are provided while 18.3% agreed and 18.3% were undecided. However, on availability of relevant source power, major of trainees 43.0% strongly agreed while 4.9% strongly disagreed and 10.8% were neutral. However, 57.5% of trainees disagreed that the VTCs furniture is adequate while 17.2% agreed and 11.8% were neutral.

Lastly majority of trainees 47.3% strongly agreed that training facilities influence trainees' acquisition of vocational skills compared to 3.2% who strongly disagreed. This finding is clearly depicted in the figure 4 below;



**Figure 4: Bar Chart Showing Trainees' Responses on Influence of Training Facilities on their Skills Acquisition**

#### Testing of Training Facility Hypothesis

$H_{03}$  Training facilities have no significant influence on acquisition of vocational skills by trainees in public vocational training centers in Kakamega County.

A chi-square test was conducted to ascertain the influence of training facilities on trainees' acquisition of vocational skills at a significant level of 0.05 as shown on table 25:

**Table 25: Testing hypothesis on influence of training facilities on trainees' acquisition of vocational skills**

<b>Chi-Square Tests</b>			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	68.902 <sup>a</sup>	46	0.016
Likelihood Ratio	78.183	46	0.002
Linear-by-Linear Association	1.041	1	0.308
N of Valid Cases	93		

The results showed;  $\chi^2(46, N=93)=68.90, P=.016$ . Therefore the hypothesis that training facilities have no significant influence on acquisition of vocational skills by trainees in public vocational training centers in Kakamega County was rejected. This emanated from the fact that P-value (0.016) was less than 0.05 alpha level associated with 95% confidence level. This implied that the training facilities have influence on acquisition of vocational skills by trainees in public vocational training centres in Kakamega County, Kenya.

The study revealed that, most of principals, instructors and trainees disagreed that VTCs had adequate training facilities to offer quality training to trainees. The findings of the study further revealed existence of un-conducive learning environment since most of respondents agreed that the VTCs lacked up to date tools and Equipment, standard workshops and classrooms, adequate furniture as well as adequate instructional materials. A spot check on the facilities in the VTCs confirmed that the VTCs had inadequate training facilities to accommodate the learning needs of the trainees. This finding concurs with Muthaa *et al.* (2012), Dasmani (2011), Mureithi (2008) who revealed that most TVET institutions operate within inadequate training facilities which translates to acquisition of irrelevant skills given that teachers opt to use lecture method with limited practical training.

In reference to open ended questions on Principals and Instructors questionnaire where an opinion was sought on how adequacy of training facilities influence acquisition of skills by trainees in VTCs, the researcher sieved and aligned views matching key factors of their responses as outlined in the table 26.

**Table 2622: Key Factors from Principals and Instructors Opinion on how Adequacy of Training Facilities Influence on Trainees Skills Acquisition**

<b>Responses</b>	<b>F</b>	<b>%</b>
Demotivates instructors	120	98
Leads to drop out of some trainee	118	96
Trainees do not acquire intended skills	123	100
Makes some trainees develop negative attitude towards the course they are under taking	115	93
Makes instructors to focus on theoretical methods there by contributing to trainees not being proficient in practical skills acquisition	123	100

**N=123**

**Source: Field data 2018(Principals’ and Instructors’ Questionnaires)**

From the table 26, respondents revealed that inadequate training facilities, (100%) greatly contributes to failure of trainee to acquire intended, (100%) compels instructors to use theoretical methods of instructing, 96% demoralizes instructors,93% contributes to trainees drop out. Therefore, Lack or inadequate training facilities shows that the training environment is wanting and negatively affects quality of the VTCs. This observation concurs with, Muthaa *et al.* (2012), Mureithi (2008), Umar and Ma’aji (2010) who noted that lack of training facilities compromises the relevance of taught skills to market need VTCs fail to offer hands on skills due to inadequate and neglected training facilities.

#### **4.7Influence of Instructional Strategies on Acquisition of Vocational Skills**

The fourth objective of the study sought to find out the influence of instructional strategies on acquisition of vocational skills. To analyze the influence of instructional strategies on acquisition of vocational skills, the researcher evaluated VTCs’ use of the demonstration,

project work, work based learning, problem solving, lecture method, field trips and simulation. The responses were as illustrated on the tables27.

**Table 23: Principals’ responses on influence of VTCs’ instructional strategies on acquisition of vocational Skills**

<b>Responses</b>	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>
Demonstration method is very common in your trade	3(16.7%)	9(50%)	1(5.6%)	3(16.7%)	2(11.1%)
Project work is used in your trade area	2(11.1%)	2(11.1%)	2(11.1%)	6(33.3%)	6(33.3%)
Trainees are exposed to Work-based learning	3(16.7%)	9(50%)	2(11.1%)	1(5.6%)	3(16.7%)
There is effective Problem-based learning	1(5.6%)	4(22.2%)	4(22.2%)	6(33.3%)	3(16.7%)
Lecture method is commonly used	6(33.3%)	5(27.8%)	4(22.2%)	3(16.7%)	0(0%)
Learners in your VTC are given opportunity for field trips	8(44.4%)	5(27.8%)	2(11.1%)	3(16.7%)	0(0%)
Simulation method is common in my trade area	2(11.1%)	3(16.7%)	5(27.8%)	4(22.2%)	4(22.2%)
Instructional strategies influence trainees’ acquisition of vocational skills in a VTC	10(55.6%)	6(33.3%)	0(0%)	1(5.6%)	1(5.6%)

**N=18Source: Field data 2018**

The findings of the study indicated that, majority of principals 50.0% were in agreement that demonstration method was very common in their VTC 16.7% disagreed and 5.6% were neutral. However, majority of principals 33.3% strongly disagreed that project work is used in their VTC, 11.1 % strongly agreed and 11.1% were neutral. On trainees’ exposure to work-based learning, most of principals 50.0% agreed while 5.6 % disagreed and 11.1% were neutral. Also, most principals 16.7%% strongly disagreed that problem-based learning was commonly used in their VTCs while 5.6% strongly agreed and 22.2% were neutral. The findings also revealed that, majority of principals 33.3% were for the opinion that lecture method was always used in their VTC while none strongly disagreed and 22.2% were

undecided. This concurs with Simiyu (2009) findings that depicted that TVET teachers were more comfortable teaching theory than practical.

Majority of principals 44.4% strongly agreed they embrace field trips for their trainees while 0.0% had strongly disagreed and 11.1% were neutral. Contrary majority of principals 22.2% strongly disagreed that simulation was always used in their VTCs while 11.1% strongly agreed. Lastly majority of principals 55.6% strongly agreed that instructional strategies influence trainees' acquisition of vocational skills in VTC, while 5.6% strongly disagreed and none was undecided.

**Table 24: Instructors' Responses on Influence of VTCs' Instructional Strategies on Acquisition of Vocational Skills**

<b>Responses</b>	<b>SA</b>	<b>A</b>	<b>N</b>	<b>D</b>	<b>SD</b>
Demonstration method is very common in your trade	26(24.8%)	50(47.6%)	11(10.5%)	5(4.8%)	13(41%)
Project work is used in your trade area	11(10.5%)	7(5.8%)	14(13.3%)	40(38.1%)	33(31.4%)
Trainees are exposed to Work-based learning	33(31.4%)	14(13.3%)	30(28.6%)	10(9.5%)	18(17.1%)
There is frequent use of Problem-based learning	7(5.8%)	15(14.3%)	30(28.6%)	24(16.2%)	29(27.6%)
Lecture method is commonly used	28(26.7%)	37(35.2%)	8(7.6%)	17(16.2%)	15(14.3%)
Learners in your VTC are given opportunity for field trips	19(18.1%)	43(41%)	20(16.5%)	14(13.3%)	9(8.6%)
Simulation method is common in my trade area	7(6.7%)	13(41%)	39(37.1%)	23(21.9%)	23(21.9%)
Instructional strategies influence trainees' acquisition of vocational skills in a VTC	55(52.4%)	34(32.4%)	5(4.8%)	8(7.6%)	3(2.9%)

**N=105 Source: Field Data, 2018**

The findings of the study indicated that, majority of Instructors 47.6% were in agreement that demonstration method is very common in trade areas in their VTC, 4.8% disagreed and

10.5% were neutral. In addition majority of Instructors 38.1% disagreed that project work is used in trade areas in their VTC, 6.7 % agreed and 13.3 % were neutral. On trainees' exposure to work-based learning, most of Instructors 31.4% strongly agreed while 17.4% strongly disagreed. However, most Instructors 33.1% strongly disagreed that problem-based learning is commonly used in their VTCs while 5.8%strongly agreed and 24.8% were neutral. The findings also revealed that, majority of Instructors 35.2 % agreed that lecture method is always used in their VTC While 16.2 % disagreed and 17.1% were undecided. Moreover, majority of Instructors 41.0 % agreed that trainees were exposed to field trips while 13.3% disagreed and 19.5% was neutral. Contrary majority of principals 21.9% strongly disagreed that simulation was always used in their VTCs while 6.7% strongly agreed and 37.14% were neutral. Lastly majority of Instructors 52.4% strongly agreed that instructional strategies influence trainees' acquisition of vocational skills in VTC, while 2.9 % strongly disagreed and 4.8 % were neutral.

The instructors were also asked to state factors which compel them to use instructional strategies mentioned above. The responses were as indicated in table 29.

***Table 25: Factors Influencing Choice of Commonly Used Teaching Method in VTCs***

<b>Factor</b>	<b>(f)</b>	<b>(%)</b>
Small class size	11	10
In availability of adequate training facilities	90	85
Large class size	95	90
The method enhances acquisition of vocational skills	80	76
Age of trainees	4	4

**N=105Source: Field Data,2018(Instructors' Questionnaire)**

Therefore, the instructors commonly used work based learning, lecture method, field trips and demonstration due to large class sizes, lack of adequate training facilities as well as the fact that some of the methods enhances acquisition of practical skills. This finding concurred with Damani (2011) who revealed that inadequate provision of instructional materials, large class size & inadequate training led to ineffective training of trainees.

**Table 26: Trainees’ responses on influence of VTCs’ instructional Strategies on Acquisition of Vocational Skills (Values in %)**

	SA	A	N	D	SD
Demonstration method is very common in your trade	41.9	33.3	9.7	7.5	7.5
Project work is used in your trade area	21.5	6.5	9.7	24.7	37.6
Trainees are exposed to Work-based learning	46.2	33.3	7.5	7.5	5.4
There is frequent use of Problem-based learning	17.2	18.3	23.7	19.4	21.5
Lecture method is commonly used	33.7	51.8	4.8	8.4	1.2
Learners in your VTC are given opportunity for field trips	35.5	37.6	11.8	8.6	6.5
Simulation method is common in my trade area	0	12.9	12.9	43	31.2
Instructional strategies influence trainees’ acquisition of vocational skills in a VTC	49.5	34.4	6.5	8.6	1.1

**N=93 Source: Field Data, 2018**

The findings of the study revealed that majority of trainees 41.9% strongly agreed that demonstration method is very common in their trade areas while 7.5% disagreed and 9.7% were neutral. In addition, majority of trainees 24.7% disagreed that project work method is used in their trade areas compared to 21.5 who agreed. However, most of trainees 46.2% agreed that they are exposed to work based learning while 5.4% agreed and 7.5% were undecided. On use of problem–based learning frequently, majority of trainees 46.2% strongly disagreed, 17.2%strongly agreed and 23.7% were undecided.

The findings also revealed that majority of trainees 51.8% agreed that lecture method was always used in their trade areas while 8.4% disagreed and 4.8% were neutral. Moreover majority of trainees 35.5% strongly agreed that learners in their VTC were given opportunity for field trips, while 6.5% strongly disagreed and 11.8% were undecided. On frequent use of simulation method, majority of trainees 43.0% disagreed while 12.9% agreed and 12.9% were neutral. Lastly majority of trainees 49.5% strongly agreed that instructional strategies influencing trainees' acquisition of vocational skills in a VTC, while 1.1% strongly disagreed.

**Table 27: Trainees' Response on Level of Influence of Instructing Strategies on Acquisition of Vocational Skills**

Instructional strategy	level of acquiring vocational skills							
	Very High		High		Low		Very Low	
	F	%	F	%	F	%	f	%
Demonstration method	45	48.4	42	45.2	5	5.4	1	1.1
Project work	32	34.4	50	53.8	7	7.5	4	4.3
Work based learning	26	28.0	53	57.0	12	12.9	2	2.2
Problem-based learning	47	50.5	32	34.4	11	11.8	3	3.2
Lecture method	0	0.0	13	14.0	30	32.3	50	53.8
field trips	26	28.0	34	36.6	26	28.0	7	7.5
Simulation method	25	26.9	40	43.0	17	18.3	11	11.8

**N=93 Source: Field Data, 2018**

From the table 31, it is evident that lecture method has very low influence on acquisition of vocational skills by trainees in public vocational training centers.

### **Testing of Hypothesis**

H<sub>04</sub> Instructional strategies have no significant influence on acquisition of vocational skills by trainees in public vocational training centers in Kakamega County.

A chi-square test was conducted to determine the influence of instructional strategies on trainees' acquisition of vocational skills at significant level of 0.05 as shown on table 32.

**Table 28: Testing hypothesis on influence of instructional strategies on trainees' acquisition of vocational skills**

Chi-Square Tests			
	Value	Df	Asymp. Sig. (2-sided)
Chi-Square	30.987 <sup>a</sup>	18	0.029
Likelihood Ratio	38.221	18	0.004
Linear-by-Linear Association	8.652	1	0.003
N of Valid Cases	93		

The results were;  $X^2(18, N=93) = 30.99, P=. 029$ . Therefore the hypothesis that instructional strategies have no influence on trainees' acquisition of vocational skills in public vocational training centres was rejected. This was as a result of  $P$ -value 0.029 being less than significant level of 0.05. This implied that there was statistically significant relationship between the instructional strategies used in vocational training centres and acquisition of vocational skills by trainees in public vocational training centres. The study findings were in agreement with Tumbu & Shuaibu (2016)

The study findings further indicated that, though lecture method was commonly used, it hindered trainees' acquisition of practical skills. These findings confirmed those of Kennedy (2011) and GoK (2012) report that revealed the training is mainly theory-based hence leading to mismatch of skills among TVET graduates. When the trainees were asked to suggest methods which will enhance their skills acquisition, majority of them indicated that, field trip, project work, work-based learning, group discussions, question and answer and demonstration were the methods that will help them acquire vocational skills. This concurred with Akuezuilo (2007), Johannan (2012), and Audo (2014) who emphasized use of learner - centered approaches as the most effective and efficient methods of imparting practical skills.

**Table 29: Trainees, Instructors and Principals Suggestions on Possible Ways in which a Vocational Training Centres (VTCs) can Enhance Acquisition of Vocational Skills by its Trainees**

<b>Participants response</b>	<b>F</b>	<b>%</b>
Employ more instructors to ensure instructors can adequately attend to trainees	216	100
Develop a culture of sending instructors for in-service courses to update their knowledge and skills	123	56
Develop a culture of sending instructors and trainees for industrial attachment to equip them with new technologies	183	84
Engage in income generating activities so as to expose trainees to more practical	214	99
Seek collaborations to enable them acquire adequate relevant physical facilities, instructional material facilities as well as up to date tools and equipment	200	93
Explore all alternative methods of financing education to mobilize adequate funds to cater for all training operations	210	97
encourage instructors to embrace continuous professional development to improve their knowledge , skills and performance	119	55
VTCs to embrace use of trainee centred instructional strategies	183	84

**N=216**

**Source: Field Data 2018 (Trainees, Instructors and Principals questionnaires)**

100% of Trainees, Instructors and Principals proposed that more instructors to be employed to adequately attend to trainees.97% also suggested that VTCs should explore alternative methods of financing training such as income generating activities to enable them cater for training operations. Also noted proposals were seeking collaborations to equip workshops and acquire instructional materials 93%, sending instructors for in-service course 56%, sending instructors and trainees for industrial attachment 84%, use of trainee centred instructional strategies 84%, exposing trainees to more practical 99%. This finding was in agreement with Tumbu & Shuaibu (2016) who posted suitable instructional strategies, competent and experienced instructors, equipped workshops and provision of adequate instructional materials are requirements for achieving high quality practical skills

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter presents the summary, conclusions and recommendations of the study for the future acquisition of vocational skills in vocational training centres (VTCs). The chapter begins with a summary of findings under the research hypothesis. This is then followed by conclusions based on the findings on each hypothesis. Finally, the chapter presents recommendations based on the conclusions of the study and further areas of research.

#### **5.2 Summary of the study**

The purpose of the study was to determine the institutional factors influencing acquisition of vocational skills by trainees in public vocational training centers in Kakamega County. Four objectives guided the study: to establish the influence of instructors' capacity on acquisition of vocational skills, to examine the influence of financial resources on acquisition of vocational skills, to establish the influence of training facilities on acquisition of vocational skills and to establish the influence of teaching strategies on acquisition of vocational skills. The study targeted eighteen (18) Vocational Training Centres in Kakamega County.

A descriptive research design was adopted. The research instruments used were questionnaires for principals, teachers and students. Instrument reliability was ascertained by piloting the questionnaires after which Cronbach Alpha statistic was computed. Statistical package for social scientists (SPSS) and Ms Excel were used to aid in data analysis. Data was presented in percentages and charts. The findings enabled the researcher to establish the

recommendations of the study. The findings are summarized as indicated in the subsections below.

### ***5.2.1 Influence of instructors' capacity on acquisition of vocational skills by trainees in vocational training centres in Kakamega County.***

The study established that instructors were inadequate in the vocational training centres (VTCs). Moreover 88(77.1%) of instructors have not attended any in-service. Furthermore, 73(79.5%) instructors have never had industrial attachment to expose them to new technologies in the market after their training. Moreover, the study findings revealed that 40(38.1%) instructors do not have pedagogical training and ICT skills. However, the study findings revealed that 63(60%) instructors had both academic and professional qualifications as well as work experience.

### ***5.2.2 Influence of financial resources on acquisition of vocational skills***

The study findings revealed that 10(55.6%) of Vocational Training Centres (VTCs) had no adequate financial resources. Moreover, the study showed that 16(88.9%) of VTCs lack income generating activities, 15(83.3%) parents do not pay levies in time, 12(68.7%) disbursement of government subsidy was inconsistent, 11(71.1%) VTC Sponsors do not provide financial assistance and 13(72.2%) of VTCs had no financial assistance from development partners. Thus the study established that financial resources influence trainees' acquisition of vocational skills.

### ***5.2.3 Influence of training facilities on acquisition of vocational skills***

The study findings revealed that (51.61% trainees, 66.67% instructors, 72.22% principals) agreed that the VTCs had inadequate training facilities. Also, 47.32% trainees, 63.81% instructors, and 88.89% of principals disagreed the VTCs have relevant tools & equipment

compared to those used in the industries. Workshops and classrooms were not available and suitable as revealed by 61.11% principals, 57.14% instructors and 46.24% of trainees. In addition, instructional materials were inadequate as revealed by 48.39% trainees, instructors 48.57% and 50% of principals'. However, the study also noted that VTCs had reliable source of power as revealed by majority of 44.44% principals, 40.95% instructors and 43.01% trainees. The study findings also revealed furniture were inadequate in VTCs as indicated by 68.82% of trainees, instructors 61.90% and 66.67% of principals. Furthermore, the study revealed that VTCs had no technologically up to date on tools and equipment compared to those in industries.

Therefore, VTCs in Kakamega County lacked or had inadequate vital training facilities like workshops, classrooms and source of as well modern training equipment. This was found to hamper smooth training process for the trainees hence low acquisition of vocational skills.

#### ***5.2.4 Influence of Instructional Strategies on Acquisition of Vocational Skills.***

The study findings revealed that instructors did not commonly use project work (69.52%), problem based learning (60.92%) and simulation (43.81%). However, the study findings indicated demonstrations (72.38%), field trip (59.04%), lecture method (52.04%) and work based learning (44.76%) methods were commonly used. Generally, there was consensus from principal, instructors and trainees that instructional strategies influence acquisition of vocational skills and demonstration, project work, work-based learning and work field trip instructional strategies were pointed out as the suitable instructional strategies that enhance acquisition of vocational skills. The trainee also added question and answer method and group discussion to the list of most effective methods which contribute to their proficient in practical skills acquisition.

Finally, the respondents suggested that for trainee acquisition in VTCs can be improved, VTCs should employ more instructors, develop a culture of sending instructors for in-service courses and industrial attachment, engage in income generating activities so as to generate income as well as exposing trainees to more practicals, seek collaborations to enable them acquire training facilities and encourage instructors to embrace continuous professional development to improve their knowledge , skills and performance.

### **5.3 Conclusion**

In regard to influence of instructors' capacity on trainees' acquisition of vocational skills in public vocational training centres (VTCs), the study concluded that the VTCs were understaffed and the existing instructors do not update or their skills and knowledge or acquire new ones for effective and efficient imparting of skills to trainees since they neither attend in-service courses nor go for transfers. Furthermore, the study further concluded instructors lacked exposure to new technologies, pedagogical and ICT skills to face challenges and changes in the training world. However, the study concluded that instructors were academically and professionally qualified. Generally, instructors' capacity has a negative impact on acquisition of vocational skills in public vocational training centres in Kakamega County.

As concerns the influence of financial resources on trainees' acquisition of vocational skills in public VTCs, the study concluded that inadequate financial resources in VTCs may have emanated from failure of the VTCs to have income generating activities, parents' failure to pay levies in time as well as inconsistency in disbursement of government subsidy. Also the study concluded that VTCs financial inadequacy in public VTCs could be due to lack of financial assistance from sponsors and development partners. Thus the study concluded,

financial resources negatively influenced trainees' acquisition of vocational skills in public VTCs in Kakamega County since the VTCs were unable to acquire relevant tools and equipment, buy instructional materials and put up infrastructure to ensure high quality training.

As pertains the influence of training facilities on trainees' acquisition of vocational skills in public vocational training centres (VTCs), the study concluded that public VTCs have inadequate training facilities such as workshops, up to date tools and equipment, classes and instructional materials. Contrary, the study concluded that public VTCs had reliable source of power. Thus it was concluded that inadequate training facilities could be contributing to low acquisition of vocational skills by trainees in public VTCs in Kakamega County.

In reference to influence of instructional strategies on trainees' acquisition of vocational skills in public vocational training centres (VTCs), the study concluded that, the commonly used instructional strategies in VTCs were lecture method, field trip and work based learning. However, demonstrations, project work, problem based learning as well as simulation were not commonly used. This implied the VTCs were commonly using lecture method to impart skills as opposed to practical –oriented methods such as demonstration, project work vocational skills to their trainees. Therefore, instructional strategies had influence on acquisition of vocational skills by trainees in public vocational training centres in Kakamega County

#### **5.4 Recommendations**

Based on the findings of this study, the researcher makes the following recommendations.

- i. There is need for ministry of education to develop a policy on instructors' capacity building in terms of industrial attachment, in-service courses and ICT skills to ensure

the instructors update their skill and knowledge. This will also ensure they are abreast with new technologies and market driven skills and demand.

- ii. There is need for county governments to develop a policy on alternative methods of financing education and more so income generating activities to ensure that they have adequate funds for smooth running of their training programmes.
- iii. There is need for ministry of education to develop a policy on training facilities in vocational training centres, in order to procure adequate, relevant and up-to- date tools and equipment to ensure their trainees acquire high quality vocational skills.
- iv. There is need to develop a policy to regulate use of instructional strategies in vocational training centres where by practical oriented instructional strategies like demonstration, project work group discussion, field trip, and work-based teaching encouraged for maximum acquisition of the vocational skills necessary for the world of work.

### **5.5 Suggestions for Further Research**

Although this study found salient findings on institutional factors influencing acquisition of vocational training by trainees in vocational training centres in Kakamega County, there is need to undertake another study on:

1. Influence of other instructors' capacity on acquisition of vocational skills by trainees in public vocational training centres in Kakamega County.
2. Institutional factors influencing acquisition of vocational skills by trainees in public vocational training centres in other counties.
3. Non-institutional factors influencing acquisition of vocational skills by trainees in public vocational training centres in Kakamega

## REFERENCES

- Afeti, G. (2006). Strategy to revitalize technical and vocational education and training (TVET) in Africa, background document for the African Union's TVET Expert's meeting, *13-14 December 2006, Addis Ababa*.
- Afeti, G. (2014). Technical and Vocational education programmes and Training for Industrialization. *African Research and Resource Forum (ARRF), Nairobi*.
- Ajibade, A. (2009). *Understanding micro teaching theory and practice*. Osogbo: Simba Ventures.
- Amkombe, I. (2000). Technical Vocational Education and Training as a tool for sustainable development. Retrieved on June 14th, 2016 from <http://www.wikieducator.or>
- Anyakwo, P. (2012). Quality assurance in business education. *Lead Paper Presented at the 24<sup>th</sup> National Conference of ABEN Held from 16th-20th October, 2012 at the Federal Polytechnic, Nekede*.
- Atchoerena, D., & Delluc, A. (2001). *Revisiting Technical and vocational education in Sub-Saharan Africa: An update on trends innovations and challenges* Paris.
- Akuezuilo, E. O. (2007). The New 9-Year Basic Science and Technology Curriculum and Challenges of its Implementation. *Journal of Curriculum and Instruction*, 6(2), 1-6.
- Audu, R. (2014). *Assessment of the teaching methods that influence the acquisition of practical skills*. *Asian social science*, (21), 35-41.
- BAIRA. (2009). Availability of Manpower in Bangladesh. Retrieved from the web A PRIL 26, 2017. <http://www.hrexport-baira>
- Becker, G. (2009) *Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education*. Chicago: The University of Chicago Press
- Blumberg et al (2008). *Business research methods* (7<sup>th</sup> ed.)
- Borg, W. R., & Gall, M. D. (2003). *Educational Research: An Introduction* (Fifth ed.). New York: Longman.
- Bourgonje and Tramp (2011); *An international study of teacher competencies and standards*.
- Bwisa, H. (2014). *Challenges of managing Vocational training centres*. Entrepreneurship Department, Jomo Kenyatta University of Agriculture and Technology, Kenya.
- Chelimo, A. (2005). *Free Primary Education Policy in Kenya*- Unpublished Thesis
- Cooper, D.R and Schindler, P.S (2006). *Business Research Methods*. New York.

- Colombo Page News desk . (2009). Sri Lanka sets up Vocational Training Centers at Welfare Villages in Vavuniya. Retrieved from the web January 26, 2017.
- Dasmani, A. (2011). *Challenges facing Technical Institute graduates in practical skill acquisition in the Upper East Region of Ghana*. Asia- Pacific Journal 12(2) 67-77.
- DFID, (2006).The importance of Secondary, Vocational and higher Education in Development. Briefing Paper July 2006, DFID: London.
- Diaa, E.L. (2006). *Education programmes Finance in Egypt*. Dakar: Codesria,Egypt.
- FKE 2018: skill mismatch Report .<https://www.standard media.co.ke>
- Ferej, A.; Kitainge, K. & Ooko, Z. (2012). *Reform of TVET Teacher education in Kenya: Overcoming the challenges of quality and relevance*. ADEA, Working document.
- Gall, M.D, Gall,J.P & Borg,W.R.(2007): Educational research: An introduction ( 8<sup>th</sup> ed.) Boston:Pearson.
- Garriga, C. and Keightley, M. (2007).A General Equilibrium Theory of College Education Subsidies, In-School Labor Supply, and Borrowing Constraints.Federal Reserve Bank of St Louis.
- Gay, L. R., & Airasian, P. (2003). Educational research: Competencies for analysis and Applications (7th ed.). Upper Saddle River, NJ: Pearson Education.
- Goel, V. P. (2010). Technical and vocational education and training (TVET) system in India for sustainable development. Retrieved 7<sup>th</sup> March, 2017 from Government of Kenya,(2007). *Kenya Vision 2030*.Government Press, Nairobi.
- GoK, (2012). *Sessional Paper No 14, Reforming Education and Training sectors in Kenya*, Government Press, Nairobi.
- Gurney,P. (2007) “Five factors for effective teaching” *Journal of teachers’ work* vol.4. Issue 2
- Hicks (2011): *Vocational education voucher delivery and labour market returns. A randomized evaluation among Kenyan youth*.Report for Spanish Impact Evaluation Fund (SIEF) phase II. Retrieved 15 february 2016 from <http://www.sitere sources. World bank. Org/.../Voc Ed- SIEF-Report...feb 15 2016>
- Ibrahim, A (2012). *An empirical analysis on the operational challenges of interest free banking window in Nigeria*: Department of General Studies, Federal Polytechnic, Nasarawa.

- ILO (2005). *Vocational Training and Skill Development in the Poverty Reduction Strategy Paper: a preliminary review*, skills and employability department, ILO: Geneva.
- ILO & UNESCO. (2007). *Joint ILO–UNESCO committee of experts on the application of the recommendations concerning teaching personnel: Report*, Ninth Session, Geneva: Author. Retrieved 23 March 2017
- Johannsen, M. (2012). *Three Key Skills Needed Inside Organizations*. California: Legacee.
- Ministry of Education Science, Technology & ICT –Kakamega County (2014).Kakamega Education Task Force Report.
- Kamau, S.M. (2013). Challenges affecting the technical and vocational education training youth polytechnics in Kiambu County. *International Journal of Social Sciences and Entrepreneurship*, 1 (5), 679-687.
- Karemu, K.G. & Gongera, E.G, (2014). *An evaluation of strategy implementation on Organizational performance: Case study of Public TVET in Kiambu County, Kenya*. *Industrial Engineering Letters*, 4(1), 35-50.
- Kasomo, D. (2015) *Research Methods in Humanities and Education*. Nairobi: The Jomo Kenyatta Foundation
- Kennedy, O. O. (2011). *Re-appraising the Work Skill Requirements for Building Technology Education in Senior Secondary School for Optimum Performance in Nigeria*. *European Journal of Applied Sciences*, 3(2), 46-52
- Khatete I. W. (2010). *Extend of Utilization of Education Commissions. Recommendations in Planning Quality Education in Primary Schools in Kenya (1988-2009)*. unpublished PhD Thesis; UoN, Kenya.
- Kigwilu, P.C.(2014). Determinants of effective implementation of Artisan & craft curriculum in catholic sponsored community colleges in Nairobi Region, Kenya.
- Kigwilu, P & Githiji, J. (2015). Teachers factors influencing effective implementation of artisan and craft curriculum in community colleges in Kenya. Retrieved from <http://asrjetsjournal.org> American scientific journal/ article/ download/983/596
- Kirimi.T. (2012). *Alternative financing mechanisms in provision of quality education programmes and training in vocational training centres*. Kenyatta University, Kenya.
- Kirimi.T (2012) *Alternative financing mechanisms in provision of quality education programmes and training in youth polytechnics*. Kenyatta University, Kenya.
- Kitaike, K.M. (2003). 'Education and training for work: A comparative study of Kenya and Australia', paper presented at the sixth Australian VET Research Association Conference, *The changing face of VET*, Sydney

- Kombo, D.K. (2006). *Proposal and Thesis Writing: An Introduction*. Pauline Publications Africa, Nairobi.
- Kombo, D. K., and Tromp, D. L. A. (2006). *Proposal and Thesis Writing*. Paulines Publication Africa
- Kothari, C. R., (2000): ‘‘Research Methodology’’. *Methods and Techniques*; New Age International. Government of Kenya, (2007). *Kenya Vision 2030*. Government Press, Nairobi.
- Kothari, C.R. (2005). *Research Methodology*. *Methods and Techniques*. 2<sup>nd</sup> ed. New Delhi. Age International Ltd.
- Likoko, S. Mutsotso, S. & Nasongo, J. (2013). Adequacy of instructional materials and physical facilities and their effect on quality of teacher preparation in colleges in Bungoma County. *International journal of Qscience and research (IJSR)*.
- Mayabi, L.O (2014): *Influence of Government funding on skill development in public youth polytechnics in Samia Sub County, Kenya*.
- Mbugua, K. Z.; Muthaa, M. G. & Sang, K.A. (2012). *Challenges Facing Technical Training in Kenya*. *Scientific Research Journal*, 1(3), 109-113.
- Mobegi FO (2007). *Quality Assurance in Public Secondary School; Challenge and Opportunities for Principals in Gucha District*. Unpublished M. ED Thesis, Maseno University.
- Ministry of Education, Science and technology, Kakamega County – VTCs Director’s report, 2016
- Ministry of State for Youth Affairs (MOYA). (2006). *National policy for the youth polytechnics and vocational training sector (NPYP & VTS)*. Nairobi:
- MOEST, (2003). *Report of the National Conference on Education and Training*. GOK.
- MOEST, (2012). *Sessional Paper No.14 of 2012, Policy Framework on reforming, Education & Training sectors in Kenya*. Government Press Nairobi
- Mohsen Tavakol and Reg Dennick (2011). *Making Sense of Cronbach’s Alpha*. *International Journal of Medical Education*.; 2:53-55 Editorial
- Moturi, Onderi, O & Mwebi, B
- Mugenda, O. & Mugenda, A. (2003). *Research Methods: Quantitative and Qualitative Approaches*. Nairobi: Acts Press.

- Mugenda, A.G. & Mugenda, O. M. (2012). *Research methods dictionary*. Nairobi, Kenya: Applied Research & Training Services.
- Mureithi, G. W. (2008) Challenges Facing Vocational Centres in Human Resource Development: The Case of Vocational training centres in Rift Valley Province, Kenya
- Muriithi, S. (2013b). *To Find out Factors that Contribute to Low Enrollment in Youth Polytechnics in Nyeri Zone in Nyeri South District*. Masters Research Project University of Nairobi.
- Muthaa et al (2012): Challenges facing Technical training in Kenya. Published online February 2012 in SciRes ( <http://www.SciRP.Org/journal/ce>
- Mwiria et al (2007): Public and Private Universities in Kenya. New challenges, issues and Achievements. Higher Education in Africa, oxford.
- Neito, S. (2003): Profoundly Multicultural Questions. Educational leadership.
- Ngerechi, J.B. (2003). *Technical Vocational Education Training in Kenya*. Nairobi: MoEST.
- Ngome, C (2009). *Overview of Skills Development in Kenya: Constraints and Prospects Eastern on Basic and Post*. Bureau of educational programmes Research Kenyatta University, Nairobi.
- Ngure, S.W, (2013) Where to Vocational Education in Kenya? Is Analyzing Training and Development Needs the Answer to the Challenges in this Sector? *Journal of Education and Vocational Research Vol. 4, No. 6, pp.193-204*
- Njati, C. (2011). *The Impact of Vocational Training for Rural Development in Nyambene District Kenya. A Case of Muthara Youth Polytechnic*. Kenyatta University MED Thesis.
- Njihia, S.M. (2005). *Income Generating Activities and their contribution to the provision of teaching- learning resources in National Polytechnics in Kenya*, Unpublished Med Thesis. Nairobi.
- Njoki, M. N. (2014). *Strategies Influencing Production Of Middle Level Workforce In Public Technical, Vocational Education And Training Institutions In Nairobi Region, Kenya*
- Nyerere, J. (2009). Technical and Vocational Education and Training (TVET) Sector Mapping in Kenya for the Dutch Schokland TVET Programme Edukans Foundation.
- Nze, J.S.B. & Ginestie, J. 2011. Technical and vocational teaching and training in Gabon: how future teachers build their vocational identity. *International Journal for Technology and Design Education*. (22):399–416.

- Olokede, N. O. & Olusanjo, M. O. (2009). *Introduction to principles and method of teaching (2nd ed)*. Abuja: Akitol prints
- Otieno, W. (2004) Student loans in Kenya; Past Experiences, current hurdles and opportunities for the future. *Journal of Higher education in Africa* 75-99.
- Otieno, W. (2009). Lecture Notes on Human Capital and Economics of Education.
- Orodho, A.J., Kombo, D.K (2002). Research Methods. Nairobi: Kenyatta University, Institute of Opening Learning.
- Orodho J.A. (2003). *Essentials of Educational and social Science Research Methods*. Nairobi: Masola Publishers.
- Orodho, J.A. (2004). *Techniques of writing research proposals and Reports in Education and Social Sciences*. Nairobi: Masola.
- Orodho J.A. (2005). *Elements of Education and Social Science Research Methods*. Nairobi: Masola.
- Owano, A (2012). Education for employment: the contribution of the vocational training centres (VTC) programme to youth employment. Kenyatta University.
- Oso, W.Y and Onen, D. (2009). *A general guide to writing research proposal and report*. Nairobi: Jomo Kenyatta Foundation.
- Owiye DO (2005). Trend in and Factors Affecting Wastage in Primary Education in Siaya District. Kenya. Unpublished M.E.D. Thesis, Maseno University.
- Oyebade, S. A., Oladipo, S. A., & Adetoro, J. A. (2012). *Determinants and strategies for quality assurance in NigeriaUniversity education*. Retrieved October 30, 2013, from <http://www.herp-net.org>
- GoK, (2005a). *Sessional Paper No.1; A policy Framework for Education, Training and Research*. Nairobi: Government Printers
- GoK, (2005b). *Kenya Education Sector Support Programme (KESSP) 2005- 2010: Delivering Quality Education and Training to all Kenyans*. Nairobi: Government Printers.
- Simiyu,J (2009). *Factors influencing the attractiveness of a Technical and Vocational education programmes and Training Institution; A case study of a Technical Institute in Kenya*. Moi University.

- Simiyu, J. W. (2009). *Revitalizing a technical training institute in Kenya: A case study of Kaiboi technical training institute, Eldoret, Kenya*. Bonn: UN
- ESCO-UNEVOC International Centre for Technical and Vocational Education and Training.
- Smith, A. M. (2012). *Research Methodology: A Step-by-step Guide for Beginners*. *Nurse Education in Practice*. doi:10.1016/j.nepr.2011.11.008
- Tumba .I & Shuaibu . H ,2016: Strategies for Improving Students Acquisition of Practical Skills in Technical Colleges in Kano State
- Udofia, A. E, Ekpo, A. B., Nsa, E. O., & Akpan, E. O. (2012). *Instructional Variables and Students' Acquisition of Employable Skills in Vocational Education in Nigerian Technical Colleges*. *Scholarly Journal of Education*. 1(2), 13-19.
- Umar, I. Y. & Ma'aji, A. S. (2010). *Repositioning the Facilities in Technical College Workshop for Efficiency: A Case Study of North Central Nigeria*. *Journal of TEM Teacher Education*: 47(3), 1-9.
- UNESCO (2003). *Synthesis of main findings from two case studies carried out in Ghana and Zambia on private technical and vocational education and training (TVET)*. Paris: International Institute for Educational Planning. Retrieved 5 February 2017
- UNESCO, (2006). *Literacy for life; EFA Global Monitoring Report*. Nairobi; Government Printer
- UNESCO. (2006). *Fact book on Education for All (EFA)*. Nairobi.
- Veriava, F. (2002). *Eradicating Barriers to Educational: An Introduction to Education Rights project*.
- Yinusa, A. F. (2014). Assessment of teaching strategies adopted for effective implementation of science subjects and trade modules curriculum in Nigerian technical colleges. *Journal of educational and social research MCSER publishing, Romeo-Italy*, 4(6), 391-396.

## APPENDICES

### APPENDIX 1

#### LETTER OF CONSENT

Dear Participant,

#### RE: LETTER OF CONSENT

I am a master student at The Masinde Murilo University of science and technology conducting research on “*Institutional Factors Influencing acquisition of vocational skills by trainees in Public Vocational Training Centres in Kakamega County*”

You have been selected to participate in this study. Your participation is voluntary, and will take approximately 30 minutes of your time. The information collected will be used for academic purpose only and your identity will be kept confidential. Thank you for your willingness to participate in the study.

Thank you

Josephine Maingi

Phone No.0723 686 589

## APPENDIX 1I

### TRAINEES' QUESTIONNAIRE

#### Part A: Demographic information of the trainee

This part seeks to gather your background information in relation to the vocational training centre (VTC) where you study. Please provide as accurate information as possible by ticking (✓) the best response where appropriate

1. Gender: Male [ ] Female [ ]
2. Age (in years): .....
3. Which course are you undertaking in the VTC:  
.....
4. Level of study a) GTT III [ ] b) GTT II [ ] c) GTT I [ ] d) Artisan [ ]

#### PART B: Influence of training facilities on trainees acquisition of vocational skills

**5a.** The following training facilities influence acquisition of vocational skills by trainees in your vocational training centre (VTC). What is your level of agreement? Use a scale where SA- strongly agree, A- agree, N-Neutral, D- disagree and SD-strongly disagree, to tick(✓)the choice that best describes your opinion.

S/NO	Statement	Level of Agreement				
		SA	A	N	D	SD
i.	The VTC has adequate and relevant training facilities					
ii.	The VTC has adequate and relevant tools and equipment					
iii.	The workshops in your field are available and suitable					
iv.	instructional materials are adequate for practical					
v.	The class rooms are suitable and adequate					
vi	There is reliable source of power/electricity					
vii	The VTC's furniture is adequate and suitable					
viii	Tools and Equipment are up to date					
ix	Training facilities influence trainees' acquisition of vocational skills					

5b. In your own opinion, how do the adequacy and relevancy of training facilities influence acquisition of vocational skills by trainees in your vocational training centre.

- i. ....
- ii. ....
- iii. ....
- iv. ....

**PART C: Influence of instructional strategies on acquisition of vocational skills**

6. The table below shows influence of instructional strategies on trainees’ acquisition of vocational skills statements. Indicate by ticking (√) the level at which you agree. Use a scale where SA- strongly agree, A- agree, N-Neutral, D- disagree and SD-strongly disagree

S/NO	Influence of instructional strategies on trainees’ acquisition of vocational skills VTCs.	Level of agreement				
		SA	A	N	D	SD
i.	Demonstration method is very common in your trade area					
ii.	Project work is commonly used in your trade area					
iii.	Trainees are exposed to Work-based learning					
iv.	Problem-based learning is very common in your trade area					
v.	Lecture strategy is used common in your trade					
vi	Learners in your VTC are given opportunity for field trips					
vii	Simulation strategy is common in my trade area					
viii	Instructional strategies influence trainees’ acquisition of vocational skills in a VTC					

7a. By putting a tick(√) in the box below the choices, indicate instructional strategy that makes you best acquire vocational skills taught by the instructors.

Instructional strategy	Level of acquiring vocational skills			
	Very High	High	Low	Very Low
Demonstration				
Project work				
Work based learning				
Problem solving				
Lecture				
Field trip				
Simulation				

**7b.** Please, briefly explain how the instructional strategies in 6a, influences your acquisition of practical skills?

**i.** .....  
 ...

**ii.** .....  
 ....

**iii.** .....  
 ...

**7c.** Kindly indicate instructional strategies from the above list (6a) you prefer to be used often in your VTC to enhance your acquisition of vocational skills.

**i.** .....  
 ....

**ii.** .....  
 ....

**iii.** .....  
 ...

**iv.** .....  
 ....

**v.** .....  
 ....

**vi.** .....

**PART D: Trainee Vocational Skills Competency**

8. The table below highlights scale for vocational skills acquired by trainees after completing the course and industrial attachment. Kindly rate your competency level in your trade area.

S/No.	Acquired vocational skills	Competent	
		Yes	No

i.	Are you able to operate all tools and equipment involved in the course undertaken with ease		
ii.	Do you believe that the skills acquired in your course equips you adequately to gain employment upon graduating		

9a. Which aspect of your course would you say you are adequately equipped in?

Practical ( )      Theoretical ( )

9b. Kindly by use of a tick mark (√), rate your practical competency in your trade area/course

Low ( )

Moderate ( )

High ( )

10. Please suggest possible ways in which training in VTC can be improved.

**i.** .....

**ii.** .....

**iii.** .....

**iv.** .....

## APPENDIX 1II

### INSTRUCTORS' QUESTIONNAIRE

#### Part A: Demographic information of instructors

Please provide response by ticking (√) on the appropriate alternative.

1. Gender: Male ( ) Female ( )
2. Your age (in years): .....
3. Enrolment in your trade area: below 50 ( ) 51-100( ) 101 -200 ( ) above 201 ( )
4. What is your highest academic qualification?  
 Masters ( ) Bachelors ( ) Higher Diploma ( ) Diploma ( )  
 Certificate ( ) others ( ) (please specify).....

#### PART B: Influence of instructors' capacity on acquisition of vocational skills

5. Please answer each item by putting a tick mark (√) in the box below the choices, which most closely represents your opinion about the influence of the following instructors' capacity factors on acquisition of vocational skills by trainees in your VTC? Where, SA= Strongly Agree, A -Agree, N-Neutral, D-Disagree, SD= Strongly Disagree

	ITEM	Level of Agreement				
		SA	A	N	D	SD
i.	The instructors are adequate in your trade area					
ii	All instructors have attended in- service course					
iii	All instructors have attended a professional training					
iv	Instructors usually go for industrial attachment to be abreast with new technologies					
v	All instructors have adequate work experience					
vi	Instructors have pedagogical knowledge					
vii	Instructors have ICT or computer skills					

**PART C: Influence of training facilities on trainees' acquisition of vocational skills in VTCs**

6a. The following are some of the training facilities influencing trainees' acquisition of vocational skills in VTCs. What is your level of agreement? Use a scale where SA- strongly agree, A- agree, N-Neutral, D- disagree and SD-strongly disagree.

S/No	Statement	Level of Agreement				
		SA	A	N	D	SD
i.	The VTC has adequate tools and equipment					
ii.	The VTC has relevant tools and equipment					
iii.	The workshops in your field are available and suitable					
iv.	Adequate and relevant instructional materials are provided					
v.	The VTC's source of power relevant to the courses offered					
vi.	The VTC's furniture is adequate and suitable					
vii.	The Tools and Equipment are adequate and up to date					
viii.	Training facilities influence trainees' acquisition of vocational skills					

6b. In your own opinion, how do adequacy of training facilities in your trade area influence acquisition of vocational skills by trainees in your vocational training centre (VTC)

- i. ....  
.....
- ii. ....  
.....

iii. ....  
 .....

**PART D: Influence of instructional strategies on trainees’ acquisition of vocational skills in VTCs.**

7a. The following are some of the instructional strategies influencing trainees’ acquisition of vocational skills in your VTC. What is your level of agreement? Use a scale where SA- strongly agree, A- agree, N- neutral, D- disagree and SD-strongly disagree.

S/NO	Influence of instructional strategies on trainees’ acquisition of vocational skills VTCs.	Level of agreement				
		SA	A	N	D	SD
i.	Demonstration method is very common in your trade area					
ii.	Project work is used in your trade area					
iii.	Trainees are exposed to Work-based learning					
iv.	There is effective Problem-based learning					
v.	Lecture method is effectively used					
Vi	Learners in your VTC are given opportunity for field trips					
vii	Simulation method is common in my trade area					
vii	Instructional strategies influence trainees’ acquisition of vocational skills in a VTC					

7b. Which factor(s) determine selection of your commonly used instructional strategies

(7a)? Please tick appropriately (√)

- Small class size ( )
- Availability of adequate training facilities ( )
- Large classsize( )
- The method enhances acquisition of vocational skills ( )

- Age of trainees ( )

**PART E: Trainees' acquisition of vocational skills in Public VTCs**

10. Kindly by use of a tick mark (√), basing on VTCs resources status rate your trainees' practical competency/ skills acquisition in your trade area.

Low ( )

Moderate ( )

High ( )

9. Please, suggest ways in which VTCs can improve on acquisition of vocational skills by their trainees?

**i.** .....

.....

**ii.** .....

.....

**iii.** .....

.....

**iv.** .....

.....

**Thank you for your contribution**

**APPENDIX 1V**

**PRINCIPALS’ QUESTIONNAIRE**

**Part A: Demographic information of instructors**

Please provide response by ticking (√) on the appropriate alternative.

- 1. Gender: Male ( ) Female ( )
- 2. Your age (in years): .....
- 4. Location of the VTC : Urban ( ) Rural ( )
- 5. Type of the VTC: Day ( ) Boarding ( )
- 6. Status of the VTC : Centre of Excellency ( ) Others ( )
- 7. Enrolment: below 50 ( ) 51-100( ) 101 -200 ( ) above 201 ( )
- 8. What is your highest academic qualification?  
 Masters ( ) Bachelors ( ) Higher Diploma ( ) Diploma ( )  
 Certificate ( ) others ( ) (please specify).....

**PART B: Influence of instructors’ capacity on acquisition of vocational skills**

9. Please answer each item by putting a tick mark (√) in the box below the choices, which most closely represents your opinion about the influence of the following factors on acquisition of vocational skills by trainees in your VTC? Where, SA= Strongly Disagree, A= Agree, N=Neutral, D= Disagree, SD= Strongly Disagree

S/NO	ITEM	SA	A	N	D	SD
i	The instructors are adequate in your VTC					
ii	All instructors in your VTC have attended in-service course					
iii	All instructors in your VTC have attended a professional training					
iv	Instructors in your VTC usually go for industrial attachment to be abreast with new technologies					
v	All instructors in your VTC have adequate work experience					
vi	All Instructors in your VTC have pedagogical knowledge					
vii	All instructors in your VTC have ICT or computer skills					

**PART C: influence of financial resources on trainees’ acquisition of vocational skills**

10. The table below shows influence of VTCs adequacy of financial resources on trainees’ acquisition of vocational skills, tick according to your level of agreement. (Please indicate by using Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D), Strongly Disagree (SD) )

S/No	STATEMENT	SA	A	N	D	SD
I.	The VTC has adequate financial resources to offer quality training					
II.	There VTC has viable income generating activities which enables trainees to be exposed to more practical work					
III.	The parents pay extra levies in time to procure furniture					
IV.	The VTC receives government tuition subsidy consistently to procure instructional materials					
V.	The VTC receives bursaries from ward fund					
VI.	VTC sponsors provide financial assistance for tools and Equipment					
VII.	The VTC receives grants from development partners for construction of standard infrastructure					
VIII.	VTC’s financial resources influences trainees acquisition of vocational skills					

10b. In your own opinion, how do availability of financial resources (position) in 10a influence acquisition of vocational skills by trainees in your vocational training centre (VTC)

- i.** .....
- ii.** .....
- iii.** .....
- iv.** .....

**PART D: Influence of training facilities on trainees' acquisition of vocational skills in VTCs**

11a. The following are some of the training facilities influencing trainees' acquisition of vocational skills in VTCs. What is your level of agreement? Use a scale where SA- strongly agree, AG- agree, NE-neutral, DA- disagree and SD-strongly disagree.

S/No	Statement	Level of Agreement				
		SA	AG	NE	DA	SD
I.	The VTC has adequate tools and equipment					
II.	The VTC has relevant tools and equipment					
III.	The workshops in your field are available and suitable					
IV.	Adequate and relevant instructional materials are provided					
V.	The class rooms are suitable and adequate					
VI.	The VTC's source of power relevant to the courses offered					
VII.	The VTC's furniture is adequate and suitable					
VIII.	The Tools and Equipment are adequate and up to date					
IX.	Training facilities influence trainees' acquisition of vocational skills					

11b. How does the adequacy of training facilities influence acquisition of vocational skills by trainees in your VTC?

- i. ....
- ii. ....
- iii. ....
- iv. ....
- v. ....

**PART E: Influence of instructional strategies on trainees’ acquisition of vocational skills in VTCs.**

12. The following are some of the instructional strategies influencing trainees’ acquisition of vocational skills in your VTC. What is your level of agreement? Use a scale where SA- strongly agree, A- agree, N- neutral, D- disagree and SD-strongly disagree.

S/No	Influence of instructional strategies on trainees’ acquisition of vocational skills VTCs.	Level of agreement				
		SA	A	N	D	SD
I.	Demonstration method is very common in your trade area					
II.	Project work is used in your trade area					
III.	Trainees are exposed to Work-based learning					
IV.	There is effective Problem-based learning					
V.	Lecture method is effectively used					
VI.	Learners in your VTC are given opportunity for field trips					
VII.	Simulation method is common in my trade area					
VIII.	Instructional strategies influence trainees’ acquisition of vocational skills in a VTC					

**PART F: Trainees’ acquisition of vocational skills in Public VTCs**

13. Kindly by use of a tick mark (√), basing on VTCs resources status rate your trainees practical competency/ skills acquisition.

- Low ( )
- Moderate ( )
- High ( )

14. Please suggest possible ways in which a vocational training centre (VTC) can enhance acquisition of vocational skills by its trainees.

- i.** .....
- ii.** .....
- iii.** .....
- iv.** .....
- v.** .....

**Thank you for your contribution**



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Ref. No. **NACOSTI/P/18/73586/21565**

Date: **14<sup>th</sup> March,**

Josephine Muthike Maingi  
Masinde Muliro University of Science  
And Technology  
P.O. Box 190-50100  
**KAKAMEGA.**

**RE: RESEARCH AUTHORIZATION**

Following your application for authority to carry out research on *“Institutional factors influencing acquisition of vocational skills by trainees in Public Vocational Training Centres in Kakamega County, Kenya,”* I am pleased to inform you that you have authorized to undertake research in **Kakamega County** for the period ending **March, 2019.**

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

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

**BONIFACE WANYAMA  
FOR: DIRECTOR-GENERAL/CEO**

Copy to:

The County Commissioner

**IS TO CERTIFY THAT:**  
**JOSEPHINE MUTHIKE MAINGI**  
**ASINDE MULIRO UNIVERSITY OF**  
**SCIENCE AND TECHNOLOGY, 0-50409**  
**WAGAI, has been permitted to**  
**conduct research in Kakamega County**

**Permit No : NACOSTI/P/18/73586/21565**  
**Date Of Issue : 14th March,2018**  
**Fee Received :Ksh 1000**

**Research topic: INSTITUTIONAL FACTORS**  
**IMPACTING ACQUISITION OF**  
**TECHNICAL SKILLS BY TRAINEES IN**  
**TECHNICAL VOCATIONAL TRAINING CENTRES**  
**IN KAKAMEGA COUNTY, KENYA**



**Research period ending:**  
**March,2019**

.....  
**Researcher's**  
**Signature**

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

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