

**FACTORS AFFECTING QUALITY OF EDUCATION AND TRAINING IN  
PUBLIC TECHNICAL INSTITUTIONS : A CASE STUDY OF KABETE  
TECHNICAL TRAINING INSTITUTE.**

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A Research Project submitted to the School of Human Resource Development in Partial Fulfilment of the Requirements for the Award of the Degree of Executive Masters in Business Administration of the Jomo Kenyatta University of Agriculture and Technology.



**MARCH 2012**

**Declaration**

This project is my original work and has not been presented for a degree in any other university.



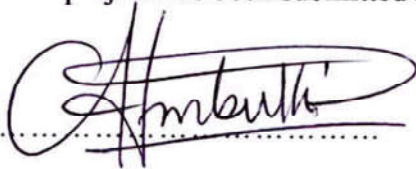
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HD334-033-0224/2011

31/03/2012

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This project has been submitted for examination with our approval as university supervisors.



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## **DEDICATION**

To my parents Mr. and Mrs. Mwangi wa Wangai for continually impressing on me the need for education.

To my spouse Mercy, our children : Eric, Rose, Mary and Lynnet for their love, support, understanding and encouragement during the preparation of this project

## **ACKNOWLEDGEMENT**

First, I would like to commend my supervisors Dr. Ombuki and Mr. Muturi for their able guidance and patience that made this project a reality.

Secondly, Dr. Wawire, my business research methods lecturer for the initial sensitization and the Cohort 10 weekend class Lectures and colleagues for freely sharing ideas and experiences in the course of writing this project.

Finally, special appreciation goes to the Principal, Staff and Students of the Kabete Technical Training Institute for enabling me obtain the necessary data for the project.

May the Almighty bless you all abundantly.



## ACRONYMS

<b>CATs</b>	- Continuous Assessment Tests
<b>CIDA</b>	- Canadian International Development Agency
<b>EACE</b>	- East African Certificate of Education
<b>EFA</b>	- Education For All.
<b>GCE</b>	- General Certificate of Education
<b>HOD</b>	- Head of Department
<b>ICT</b>	- Information and Communications Technology
<b>JICA</b>	- Japanese International Development Agency
<b>KESSP</b>	- Kenya Education Sector Support Programme
<b>MOST</b>	- Ministry of Science and Technology
<b>MOEST</b>	- Ministry of Education, Science and Technology
<b>NIC</b>	- Newly Industrialized Country
<b>TIQET</b>	- Totally Integrated Quality Education and Training.
<b>TIVET</b>	- Technical, Industrial, Vocational Educational and Training.
<b>TIVETA</b>	- Technical, Industrial ,Vocational Education and Training Authority
<b>TVET</b>	- Technical, Vocational Education and Training Authority.
<b>TTI</b>	- Technical Training Institute
<b>SWA</b>	- Sector Wide Approach
<b>UNESCO</b>	- United Nations Educational, Scientific and Cultural Organization.

## OPERATIONAL DEFINITION OF TERMS

<b>Head of department:</b>	An employee of the TSC appointed to head a department in a school or college, performs middle level management duties.
<b>Technical education:</b>	An education system comprising mainly of practical subjects.
<b>Technical training:</b>	Process of learning the practical skills that one needs in order to perform a job.
<b>Trainees:</b>	Students enrolled in TTI's pursuing various programmes of study
<b>Trainers:</b>	Teachers/lecturers employed by the TSC or BOG teaching various courses of study
<b>Principal:</b>	A head teacher employed by TSC in a school or a college who performs strategic management roles together with the BOG as its secretary.

## ABSTRACT

As the labour market becomes more specialized and the economies demand higher levels of skills, governments and businesses are increasingly investing in the future of technical education and training through publicly funded training organizations and subsidized traineeship for businesses. In Kenya, post secondary technical training is usually provided by the technical training institutes, institutes of technology or through organizational training schools (UNESCO, TVET Seminar Report, 2005). The need of the industries is continually changing as a result of the varied demands from their customers and the fact that the customers are becoming increasingly aware of their rights. The training institutions therefore have to ensure that their trainees are equipped with the requisite attitude, skills and knowledge to enable the industry meet the customers needs. The general objective of the study was to examine the factors affecting the quality of technical education and training offered by the public institutions. Kabete Technical Training Institute, one of the oldest training institutions, was the focus of the study. The target population comprised of Heads of Department, Lecturers and Students. Stratified and random sampling was used while questionnaires were utilized for data collection. For analysis, charts and descriptive statistics were adopted. A basic assumption was that the respondents would give accurate and honest responses to the questionnaires. Kenya's development blueprint director (vision 2030) has observed that middle - level human resources are extremely important to the realization of the vision. This human resource is mainly trained at the Technical Training Institutions. The expertise of these trainees is highly required as a university engineering graduate needs support of five (5) middle – level college graduates and thirty (30) craftsmen or artisans (TIVET,2003). The study showed that there is need to upgrade the workshop and laboratory facilities and define minimum resources that an institution should have to ensure minimum quality of education and training. Trainers should have a minimum industrial experience during the initial appointment and be expected to go for in-service industrial attachments so as to keep pace with the dynamics in the industry and enhance the quality of training. Funding of the institutions needs to be increased to enhance the quality of education and training and improve the trainees competitiveness both as entrepreneurs or employees. At the same time, industrial linkage should be addressed by institutions through nurturing collaborative ventures of mutual benefits with the industry





## Table of contents

Declaration	i
Dedication	ii
Acknowledgement	iii
Acronyms	iv
Operational definition of terms	v
Abstract	vi
Table of contents	vii
References	ix
Appendices	ix
List of figures	x
List of tables	xii
<b>Chapter One - Introduction</b>	<b>1</b>
1.0 Introduction	1
1.1 Background	1
1.1.2 Objectives of technical training	4
1.2 Statement of the problem	4
1.3 Research objectives	5
1.4 Research questions	5
1.5 Justification of the study	6
1.6 Scope of the study	6
1.7 Limitations of the study	7
<b>Chapter Two - Literature review</b>	<b>7</b>
2.0 Introduction	7

2.1	Theoretical review -----	7
2.1.1	Workshop and laboratory facilities -----	7
2.1.2	Trainers -----	8
2.1.3	Funding -----	9
2.1.4	Industrial linkage -----	11
2.2	Critique of existing literature -----	12
2.3	Summary -----	12
2.4	Conceptual framework -----	14
<b>Chapter Three - Research methodology -----</b>		<b>15</b>
3.0	Introduction -----	15
3.1	Research design -----	15
3.2	Target population -----	15
3.3	Sample and sampling technique -----	16
3.4	Instruments -----	16
3.5	Data collection procedures -----	16
3.6	Data processing and analysis -----	17
<b>Chapter Four - Data analysis and presentation -----</b>		<b>18</b>
4.0	Introduction -----	18
4.1	Data analysis and presentation -----	18
4.2	Questionnaires return rate -----	19
4.2.1	Workshop and laboratory facilities and the quality of technical education and training -----	20
4.2.2	Industrial experience of trainers and the quality of technical Education and training -----	22
4.2.3	funding of TTIs and the quality of technical education and training ---	24
4.2.4	Institution / Industry linkage and the quality of technical education and training -----	26
4.2.5	Respondents demographics -----	28

4.2.6 Subjective responses -----	44
<b>Chapter Five - Summary of findings, conclusions and recommendations -----</b>	<b>46</b>
5.0 Introduction -----	46
5.1 Summary -----	46
5.1.1 Workshop and laboratory facilities -----	46
5.1.2 Industrial experience of trainers -----	46
5.1.3 Funding of TTIs -----	47
5.1.4 TTIs /Industry linkage -----	47
5.2 Conclusions -----	47
5.3 Recommendations -----	48
5.4 Suggested further study -----	48
<b>References -----</b>	<b>49</b>
<b>Appendices -----</b>	<b>51</b>
Appendix 1 – HODs Questionnaires -----	51
Appendix 2 – Trainers Questionnaires -----	55
Appendix 3 – Trainees Questionnaires -----	58

## List of Figures

Fig. 2.1	Conceptual Framework -----	14
Fig. 4. 1	HODs assessment of workshop and laboratory facilities -----	20
Fig. 4. 2	Trainers rating of workshop and laboratory facilities -----	21
Fig. 4. 3	Trainees rating of workshop and laboratory facilities -----	22
Fig. 4. 4	HODs industrial experience -----	23
Fig. 4. 5	Trainers industrial experience -----	24
Fig. 4. 6	HODs assessment of funding -----	25
Fig. 4. 7	Trainers assessment of funding -----	26
Fig. 4. 8	HODs assessment of industrial linkage -----	27
Fig. 4. 9	Trainers rating of industrial linkage -----	28
Fig. 4.10	HODs age distribution -----	29
Fig. 4.11	HODs teaching experience -----	30
Fig. 4.12	HODs administrative experience -----	30
Fig. 4.13	HODs academic qualifications -----	31
Fig. 4.14	HODs professional qualifications -----	32
Fig. 4.15	HODs rating of trainers and trainees -----	33
Fig. 4.16	Trainers age distribution -----	34
Fig. 4.17	Trainers teaching experience -----	34
Fig. 4.18	Trainers administrative experience -----	35
Fig. 4.19	Trainers academic qualifications -----	36
Fig. 4.20	Trainers professional qualifications -----	37
Fig. 4.21	Trainers rating of academic issues -----	38
Fig. 4.22	Trainees courses of study -----	39
Fig. 4.23	Trainees entry qualifications -----	40



Fig. 4.24 Trainees scholarship -----	41
Fig. 4.25 Trainees time-table flexibility -----	41
Fig. 4.26 Trainees library usage -----	42
Fig. 4.27 Trainees study grouping -----	43
Fig. 4.28 Trainees academic ratings -----	44



### **List of tables**

Table 3.1 Target population -----	15
Table 4.1 Questionnaire return rate -----	19
Table 4.2 Significance of scores -----	19

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.0 Introduction**

This chapter contains the background information on technical education and training which leads to the objectives of the study and the subsequent research questions. The chapter goes further to highlight the justification and the scope of the study.

#### **1.1 Background**

Technical education and training in Kenya is manifested in a number of key documents including reports, commissions, committees, working parties, development plans, sessional papers and international declarations (Rapid Appraisal of TIVET in Kenya, 2003). Following the recommendations of Phelps - Stokes report of 1924 the first vocational training school was opened the same year at the Jean school, Kabete. The school was known as the 'Native Industrial Training Depot (NITD) which has since evolved to the current Kabete Technical Training Institute. Thereafter, not much occurred in this area until the 1950s when a few more technical schools were opened in Thika, Sigalagala, Mawego, Kaiboi and Machakos. There were also two technical high schools for Asians, one in Nairobi and the other in Mombasa alongside Mombasa institute of Muslims education (MIOME) mainly for Arabs. The two institutes are the current Nairobi technical institute and the Mombasa polytechnic university college respectively.

The report on education commission of 1964 (The Ominde Report) abolished the segregation of schools on race basis and upgraded trade schools to technical secondary schools. Between 1966 and 1975, a few more technical schools were established by church organizations and the government. Kenya polytechnic was established in 1961 to train middle – level manpower after the conversion of Royal Technical College (currently Nairobi University) into a constituent college of the University of East Africa. The polytechnic and MIOME, later renamed Mombasa

Technical Institute were upgraded to national polytechnics in 1975 to cater for additional capacity in line with the recommendations of the Ominde report. During this time, Kenyan industrial sector was experiencing rapid expansion and there were no unemployed technical graduates as most of the national polytechnics trainees were sponsored by employers.

The presidential working party on the second university in Kenya (The Mc Kay report, 1981) made three crucial recommendations in favour of TIVET, namely; the second university should be a technical university, the need to expand vocational education in order to increase training opportunities of the increasing number of school leavers and the need to enrich the school curriculum with technical subjects. Two major recommendations were the need to strengthen quality assurance department of the directorate of technical training and to conduct frequent needs assessment to enable TIVET curriculum meet the changing technological needs.

Further, the report of the commission of inquiry into the education system in Kenya by Davy Koech (ROK, 1999) observes that the quality of TIVET training is proportional to the funding of various institutions and departments. The report highlights the importance of quality assurance but notes the high expenses required to ensure extensive and quality supervision and inspection of the training and industrial attachment

One of the most comprehensive reviews of the education sector is the report of the Presidential Working Party on Education and Man- Power Training for the Next Decade and Beyond chaired by James Kamunge (ROK 1988) and accepted by the government through sessional paper number 6 of 1988. The report noted the increasing demand for training and recommended the opening up of the training to self - sponsored students. This resulted in increased enrolment of trainees resulting in stressing the institutional facilities and coupled with reduced government funding, this had a negative impact on the quality of the training. Kamunge's recommendation was a good one for enabling more young Kenyans access technical education and training but



failed to emphasize the need for increased financing of the training institutions to sustain quality.

Education is globally acknowledged as a major tool for transforming and empowering youth with skills and knowledge to become useful members of the society. Indeed, education in Kenya is considered key to sustainable development. This augurs well with the Bonn Resolution of October 2004 which noted that TVET is the 'master key' for alleviation of poverty, Promotion of Peace and conservation of the environment in order to improve quality of human life and promote sustainable development. The government has a challenge to provide further quality education and training for young people in readiness for the world of work. Thus, TIVET programmes that adequately respond to demands of the labour market, both locally and internationally are central to the effort to equip the youth with work skills that will enable them escape the trap of poverty and contribute to the community's economic well – being.

(UNESCO, TIVET sub – regional seminar report, 2005)

It is worth noting that recommendations and intentions spelt out in various fora have not been acted upon. There is need to follow up on recommendations to move the country to the next level, more so in Kenya in order to actualize the aspirations as currently espoused by the vision 2030. This will enable the country overcome the devastating effects of disease, stigma and the indignity of poverty and at the same time enhance the country's international competitiveness.

### **1.1.2 Objectives of technical training.**

The objectives of technical training are to develop skills which will be responsive and relevant to the country's manpower requirements at the middle level; prepare the trainees so that they can enter the world of work with confidence for either salaried employment or self-employment and impart adequate skills which will enable trainees perform satisfactorily at the various job placements commensurate with their training.

## **1.2 Statement of the problem.**

As the labour market becomes more specialized and economies demand higher levels of skill, government and business are increasingly investing in the future of technical education through publicly funded training organizations and subsidized traineeship initiatives for business. In Kenya, post-secondary technical training is usually provided by the technical training institutions and institutes of technology or by organizational training schools.

Public TTIs have a major challenge in that the funding is limited due to the many competing needs of government finances posing a challenge in maintaining the expected standards of quality. Technical education and training is an important component of the economic development of any country. In Kenya, as the country aspires to achieve the Newly Industrialized Status by the year 2030, technical training calls for more attention (ROK, 2007). The graduates, from the training institutions are expected to have acquired knowledge and skills to enable them readily fit in the job market or venture into the informal sector. The more entrepreneurial ones may start their own businesses and in the process create job opportunities for other citizens. However, due to the continuously changing needs of the industry, feedback shows some shortcomings in the quality of TTIs graduates which can be attributed to the internal and external environments affecting many of these institutions. The purpose of this study is therefore to examine the factors affecting the quality of technical education and training offered by the public technical training institutions: A case study of Kabete Technical Training Institute.

## **1.3 Research objectives**

The general objective is to examine the factors affecting the quality of technical training.

The specific objectives are:

- 1). To find out the extent to which workshop and laboratory facilities affect the quality of training in TTIs.
- 2). To determine the effect of industrial experience of the trainers on the quality of training in TTIs.
- 3). To find out the effect of funding of the TTIs on the quality of training.
- 4). To find out the effect of the industrial linkage on the quality of training in TTIs.

#### **1.4 Research questions.**

- 1). To what extent does the workshop and laboratory facilities affect the quality of training in TTIs?
- 2). How does the industrial experience of the trainers impact on the quality of training in TTIs?
- 3). How does the funding of the public TTIs affect the quality of training?
- 4). What is the effect of industrial linkage on the quality of training in public TTIs?

#### **1.5 Justification of the study**

The findings of the study will highlight the current shortcomings in the quality of technical training to enable the government which is the main financial of the public training institutions make appropriate decisions regarding the future of these institutions. The findings are also expected to induce the industries to play bigger roles in the running of the technical training institutions as they are the main users of the institutions' products. At the same time, the findings are expected to urge the trainees to be innovative in terms of relating what is available in the institutions to what they are likely find in industries.



Technical education and training is the key to achievement of the vision 2030 and to effectively do this, the quality of the workforce is an important component. In addition, high quality workers will enhance Kenya's competitiveness in the global economy. The fact that industries have to take the TTI graduates through on-job training points to some mismatch of the training offered and the needs of the industry (Report of Rapid Appraisal of TIVET, 2003), thus, highlighting the need for collaboration between the training institutions and the industry to produce the desired product.

### **1.6 Scope of the study**

The study focused on Kabete technical training institute, the oldest training institute and the respondents were the heads of departments, lecturers/tutors and students. The history of the institute dates back to 1924 when it was established as the Native Industrial Training Depot (NITD) to the current Technical Training Institute status.

### **1.7 Limitations of the study**

The study relied on primary data that was collected through questionnaires administered to respondents, therefore the accuracy and reliability depended on their willingness and honesty. The HODs and trainers are public servants and hence had to be assured that the data was meant for academic purposes to remove fears of future victimisation.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

This chapter addresses previous studies in the area of technical education and training in Kenya.

The review derives perspective from the study and develops conceptual framework that would be employed in the study guiding the researcher. It also provides information on technical education and training in Kenya. Technical training falls under TIVET in the category of middle-level tertiary colleges but unlike other educational sub-sector like primary and secondary school, teacher training colleges and universities; TIVET education in Kenya tends to be uncoordinated, heterogeneous and incomplete. To a large extent, TIVET is invincible despite its crucial role in the provision of middle- level manpower necessary for industrial transformation and Kenya's economic growth (report of rapid appraisal of TIVET, 2003)

#### **2.1 Theoretical review**

##### **2.1.1 Workshop and laboratory facilities**

In most TTI's the physical facilities and equipment are inadequate and poorly maintained not to mention lack of preventive maintenance. Most of the equipment were donated at the time of the establishment of particular institutions. (Report of the Ministerial Committee on Problems facing National Polytechnics and TTI's, April 2003)

The history of Kabete Technical Training Institute dates back to 1924 implying that most of the equipment were donated at about the same time. Thus, most of the equipment are obsolete and past their economic use period. This complicates the acquisition of spare parts as the equipment may have ceased being produced several years back. At the same time, a complication may arise in sourcing technicians competent in maintaining such equipment.



Further, training institutions do not have sufficient supply of teaching material for practice due to under provision in terms of grant- in - aid. The cost of teaching materials is very high and poses a big challenge to the administration of these institutions. The situation is aggravated by most relevant technical texts being unavailable locally and where available the costs are out of reach of most trainees. In accordance with the recommendations of ‘the presidential working party on education and manpower training for the next decade and beyond’ (republic of Kenya, 1998); TIVET institutions should be provided with adequate facilities, equipment and materials for effective training. Similarly, Eshiwani (1993) in his study of factors affecting performance of primary and secondary schools in western Kenya found out that schools with good facilities were performing well. From the foregoing, there is a strong argument that the equipment and facilities in workshops and laboratories of TTIs will impact on the quality of the training offered.

### **2.1.2. Trainers**

Gardner (1964) argued that the quality of education can be measured in terms of achievement of goals set for a particular education system. In particular he pointed out that teachers, administration and physical infrastructure enhances the achievement of the goals Eshiwani(1983) highlighted school resources, management, teachers and learners characteristics are determinants of school achievement. Further, in a study carried out in Pakistan (Hopkins et al 1997) it was noted that teachers can introduce new methods in their teaching, thus monitoring the learners for better performance.

Heads of departments assist in school management and are responsible for overall departmental management and coordination (Mbithi 2007). HODs are responsible for promoting efficiency as middle level managers. They also supervise and conduct departmental quality assessment of the course units, the teaching regularity in conformation with the curriculum. HODs are expected to be effective as public TTI’s are administered through a departmental setting.

Quality of education and training to a large extent is dependant on the teacher/lecturer/trainer effectiveness. The minister for education in 1994 stated that in education and training the teacher is in second position after the learner in terms of importance (Kombo, 1998). This implies that teachers/lecturers remain one of the most important resources influencing the quality of education and training. Teaching force is a particularly important factor in the education system as qualified and motivated teachers are a prerequisite for the promotion of higher achievement among learners (Kimalu et al 2001)

Sogomo (2000) stated that a country is as good as its education system and the education system is as good as its teachers. Thus, the quality of the teachers is critical for the quality of education that learners achieve. TTI's train for the industry and hence for the lecturers to be efficient they need industrial experience and exposure. High quality training requires trainers having a deep knowledge of the subject for there is no substitute (US, Education Department 2000) Trainees at TTI's should therefore ideally be trained by lecturers /tutors with industrial experience backed up by the necessary academic background. Lecturers/tutors attitudes, classroom practices and presentations have strong bearing on the trainees performance. (Rowland, 1992) observed that good presentation is an ingredient of success in the education and training process. Lecturers being able to clearly explain, ask questions and guide trainees to a solution are all necessary skills needed to improve quality.

### **2.1.3 Funding**

Public technical training institutions are mainly funded through government grants; donor funding (both bilateral and multilateral); tuition fees paid by trainees; Production units / part – time / parallel programmes and training levies

(Report on Ministerial Committee – April 2003)



Government funds have many competing needs and financing education is one of them. Training institutions have expanded resulting in increased operational costs while due to numerous needs of government funding, the education and training funds have reduced over the years, because of the need of a country to have a well educated and trained manpower for industry the government needs to review the priorities regarding funding in the TIVET sector in order to accelerate the movement of Kenya towards envisaged newly industrialized country status by 2030.

Assistance from the development partners has been through the provision of physical facilities to individual institutions or by offering development opportunities to staff in training institutions. The most prominent development partners are UNESCO, British council, European Union, GTZ, JICA, CIDA and SIDA. At times the donors (development partners) have also provided books and equipment for training purposes; however this support has gradually reduced as technical education training expanded and in many cases it is currently non- existent.

Tuition fees are the main source of funding and have remained consistent since 1997 irrespective of the cost of learning and inflation. The government regulates the fees the training institution charge in order to ensure that as many as possible qualified trainees are able to benefit. This poses a challenge to the institutional administration because in most cases the fees charged are not at par with the unit cost of training. The 'Kamunge report' (Republic of Kenya, 1988) opened up the training opportunities in TTI's to those who could afford as opposed to the previous setting where trainees had to be sponsored by organizations, either private or public. This had a net effect of increased demand in terms of enrolment subjecting the available resources to added pressure. The strategy was to get additional financing for education with the net result of opening up many training opportunities without a commensurate expansion of the training resources.

Production units/ part-time programmes success as a source of funding depends largely on the

marketing abilities of a given institution and the location. Production units have assisted in bridging the budgetary gaps in some institutions. The directorate of industrial training (DIT) charges a training levy from the organizations which supports apprenticeships and management trainees but the levy rarely supports technical training institutes' trainees. The production units are meant to increase institutional financial resources, increase the training opportunities locally, enable skills improvement, encourage innovations and creativity and motivate staff.

The training levy administered through DIT has been used to support a few women trainees pursuing technical training in the engineering field. This was through special arrangement as the levy is administered under the DIT in the ministry of labour and manpower development, while the TTI's are under the ministry of higher education, science and technology. Thus, there is a need to harmonize the management of technical education and training to simplify and fasten the decision making process on issues especially touching on policy. In 2005, the government working together with development partners through SWA developed KESSP where six major investment programmes were planned for implementation under the TIVET sub-sector of which DTT under MOST was the lead agency. One of the programmes was the establishment of TIVET centres of excellence across the country. The objective was to attain the mission of enhancing quality, relevance and access to TIVET. ( TIVET investment manual, MOST 2007)

#### **2.1.4 Industrial linkage**

Industrial linkages are organized into zones for the harmonization and coordination of industrial attachment for trainees in public technical training institutions. The zones are named Central (serving Nairobi and surrounding areas), Mountkenya , Western, Riftvalley and the Coast regions. However, not all trainees are able to secure attachment places. Emphasies need to focus on the follow-up by the training institutions to show the importance of the hands-on experience that the trainees are exposed to.



A ministerial committee (MOEST, April 2003) noted that some industries are reluctant to accept trainees for attachment while others require the trainees to be insured, some demand payments for offering places with other organizations assigning tasks unrelated to the trainee's area of study. The committee further noted that the attachment assessment tools differ from one institution to another. The industrial exposure needs appear to be directed to the trainee only. This needs to cover the trainers also so that as they deliver in lecture rooms, they be in a position to relate the theory and current practice appropriately.

## **2.2 Critique of existing literature**

Most of the available literature dwells on general education issues, on matters touching on the areas such as performance, school management and disturbances in schools/colleges. The issue of quality of the education and training may have a bearing on the issues dealt with by earlier studies but has not been given the prominence it deserves, more so when we bring in the element of competitiveness in the industrial setting. Earlier researcher's have done a commendable job in terms of their areas of study but I strongly feel that incorporating the element of quality will heavily support the various earlier findings and recommendations in the area of technical education and training. The researcher intends to highlight and show the impact of the independent variables considered on the quality of education and training in TTI's. It is anticipated that the new research findings if implemented would result in more effective education and training at the TTI's. This would be expected to fast track the attainment of Kenya's NIC status.

## **2.3 Summary**

In order to meet the objectives of technical education and training, the development of quality skills that will be responsive and relevant to the Kenya's manpower needs at the middle level is vital. Trainees who have gone through quality education and training enter the world of work with added confidence and are likely to be more innovative in their undertakings. Some enter as either

self-employed entrepreneurs while others take salaried employment and either way, with a quality training background they are more likely to perform better. At the government level, there is justification to invest a little more in the technical training institutions as a seed for future bumper harvest as a nation resulting from the improved production coupled with better quality products leading to enhanced country's competitiveness in the global economy.

## 2.4 Conceptual framework

INDEPENDENT  
VARIABLES

DEPENDENT  
VARIABLE

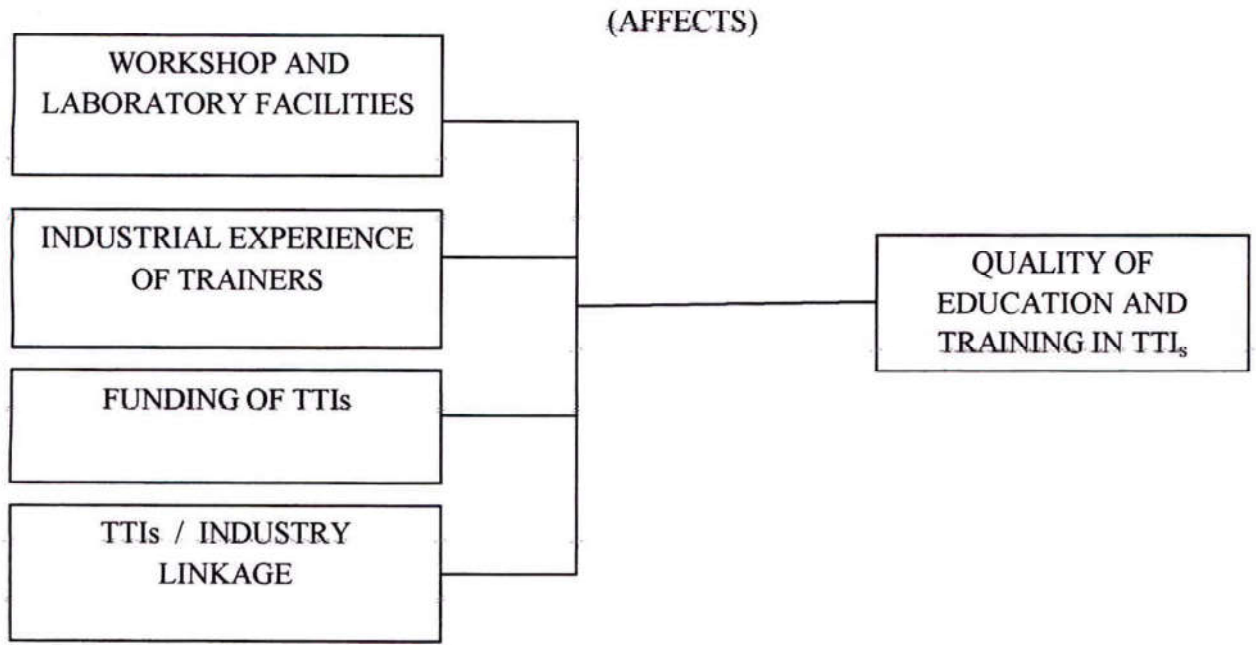


Fig.2.1 conceptual framework

Source: Researcher (2011)

**CHAPTER THREE**  
**RESEARCH METHODOLOGY**

**3.0 Introduction**

This chapter describes the methodology used in the study. The chapter also highlights the population of interest, the sampling design and techniques, the instruments used, data collection procedure and the subsequent analysis

**3.1 Research design.**

The research design is the blueprint for the collection, measurement and analysis of data (Kothari, 2003). Descriptive survey design was adopted while data was collected mainly through questionnaires. It was appropriate as it enabled description, recording, analyzing and reporting the existing or previous condition.

**3.2 Target population**

The target population comprising HODs, trainers and the trainees was as shown in table 3.1

TABLE 3.1 Target population

CLASS	POPULATION	TARGET	%
HODs	13	8	62
TRAINERS	50	170	29
TRAINEES	300	1750	17

**Source: Researcher (2011)**



### **3.3 Sample and sampling technique**

Simple random and stratified sampling procedure was adapted to draw a sample from the HODs, trainers and trainees. Simple random sampling was adopted to ensure that each respondent had an equal opportunity of being selected while stratification was chosen due to the heterogeneous nature of the population. A selected group of respondents to a large population constitutes a sample and the selection process refers to the sampling procedure (Kothari 2004) The target population comprised of HODs, lecturers and trainees of the Kabete technical training institute, one of the oldest institution having commenced in 1924.

Ogula ( 1995) suggested the time available and the cost involved dictate the sample size. A letter was written to the principal to facilitate the collection of data from HOD, lecturers and students. The study targeted 8 HODs, 50 lecturers and 300 students. (Gay, 1992) proposed 10% of study population would be adequate for descriptive study. Further (Bumlar, 1988) observed that the target population is the large population from whom sample population is selected.

### **3.4 Instruments**

Nachmias et al, (1976) pointed out that validity of research instruments can be determined by expert judgement, thus, the supervisors will ensure validity through their judgement. Principally, questionnaires were used and it was expected that the respondents gave honest and accurate responses. They were mainly administered through objective questions, however, open-ended questions were used to access personalized responses to clarify objective responses and support the formulation of recommendations.

### **3.5 Data collection procedure**

Questionnaires were administered to HODs, lecturers and trainees. In all cases initial part solicited for biographic data including the educational background. There were three questionnaires, namely:

first one for the HODs; second for the lecturers and the third one for the trainees. For the HODs and lecturers, there will be a section touching on the industrial experiences and professional qualifications. The trainee's questionnaire addressed time management; their perception of trainers' effectiveness and library usage.

### **3.6 Data processing and data analysis.**

The research used descriptive statistics such as frequencies, percentages, mean scores, variances and standard deviations. Initially, the gathered data using the various instruments, transcripts and schedules should be validated, edited and coded (Mugenda and Mugenda, 1999). The validation process determined the response rate of the questionnaires. The instruments were scrutinized to determine the completeness of responses and whether they had other shortcomings. Descriptive approach reinforced by frequency table was employed in the evaluation of each independent variable

## **CHAPTER FOUR**

### **DATA ANALYSIS AND PRESENTATION**

#### **4.0. Introduction**

This chapter gives the results of the data analysis collected for the study. The chapter commences with the analysis of the questionnaire return rate followed by the demographic data of the respondents and thereafter the relationship between the independent variables and the dependent variable. The data was obtained from the heads of departments, trainers and the trainees in line with the stratified sampling approach adopted

#### **4.1. Data analysis and presentation**

The data was obtained from Kabete TTI, the oldest institution in technical and vocational training which was the focus of the study. The institution was opened in 1924 at the Jean school Kabete better known as the 'native industrial training depot' (NITD). During the second world war (1939 – 1945), the institution served as a military barrack accommodating second world war soldiers. After the war, the school reverted to a school for trade courses for primary level graduates under the institute of education offering three-year courses at artisan level in masonry and carpentry, fitters, mechanics, welding and electrical installation. In 1968 to 1972 the institute offered City and Guilds of London institute examinations and a three-year East African Pre-technician Certificate of Kenya. Thereafter four-year programmes on basic engineering and building trade courses were adopted leading to East African Certificate of Education. In 1985 the school reverted to a TTI at the advent of the 8 – 4 – 4 system of education. Courses have been developed leading to the current Certificate and Diploma programmes.

Quantitative, qualitative and descriptive methods were employed. The quantitative data is objective, empirical in nature and focuses particular aspects of the situation or behaviour by picking relevant variables (Mugenda and Mugenda, 2003). The qualitative analysis on the other hand is subjective and was aimed at identifying points of convergence from the respondents. Descriptive methods were used in analysing data while pie charts together with frequency charts were used in the presentation.



#### 4.2. Questionnaires response rate

Questionnaires were used as the main tools for the acquisition of the data for the study and table 4.1. shows the questionnaires response rate

Table 4.1. Questionnaires Response Rate

	No. Distributed	No. Returned	% Response
Heads of Department	8	6	75
Trainers	50	31	62
Trainees	300	218	73

The questionnaire return rate was considered satisfactory since according to Peil (1995) a return rate exceeding 50% is considered a good response. Hence, as the return rate is over 60% in all cases, this was considered significant enough to enable the study establish the effect of the independent variables on technical education and training in public institutions

Table 4.2 shows the significance of the scores that were used during the study

Table 4.2 Significance of the scores

Score	Significance
5	Very good
4	Good
3	Satisfactory
2	Poor
1	Very poor

#### 4.2.1 Workshop and laboratory facilities and the quality of technical education and training

Fig. 4.1 shows that 67% of the HODs rated consultation regarding the acquisition of the facilities poor while 49% rated the available facilities satisfactory and effective. At the same time, 50% rated the maintenance of the facilities poor with 67% rating their competitiveness satisfactory to poor .

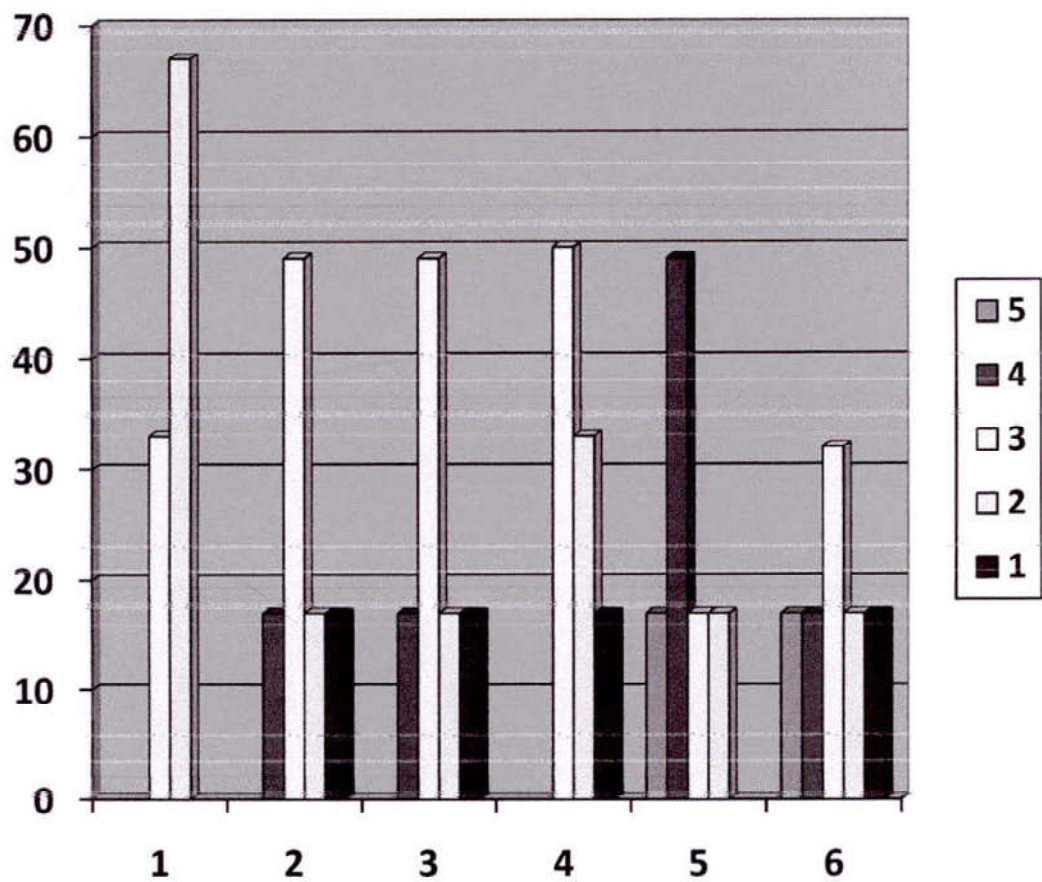


Fig. 4.1: HODs Assessment of Workshop and Laboratory Facilities

For the trainers, 50.2% of the respondents rated consultation during acquisition of the facilities poor; 51.4% rated the available facilities satisfactory; over 37% rated the effectiveness poor; over 44% and 36% rated the maintenance and appropriateness respectively poor while over 45% rated the facilities impact on performance poor as captured in figure 4.2

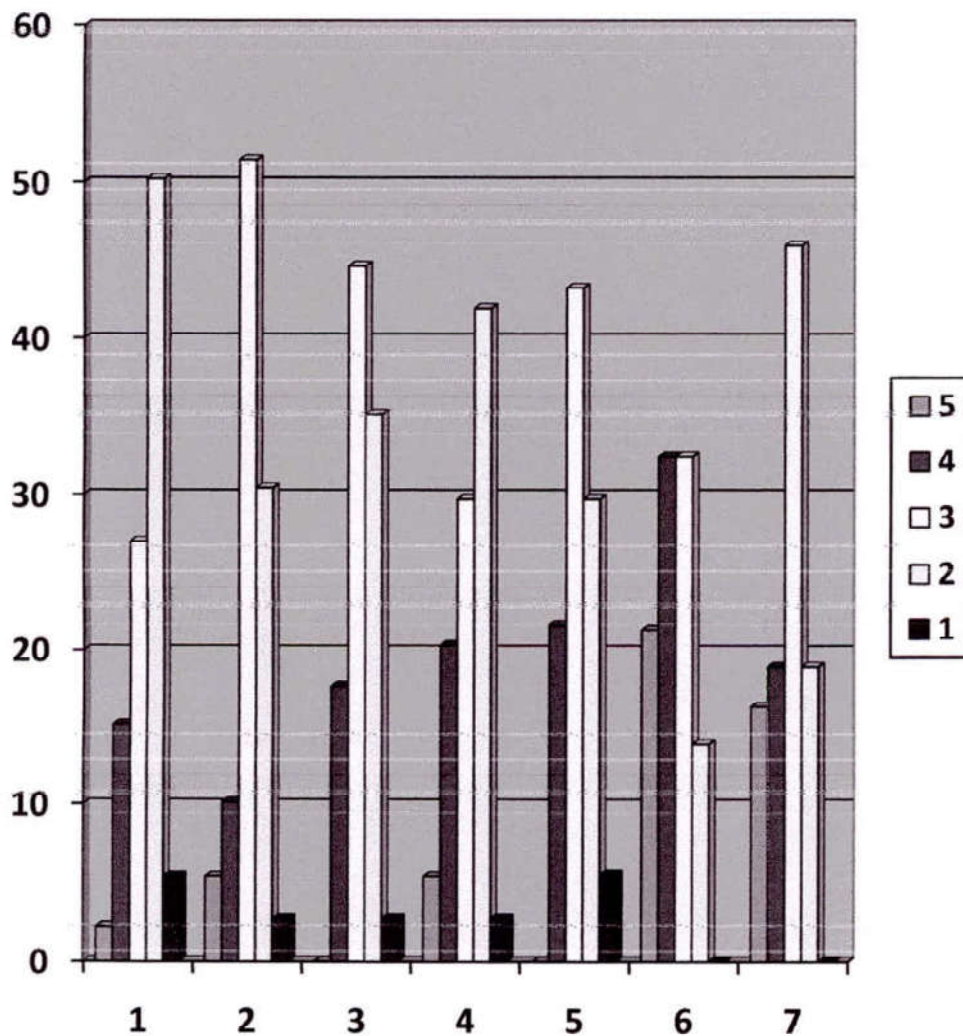


Fig. 4.2: Trainers Rating of Workshop and Laboratory Facilities



Fig. 4.3 shows the trainees rating of the workshop and laboratory facilities. Over 40% of the respondents rated the suitability, adequacy, maintenance and the trainers in practicals poor. This could be explained by the time lapses between ordering and delivery of teaching materials and generally the lengthy procurement processes.

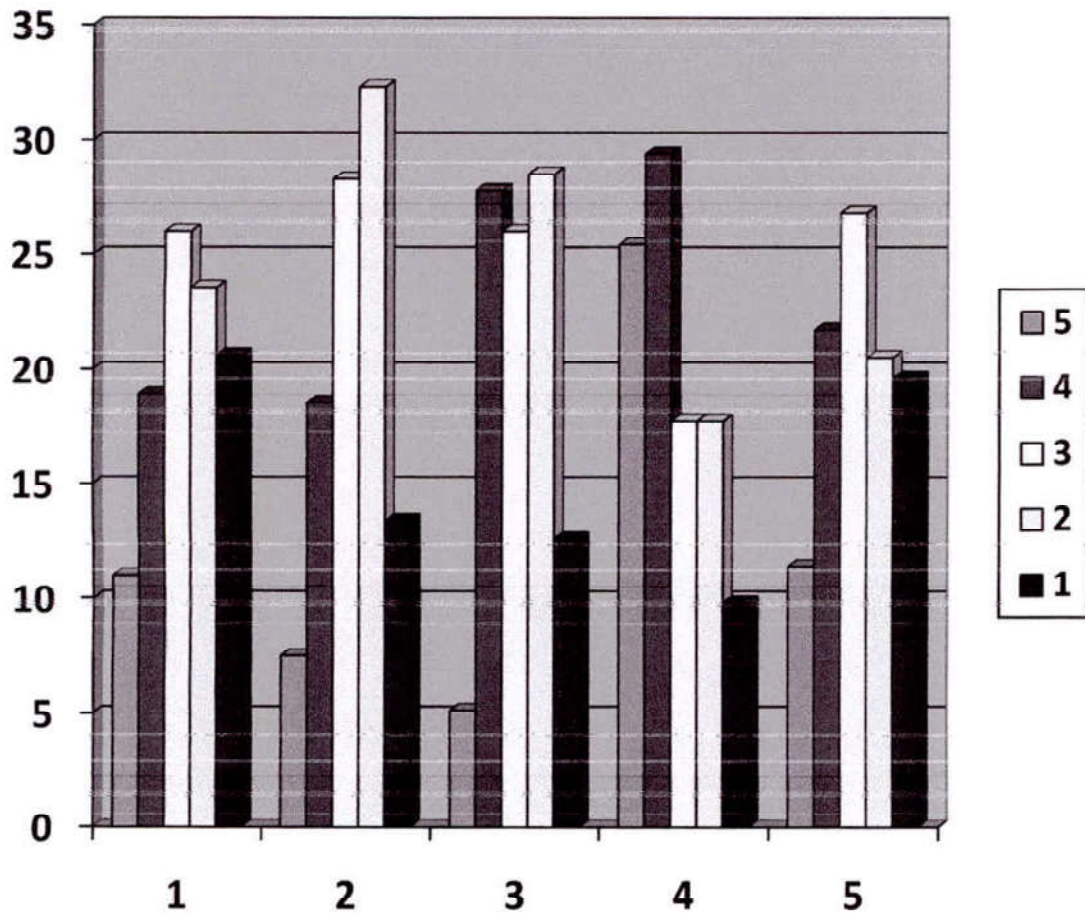


Fig. 4.3: Trainees Rating of Workshop and Laboratory Facilities

#### 4.2.2 Industrial experience of the trainers and quality of technical education and training

Fig. 4.4 shows that 33.3% of the HODs respondents did not have any industrial experience while the rest had between one and five years . This could be as a result of lack of emphases on industrial experience during the recruitment by the employer. At the same time those with industrial exposure had between one and five years

which could have been many years ago rendering the experience irrelevant to the current industry needs.

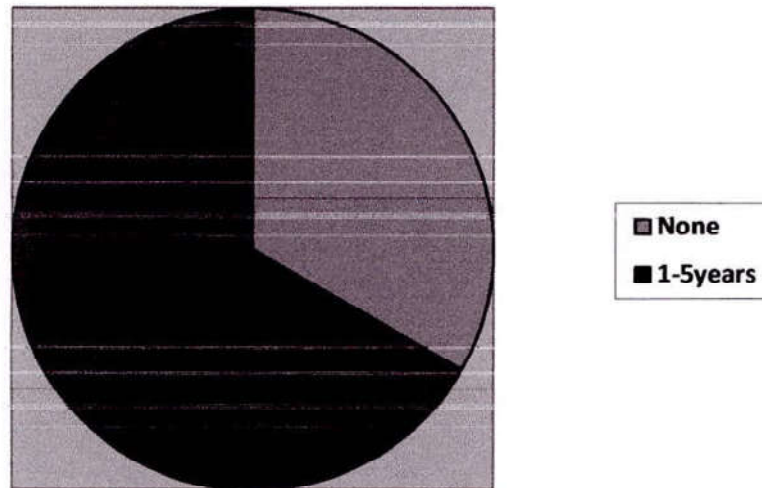


Fig. 4.4: HODs Industrial Experience

For the trainers, 55.9% of the respondents had none, 27% had between one and five years while 17.1% had between six to fifteen years as shown in figure 4.5. Again, this could be explained by lack of inclusion of this aspect in the recruitment policy. The recruiting agency should have a provision for identifying those with hands – on exposure in relevant skills.



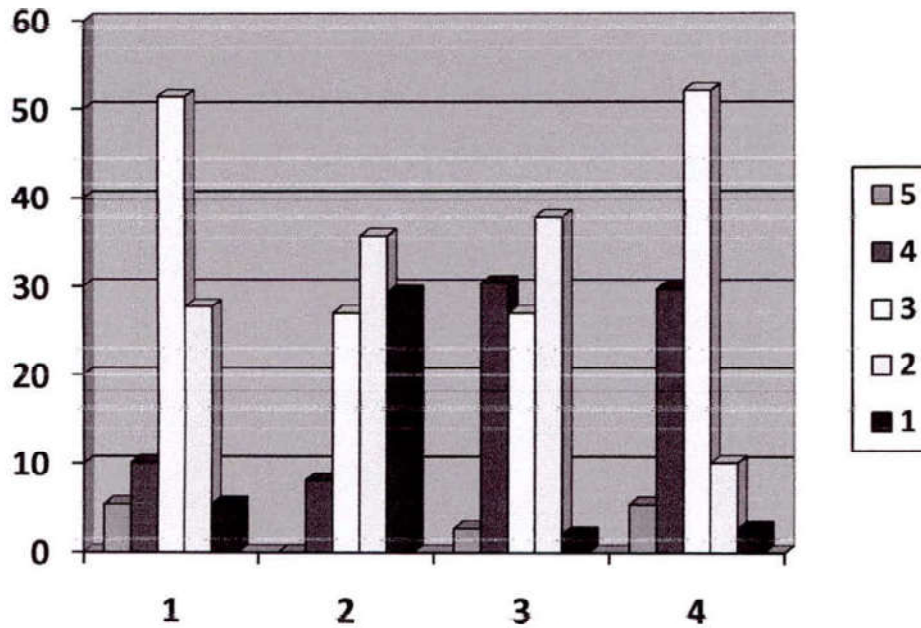


Fig. 4.7: Trainers Rating on Funding

From the subjective responses, the respondents observed that the institution should Provide market driven courses, engage in production units using skilled labour, improve part-time programmes by ensuring that they are market driven, identify development partners, establish consultancy services, diversify training programmes and patterns, aggressively market the income generating activities, collaborate with other higher institutions of education, solicit for improved funding from the government and source for scholarships.

#### 4.2.4 Institution / Industry linkage and the quality of technical education and training

Industrial linkage aspects were rated by the HODs as shown in figure 4.8. Departments industrial linkages and the effectiveness of the industrial collaboration's rating were split 50-50 between good and satisfactory while in general the industrial linkage was rated good by 83% of the respondents

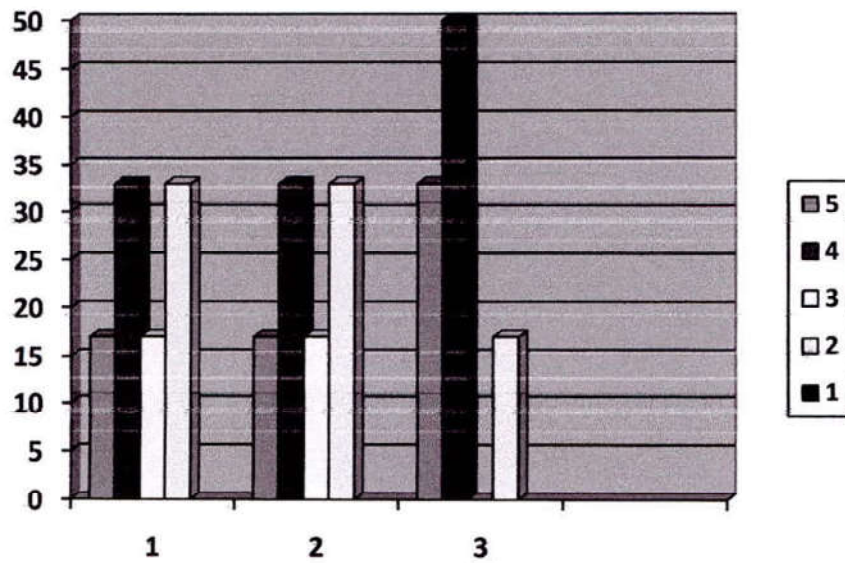


Fig. 4.8: HODs Assessment of Industrial Linkage

Fig. 4.9 shows the trainers rating of the industrial linkage with 40.5% and 47.5% of the respondents rating the industry / institution collaboration and section / industry linkage as satisfactory respectively. 67.5% rated the need for industrial experience very highly, an indication of the importance of this aspect in technical training.

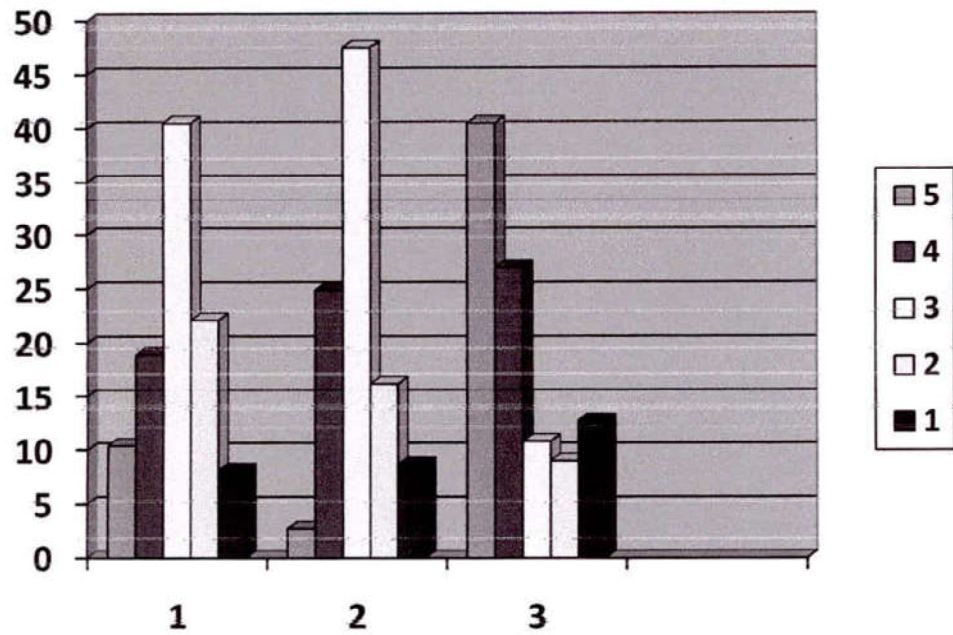


Fig. 4.9: Trainers Rating of Industrial Linkage

From the subjective questions, the respondents pointed out that there is need for establishing collaborations and attachments for both trainers and trainees, establishing constant and sustained communication with industries, institute's participation in workshops and exhibitions, inviting experts from the industry to deliver lectures, institute to secure attachment placements for trainees, training equipment to be upgraded to match those in the industry, Organizing educational visits to industry, establishing internship arrangements with industry, strengthen the industrial- liaison office, follow-up on the performance of the attached trainees, inviting industries during institution's social events, having open days for members of public, collaborating with industries through mutually beneficial consultancies, sensitize and recognize industries as important stakeholders and identifying areas where partnerships may be established

#### 4.2.5 Respondents demographics

HODs ages ranged from 31 to 50 years with 33.3% in the 31 to 40 age bracket while 66.7% were in the 41 to 50 years range as shown in fig.4.10. This could be explained by the fact that for one to be appointed a HOD, seniority is a

major consideration. This seniority in age may be assumed to be proportional to the teaching experience which should impact positively in the middle-level management of technical education and training leading to improved quality.

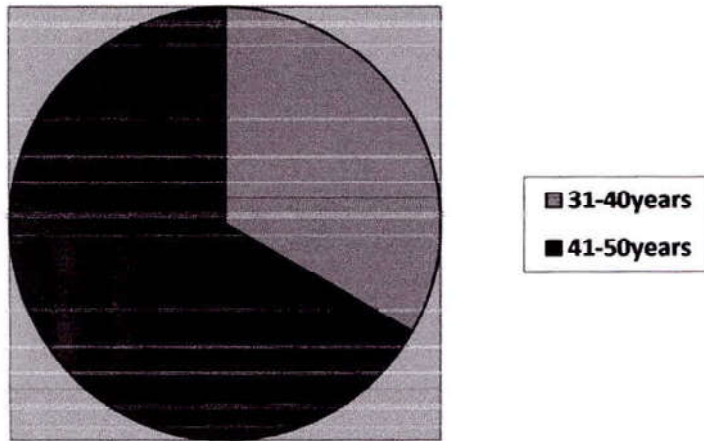


Fig. 4.10: HODs Age Distribution

Fig. 4.11 shows that 33.3% of the HODs had between 11 to 15 years teaching experience while 67.3% had a teaching experience of over 20 years . This further explains seniority in terms of teaching experience as a major basis for appointment to a HOD position.



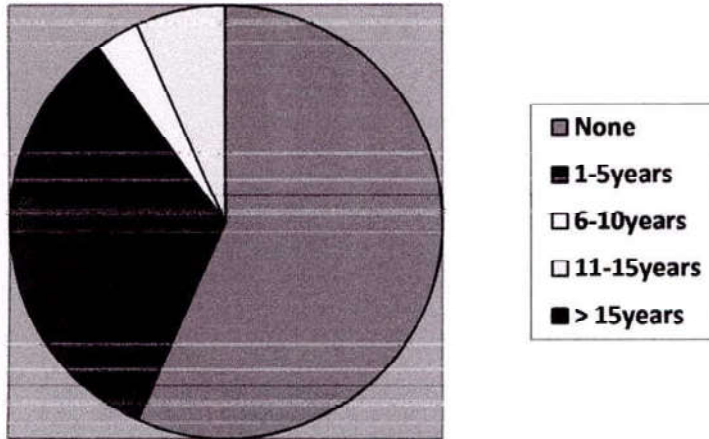


Fig. 4.5: Trainers Industrial Experience

In the subjective part of the questionnaire, the respondents observed that the recruiting agency should make industrial experience a requirement for appointment as it is vital for the trainer's attachment assessment. The respondents further noted the importance of industrial experience for practical training as it enables the acquisition of the necessary skills that are required by the trainees while at the same time enhancing the appreciation of the dynamic nature of the technology employed in the industry.

#### 4.2.3 Funding of TTIs and the quality of technical education and training

Fig. 4.6 shows the HODs rating of funding and other associated aspects. 66% of the respondents rated the departmental funding satisfactory while 17% rated the same poor and very poor respectively. Income generating activities were rated satisfactory by 49% with 17% rating the same poor and very poor respectively; 50% rated chances of improvement of income generating activities in the next three years satisfactory with 33% rating the same good while the adequacy of tuition fees was rated good by 50%.

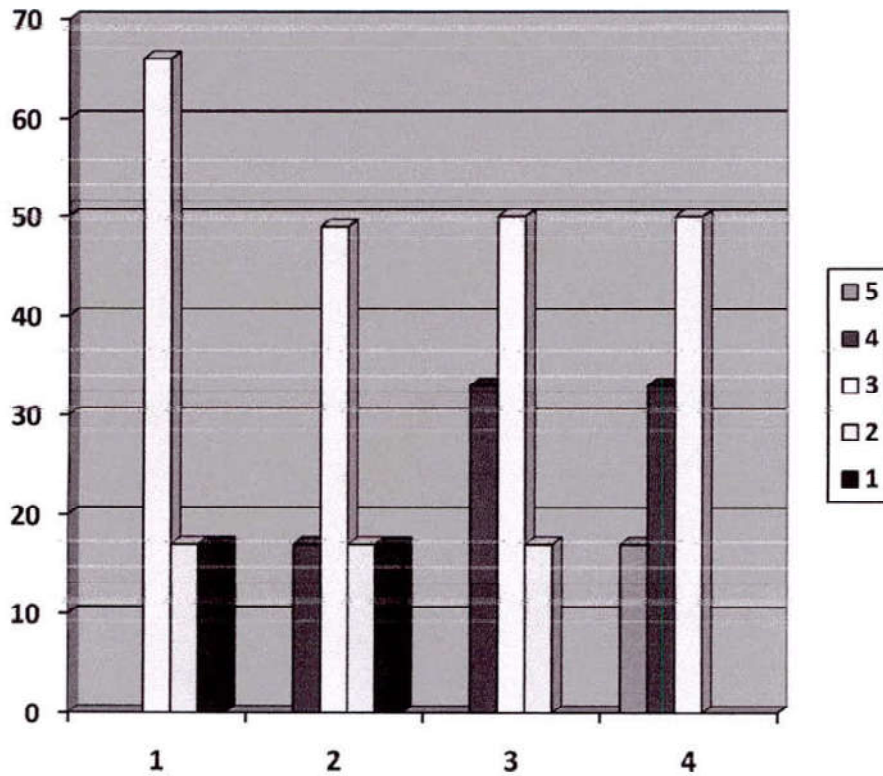


Fig. 4.6 HODs Assessment of Funding

Fig. 4.7 shows that 51.4% of the trainers rated funding as satisfactory while 52.1% similarly rated the tuition fees charged as satisfactory. About 65% rated the income generating activities poor while 33% rated chances of improvement of the same good. As the main financial of the institution is the government, this could be attributed to the many competing financing needs and the large number of institutions limiting the funds that reach the individual institutions.

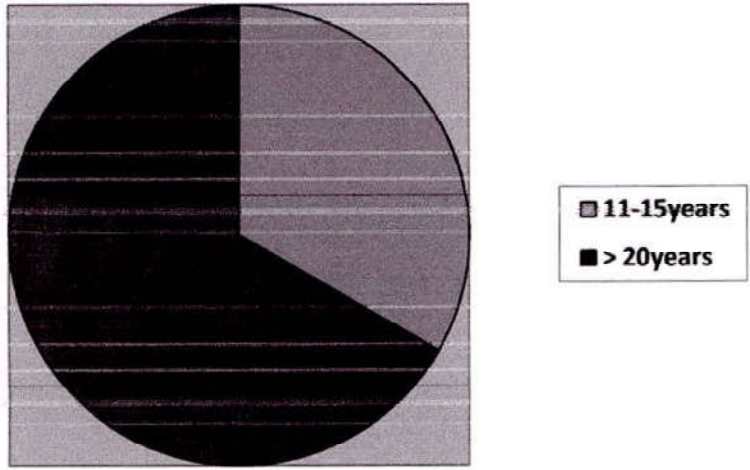


Fig. 4.11 : HODs Teaching Experience

Fig. 4.12 shows the distribution of the HODs administrative experience. The even distribution between 0 – 5; 6 – 10; and 11 -15 year ranges could be attributed to high turnover as a result of promotions and retirement. This distribution may be interpreted to mean that the new appointees have at any time experienced colleagues to learn from enhancing their effectiveness which in turn leads to a sustained good middle level management of technical education and training

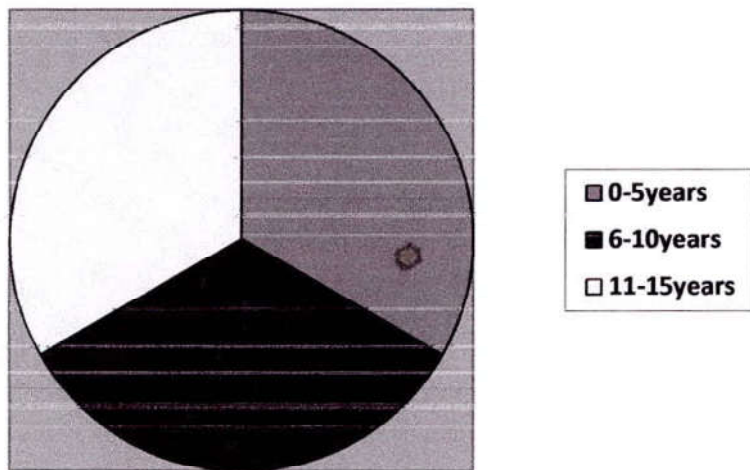


Fig. 4.12: HODs Administrative Experience

Fig. 4.13 shows that 33.3% of the respondents had higher diploma, 16.7% had first degree while 50% had a masters degree. This indicates that academic qualification is also a major consideration for the appointment and is expected to reflect in the quality of education and training with an added expectation that the HOD will be a role model to the trainees.

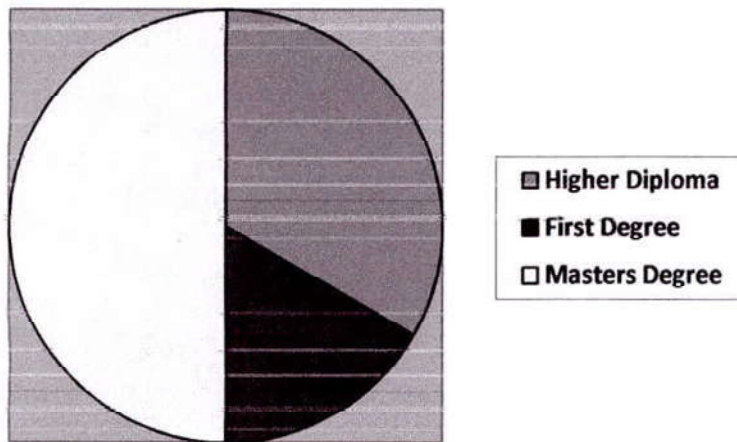


Fig. 4.13: HODs Academic Qualifications

Fig. 4.14 shows the distribution of the HODs professional qualifications. 50% of the respondents did not have any professional qualification. This could be due to varied interpretations regarding the definition of the term and emphases assigned to this aspect. With the relevant professional qualifications, trainers will be deemed to be highly competent in their areas of specialization and be expected to transfer the same skills to the trainees with a net result of improved education and training.



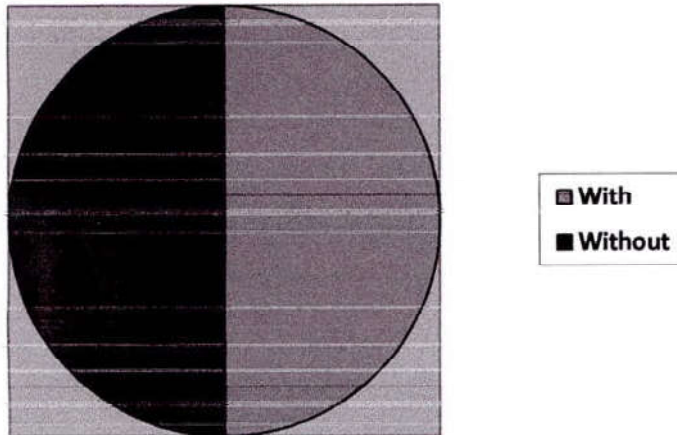


Fig. 4.14: HODs Professional Qualifications

Figure 4.15 shows the HODs rating of the trainers and the trainees. 67% rated the entry characteristics of the trainees good with the same number rating the trainees performance in national examinations satisfactory. The trainees lecture attendance and the trainers were rated equally good by over two-thirds; trainers practical skills was rated good by over 67% tying with the rating for trainer / trainee relationship while training monitoring system was rated satisfactory by over 66%. Good rating of the trainers by the HODs, their immediate supervisors has a positive bearing on the quality of the quality of technical education and training and likewise for the trainees lecture attendance and the trainers practical skills.

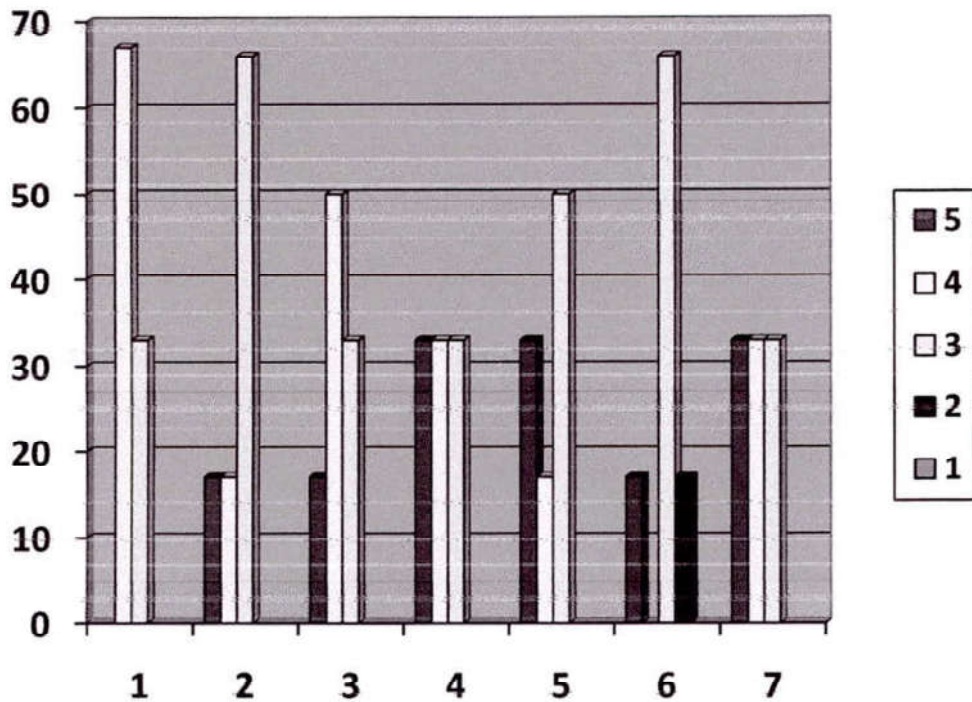
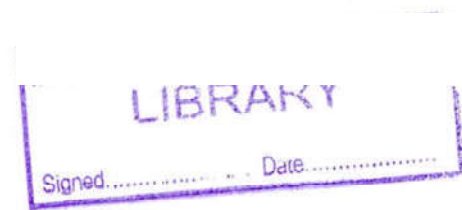


Fig. 4.15: HODs Rating of Trainers and Trainees

Fig. 4.16 shows that 24.3% of the trainers were under 30 years, 27% between 31 and 40 years, 35.2% between 41 and 50 years while 13.5% were over 50 years . The age distribution of the trainers shows that there are opportunities for the younger ones to learn from the older ones leading to their improved performances resulting in a positive impact on education and training.



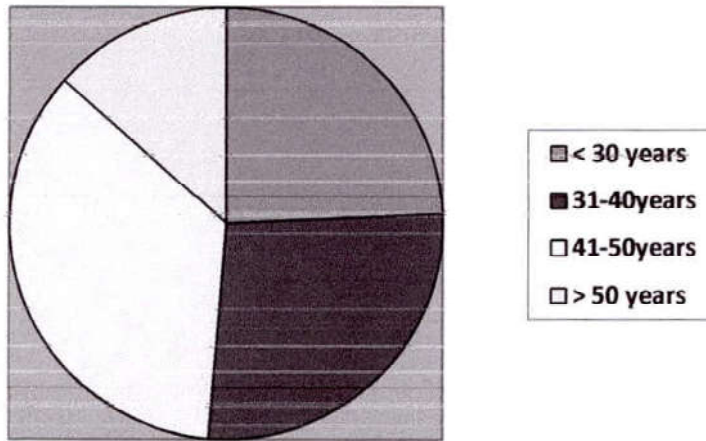


Fig. 4.16: Trainers Age Distribution

Fig. 4.17 shows the trainers teaching experience in years where 45.9% of the respondents had 0–5 , 2.7% had 6–10, 16.3% had 11–15, 8.1% had 16–20 while 27% had over 20. The age disparity could be attributed to the period over which the government had frozen recruitment of teachers. However, the large number with a long teaching experience should translate to enhanced quality of education and training.

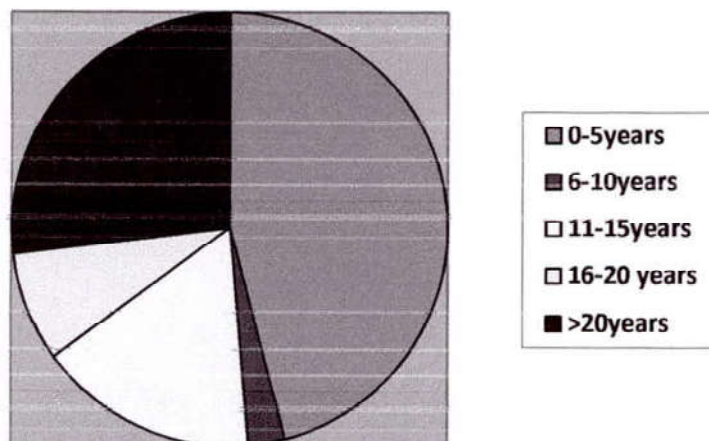


Fig. 4.17: Trainers Teaching Experience

Majority of the trainers (81.1%) had 0–5 years 16.2% and 2.7% had 6-10 and years respectively while none had over 15 years as shown in fig. 4.18. This has an impact in the enhancement of quality as this experience exposes one to a wider aspect of education and training

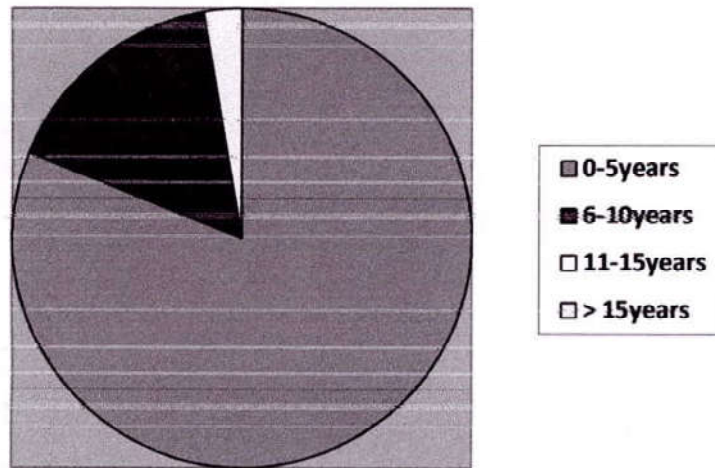


Fig. 4.18: Trainers Administrative Experience

As shown in fig. 4.19, 34.3% of the trainers had diploma and higher diploma qualifications in each case while 18.6% and 12.8% had first and masters degree respectively. This could be explained by the fact that technical training is highly specialized at higher levels and probably the holders of those qualifications could be in self-employment. However, skills inherent with the trainers could be taken to be proportional to the level of education, thus, ways should be defined to enable appointments and retention of trainers with higher levels of education.



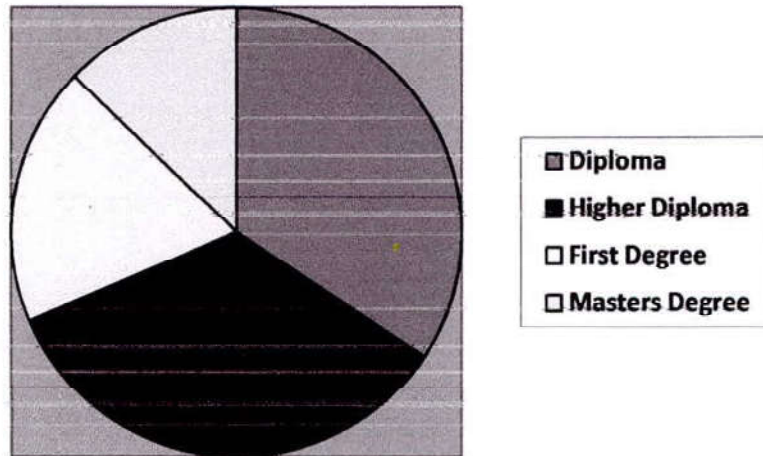


Fig. 4.19: Trainers Academic Qualifications

Fig. 4.20 shows that 83.8% of the trainers had no professional qualifications. Of the 16.2% who had some, the data established this to have been mainly in education and not in the core technical areas. This could be attributed to lack of emphasis on these qualifications during the appointment of the trainers and lack of competitiveness in the terms and conditions of service. These qualifications will significantly impact on the quality of training and also enhance credibility by the industry.

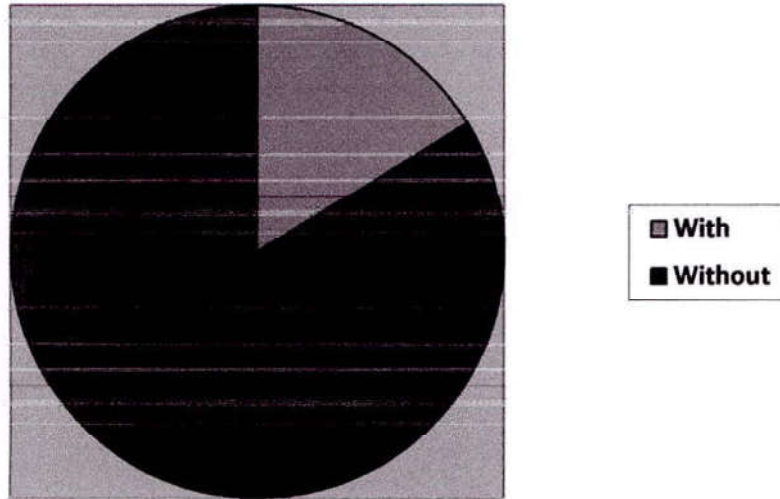


Fig. 4.20: Trainers Professional Qualifications

Trainers rating of academic issues is captured in fig. 4.21. 51.4% of the trainers rated the trainees entry characteristics satisfactory with 40.5% rating the performance of the trainees in national examinations likewise. Trainees lecture attendance and supervision were rated good by over 48% and 40% respectively; cooperativeness of the trainees, trainees attitude towards practicals and their preparedness were rated as good by 48.6%, 51.4% and 22.2% respectively. Trainees entry characteristics and lecture attendance have an impact on the quality of education and training due to capacity and consistency issues and likewise for the cooperativeness of the trainees and their attitude towards practical training.

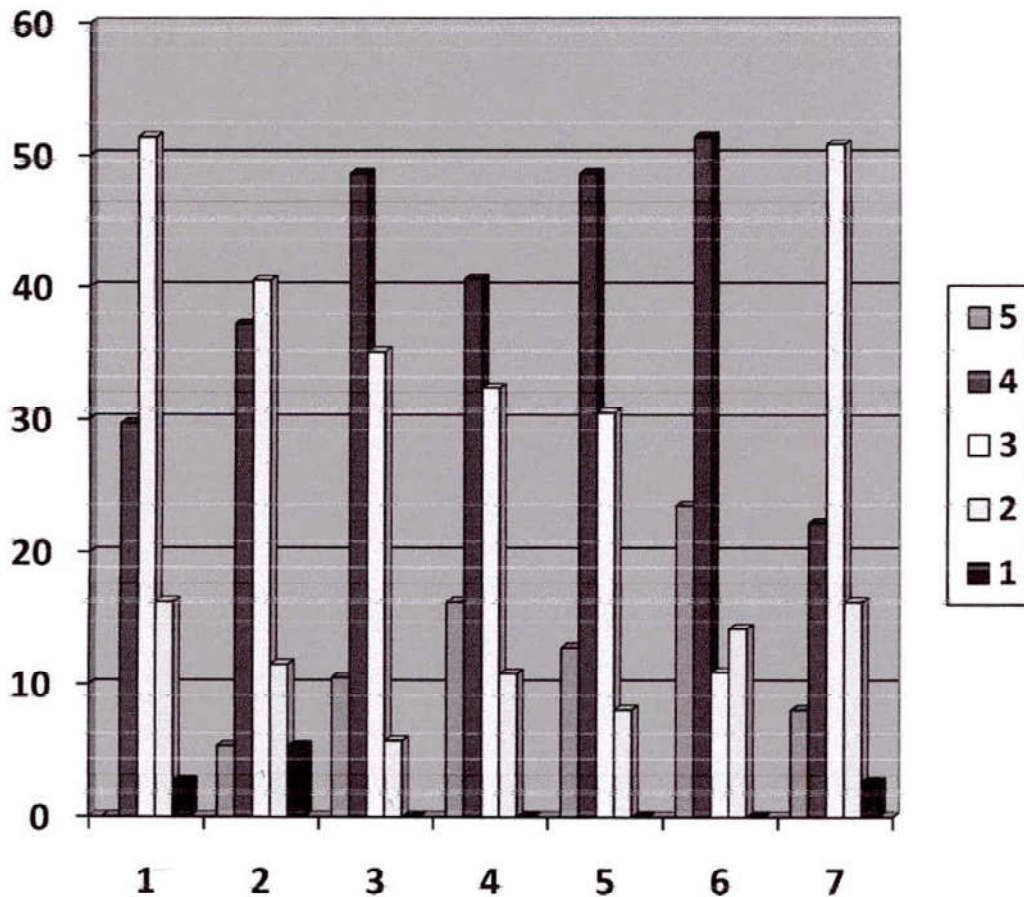


Fig. 4.21: Trainers Rating of Academic Issues

Fig.4.22 shows that 74.8% of the respondents were pursuing diploma programmes, 23.3% certificate ones while only 2% were on artisan courses. This shows that technical training at TTIs is mainly in diploma programmes. From the responses on trainers qualifications, 34.3% had diploma qualifications raising a concern regarding quality since under ideal conditions, a trainer should have a higher qualification than that expected of his / her trainee.

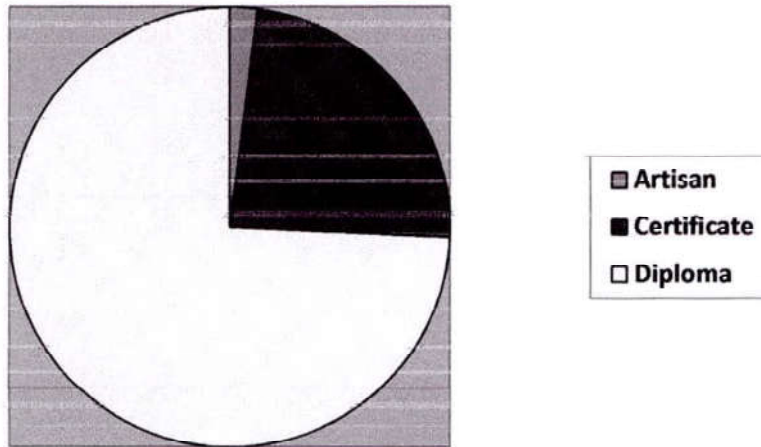


Fig. 4.22: Trainees Courses of Study

Fig. 4.23 shows the trainees entry qualifications where only 0.8% had KCPE with the rest having KCSE distributed as follows in percentage:

D-(minus) - 1.2, D(plain) - 2.4, D+(plus) - 4.7, C-(minus) - 20.1, C(plain) - 29.5, C+(plus) - 18, B-(minus) - 5.1, B+(plus) - 0.8

KCSE grade C, the entry requirement for diploma programmes and above covers 71.2% of the respondents which compares well with the percentage of the trainees pursuing the diploma courses. The programmes offered by the institutions have an impact on the quality of education and training in that the courses offered dictates the minimum resources that an institution should have to effectively run the programmes.



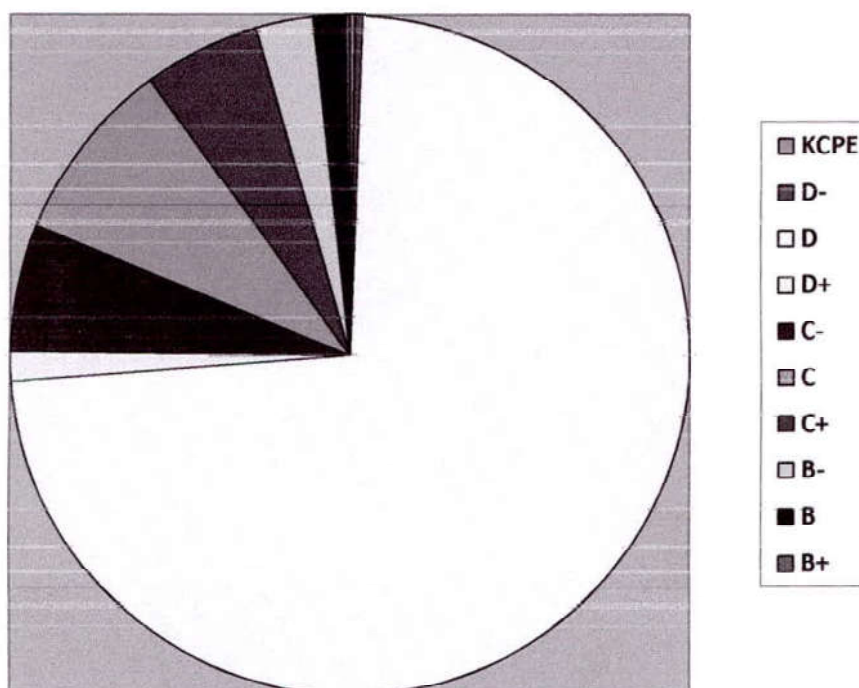


Fig. 4.23: Trainees Entry Qualifications Distribution

Fig. 4.24 shows the divide between boarders and day scholars among the respondents where 77.3% were boarders while 22.7% were day scholars. This could be explained by the fact that Kabete TTI was initially a boarding institution but as a result of changes in education and training policy, the institution had to cater for trainees on day scholar basis. The significance of scholarship hinges on time management which could be harnessed to enhance quality of education and training in the institutions especially for residential trainees.

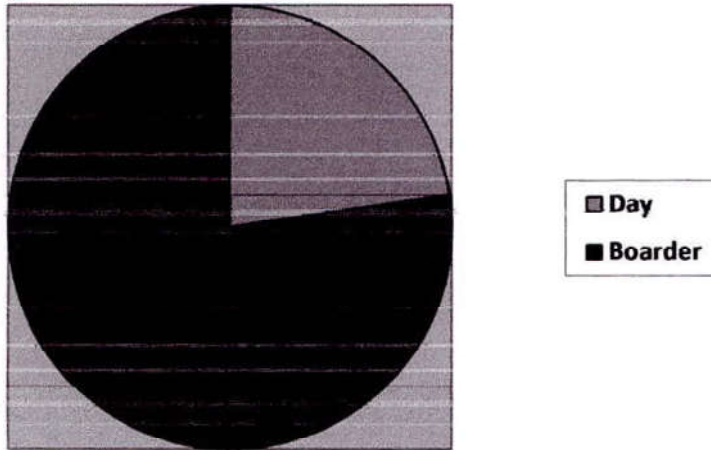


Fig. 4.24: Trainees Scholarship

Fig. 4.25 shows the trainees rating of the timetable flexibility. Over 75% reported some degree of flexibility. This is significant for purposes of home - work, group-work and assignments organization. Trainees could be organized into working groups to promote team - work which will lead to the enhancement of the quality of education and training.

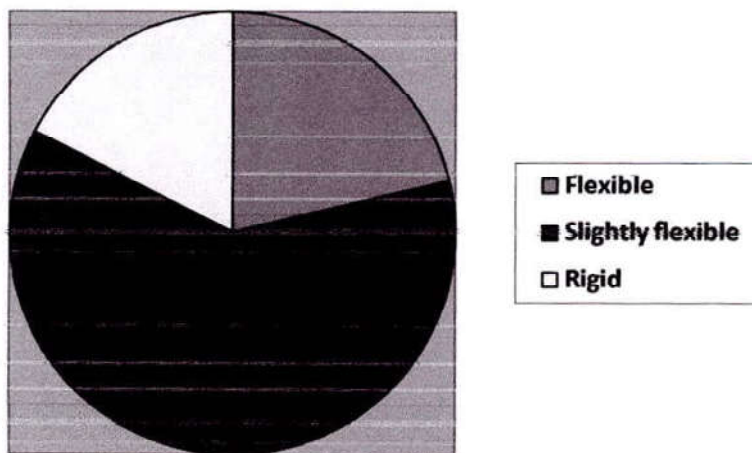


Fig. 4.25: Trainees Timetable Flexibility

Fig. 4.26 shows the use of the library by the trainees. 49.2% rarely used the library while 1.2% never did. This could be as result of the trainees not being subjected to challenging assignments by the trainers. At the TTIs level of training, the trainees are expected to carry out research in their areas of study to complement the lectures and this can be gauged by their library usage. Where trainees capitalize on the library resources, the net result would be improved quality of education and training

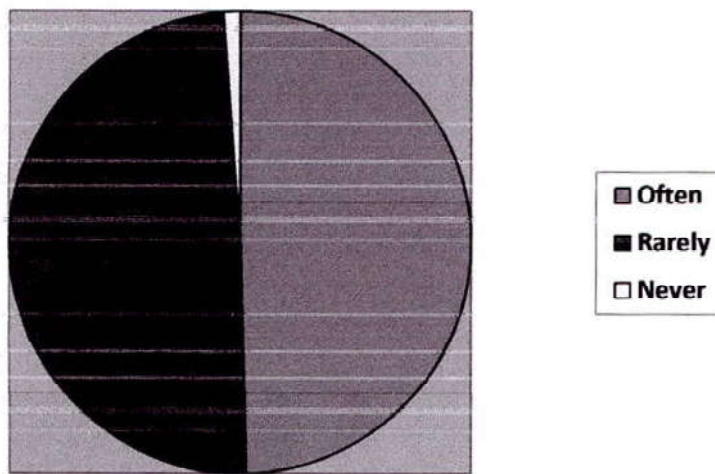


Fig. 4.26: Trainees Library Usage

Fig. 4.27 shows the organization of study groups by the trainees. 66.5% reported having study groups while 33.5% did not. This could be explained by the feeling of a significant number that the assignments were not challenging enough to warrant internal consultations. Formation of study groups will enhance the quality of education and training as trainees form a network of internal consultations and learn from one another

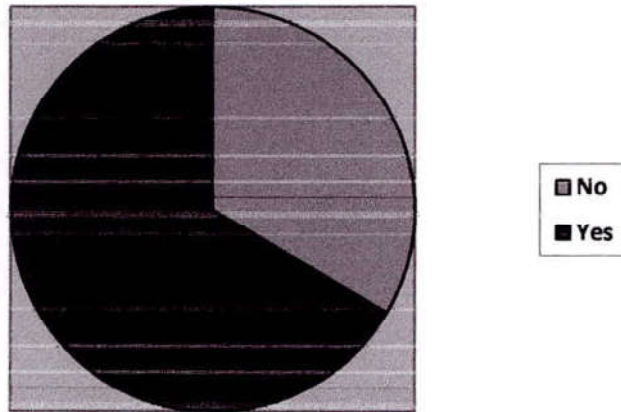


Fig. 4.27: Trainees Study Groups

Fig. 4.28 shows the rating of academic aspects by the trainees. 59% rated their entry grades good; 33.9% rated their predecessors performance satisfactory; over 42% rated their trainers performance good; 50.5% rated the importance of the practicals good; 59.4% rated their relationship with the trainers good; 37% rated supervision satisfactory while 17% rated their trainers preparedness poor. Entry qualifications and predecessors performance have a psychological effect on the trainees while their perception of the practical training and the trainers competence influences the trainees attitude thus impacting on the quality of education and training.



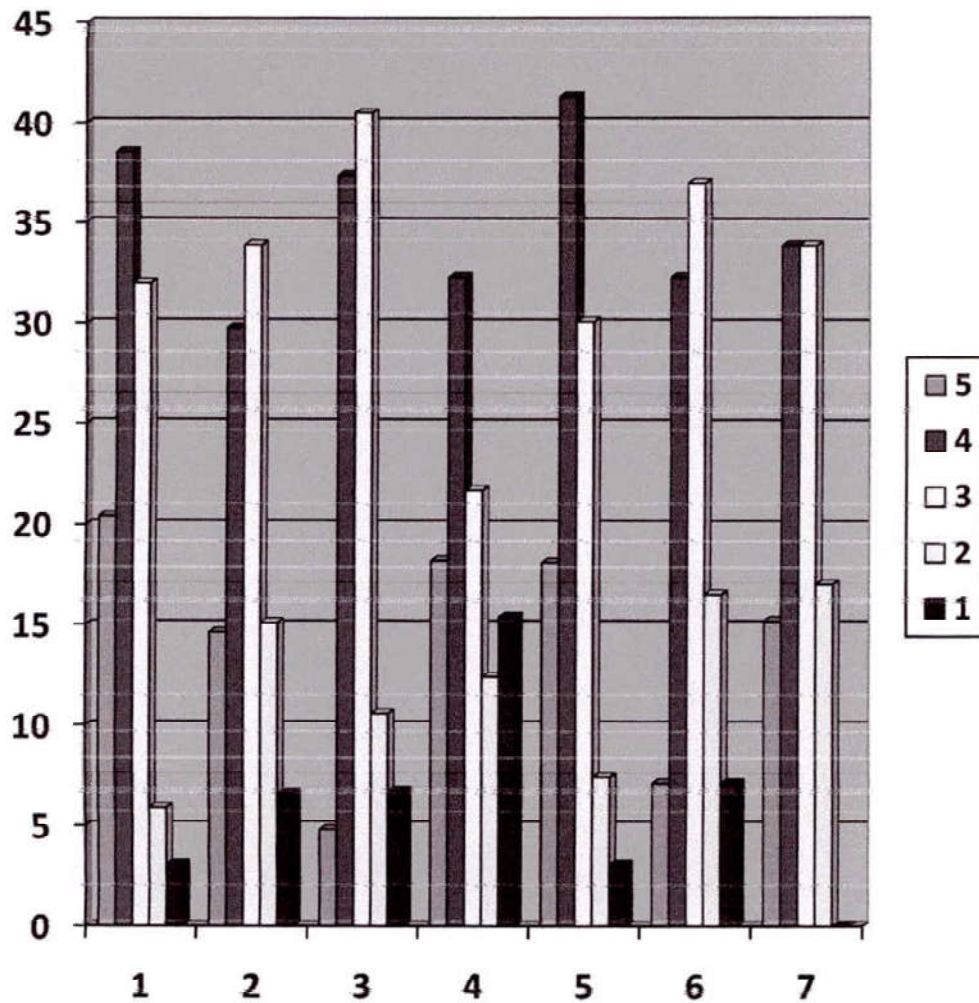


Fig. 4.28: Trainees Academic Ratings

#### 4.2.6 Subjective responses

In general, the HODs observed that technical education and training needs a quality management system, upgrade of the training equipment, improved monitoring and evaluation systems, improved industrial attachment processes, increased funding, motivation of the trainers, mutually beneficial linkages, introduction of in-service industrial training for the trainers, training to be more innovative and research based and establishment of incubators for innovation .

Trainers observed that to improve technical education and training, adequate training equipment should be provided, workshops and seminars organized, allot more time

for practicals, collaboration with industry should be strengthened, introduction of in-service training for the trainers, alignment of the training programmes to the needs of the industry, effective participation in TIVET activities, curriculum to be reviewed regularly, review the entry characteristics for the training programmes, training equipment should be modernized, trainers remuneration needs to be reviewed, trainers to have a minimum industrial exposure, training to be focused on the trainees, creation of a positive institutional culture and expansion of the infrastructure.

Trainees suggestions on improvement of technical education and training included allocation of additional time for practicals, introduction of discussion sessions during lectures, improvement of trainee / trainer relationship, strengthening of supervision, improvement of library resources and facilities, improvement of workshop and laboratory facilities, trainees to have open access to computers, more assignments and homework, varying teaching techniques, adoption of emerging technologies especially Information Technology (I.T), engagement of competent trainers, limiting boarders night movement outside the institution, thorough revision of CATs, timely provision of practicals training materials, eliminate cheating during examination times, organized educational visits to relevant industries, Inviting professionals from the industry to give lectures, improvement of the general learning environment such as the upkeep of the lecture rooms, mounting annual graduation ceremonies to motivate trainees to work harder, holding frequent departmental meetings with free flow of information, improvement in time management, trainers to be up-to-date with new technology, addressing students' complaints on time and appreciating and noting exemplary performance.

## **CHAPTER 5.**

### **Summary of Findings, Conclusions and Recommendations**

#### **5.0. Introduction**

This chapter gives the summary, conclusions made and the recommendations based on the study. The focus of the study was on the quality of technical training in public training institutions. Three questionnaires were developed as the main data collection instruments, for the HODs, trainers and the trainees. The one for the HODs was designed to gather information on trainers, trainees and facilities; that for the trainers to avail data on trainees and training facilities while that for the trainees was to collect data on trainers, supervision and the training facilities.

#### **5.1. Summary**

##### **5.1.1. Workshop and laboratory facilities**

The study established that there was a need for involving the HODs and trainers during the acquisition of facilities. At the same time, the respondents expressed the need for improvement of facilities to enhance effectiveness and competitiveness. Further, upkeep and maintenance of the facilities was rated poor pointing to a need for inculcating a maintenance culture in the institutions. The possibility of improvement of the facilities in the next three years was rated highly as a result of an on-going joint programme between the Netherlands and Kenyan governments. In general workshop and laboratory facilities were found to highly affect the quality of technical training.

##### **5.1.2. Industrial experience of trainers**

A third of the Heads of Departments respondents did not have any Industrial experience while the situation was worse with the Trainers where only 16% had some industrial experience. However, both the HODs and the Trainers rated the need for Industrial experience very highly. In the subjective responses the respondents observed that industrial exposure should be a requirement for recruitment as the practice augments the theoretical training significantly. They further noted the dynamics in the industries due to the heightened local and global competition requiring rapid changes in technology for survival.



### **5.1.3. Funding of the TTIs**

The funding of the public TTIs is partly through public funds and the tuition fees paid by the trainees. The institutions also engage in income generating activities such as offering parallel programmes or hiring out space for functions to improve their financial status. The funding was rated satisfactory indicating a need for improvement. In the subjective responses the respondents pointed out the need for starting market-driven programmes, engaging skilled workmen in the production units, diversification of training programmes and exploration of mounting of consultancies harnessing the skills available at the institutions.

### **5.1.4. TTIs / Industry linkage**

The HODs, Trainers and the Trainees concurred on a satisfactory rating on average. The need for an effective linkage was however rated very highly in all cases

## **5.2. Conclusions**

The purpose of this study was to establish the factors affecting quality of technical education and training at Kabete TTI. The factors investigated were the workshop and laboratory facilities, industrial experience of the trainers, funding and institution / industry linkage.

The study found out that the HODs and the trainers were not involved in the acquisition of the facilities and they rated both the available facilities and their maintenance poor. The suitability, adequacy and maintenance of the facilities was rated poor by over 40% of the trainees. Thus, the better the workshop and laboratory facilities in terms of adequacy and maintenance, the higher is the quality of technical of training.

A third of the HODs and 84% of the trainers did not have any industrial exposure while over 40% of the trainees rated their trainers in practicals poor. The study found that adequate industrial experience of the trainers enhances their confidence in practicals resulting in the improvement of quality of technical education and training.

On funding, two thirds of the HODs gave satisfactory rating with 49% rating the income generating activities poor; over 50% of the trainers rated funding satisfactory with 65% rating the income generating activities poor. Due to challenges in financing the training, trainers reported late acquisition of training materials. The study pointed out that the quality of technical training varies in direct proportion to the funds available in the institution.



Need for institution / industry linkage was rated very highly by the respondents. The study revealed that there is a strong relationship between institution / industry relationship and the quality of technical training as this enables the trainers and the trainees to relate theory and practice in industry.

### **5.3. Recommendations**

Workshop and laboratory facilities in TTIs should be upgraded and in some cases renewed altogether and incubators introduced to promote innovations. Trainers should be given industrial exposure through regular attachments to the industry so as to be up-to-date with the changes in industry while at the initial recruitment, those with industrial experience should have an added advantage. Both the public and the private sector should ensure that financing of technical education and training is adequate while institutions themselves should capitalize on income generating activities by engaging in activities that are demand-driven. At the same time, technical training institutions should cultivate mutually beneficial collaborations with industry by encouraging industry's participation in institutional social activities, aligning trainee projects to challenges in the industry and encouraging industry's input in the development of the training curriculum.

### **5.4. Suggested further study**

Following areas may be considered for further research to avail additional information regarding technical education and training:

- a) A comparative study on the performance of the privately run institutions and the public ones
- b) Industry perception of the competencies of the graduates from the technical training institutions
- c) Skills mismatch between public training institutions and the organizational training schools

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## APPENDEX 1 - QUESTIONNAIRE FOR HODs

### PART A - Biographic Data

Tick ( ) as appropriate

1. Gender : Female ( ) Male ( )
2. Age in years : < 30 ( ) 31-40 ( ) 41-50 ( ) >50 ( )
3. Teaching experience (years) : 0-5 ( ) 6-10 ( ) 11-15 ( ) 16-20 ( ) >20 ( )
4. Administrative experience (years) : 0-5 ( ) 6-10 ( ) 11-15 ( ) >15 ( )
5. Academic qualification : Diploma ( ) Higher Diploma ( )  
First degree ( )  
Masters degree ( ) other (specify) -----
6. Professional Qualifications : specify -----
7. Industrial experience (years) : None ( ) 1-5 ( ) 6-10 ( ) 11-15 ( ) >15 ( )

For parts B, C, D, and E rate your response in reference to a 5(FIVE) scale score by ticking against the appropriate level.

The grading has the following significance:

5-Very Good

4-Good

3-Satisfactory

2-Poor

1-Very Poor



**PART B –Trainees and Trainers**

	5	4	3	2	1
1. How would you rate the entry characteristics of your trainees?					
2. What is the performance of your trainees in national examinations?					
3. What is your observation of the trainees lecture attendance?					
4. How would you rate the trainers in your department?					
5. In your opinion, how skilled are your trainers in practicals?					
6. How would you rate the training monitoring system in place?					
7. How would you rate the trainer – trainee relationship in your department?					

**PART C –Workshop and Laboratory Facilities**

	5	4	3	2	1
1. How consultative is the process of acquiring workshops and laboratory facilities?					
2. What is your judgement on the available the facilities ?					
3. How would you rate the effectiveness of the facilities for training?					
4. How effective is the upkeep or the replacement of the faulty facilities?					
5. What are the possibilities of improving the facilities in the next three years?					
6. How would you rate the impact of the facilities on the competitiveness of your department’s programmes?					

**PART D –Funding**

	5	4	3	2	1
1. How would you rate the financing of your department?					
2. How is the performance of the income generating programmes in your department?					
3. What are the chances of improving the income generation in the next three years?					
4. In your opinion, how adequate is the tuition fees for the programmes in your department?					
5. Suggest three ways of improving the financial status of your department					

**PART E –Industrial Linkage**

	5	4	3	2	1
1. How would you rate your department's linkage with industry?					
2. How effective are your collaborations with industry?					
3. How would you rate the need for industry linkage?					

4. In your own words, suggest how the linkage with industry can be improved.
5. Comment on the need of industrial experience of the trainers in technical education



**PART F – General Comments**

Suggest three ways that could be used in improving the quality of technical education and training.

Thank you

## APPENDIX 2 - QUESTIONNAIRE FOR TRAINERS

### PART A-Biographic Data

Please tick ( ) as appropriate

1. Gender : Female ( ) Male ( )
2. Age in years : < 30 ( ) 31-40 ( ) 41-50 ( ) >50 ( )
3. Teaching experience (years) : 0-5 ( ) 6-10 ( ) 11-15 ( ) 16-20 ( ) >20 ( )
4. Administrative experience (years) : 0-5 ( ) 6-10 ( ) 11-15 ( ) >15 ( )
5. Academic qualification : Diploma ( ) Higher Diploma ( )  
First degree ( )  
Masters degree ( ) other (specify) -----
6. Professional Qualification : specify -----
7. Industrial experience (years) : None ( ) 1-5 ( ) 6-10 ( ) 11-15 ( ) >15 ( )

For parts B, C, D, and E rate your response in reference to a 5(FIVE) scale score by ticking against the appropriate level.

The grading has the following significance:

5-Very Good

4-Good

3-Satisfactory

2-Poor

1-Very Poor



**PART B – Academic Issues**

	5	4	3	2	1
1. How would you rate the entry characteristics of your trainees?					
2. What is your judgement of the trainees performance in your subject area in the national examinations?					
3. How would you rate the trainees' lecture attendance?					
4. How would you rate the supervision during the lecture delivery?					
5. From your experiences, how cooperative are the trainees?					
6. What are the trainees' attitude towards the practical aspect of the training?					
7. Based on the lecture room behaviour, how prepared are the trainees?					

**PART C – Training Facilities**

	5	4	3	2	1
1. How consultative is the process of acquiring training facilities?					
2. How would you judge the training facilities available?					
3. How effective are the facilities in the training process?					
4. How would you rate the maintenance of the facilities?					
5. In your view, how appropriate are the available facilities?					
6. What are the chances of the improvement of the facilities in the next three years?					
7. How would you rate the impact of the facilities in the performance in your subject(s) area?					

**PART D – Funding**

	5	4	3	2	1
1. How would you judge the financing of the training?					
2. In your opinion, what is the contribution of the income generating programmes?					
3. What are the chances of improving income generation in the next three years?					
4. How sufficient is the tuition fees for your programmes?					

5. Suggest three ways of improving the financial status for your programmes

**PART E –Industrial Linkage**

	5	4	3	2	1
1. How would you rate the Industry / Institution collaboration?					
2. How effective are the linkages between your section and the industry?					
3. In your opinion, how would you rate the need for industrial experience?					

4. Suggest three ways in which industry –institution linkages can be improved.

**PART F – General Comments**

Suggest three ways in which the quality of technical education and training can be improved.

Thank you

### APPENDIX 3 - QUESTIONNAIRE FOR THE TRAINEES

#### PART A – Biographic Data

Please tick ( ) as appropriate

1. Gender : Female ( ) Male ( )
2. Course of study : Artisan ( ) Certificate ( ) Diploma ( )
3. Mean entry grade (e.g. C-) : Specify \_\_\_\_\_
4. Are you a boarder or day scholar? : Boarder ( ) Day scholar ( )
5. How flexible is your timetable? : Very ( ) Slightly ( ) Rigid ( )
6. How frequent do you use the library? : Often ( ) rarely ( ) other (specify) \_\_\_\_\_
7. Do you have study groups with your colleagues? : Yes ( ) No ( )

For parts B, C, and D, rate your response in reference to a 5(FIVE) scale score by ticking against the appropriate level.

The grading has the following significance:

- 5-Very Good
- 4-Good
- 3-Satisfactory
- 2-Poor
- 1-Very Poor



**PART B – Academic Issues**

	5	4	3	2	1
1. How would you rate the suitability of your entry grades for the course?					
2. Rate the performance of your predecessors in the national examinations					
3. How would you rate your lecturers' effectiveness?					
4. How important do you consider the practical aspect of your training?					
5. How would you rate your relationship with the lecturers?					
6. How would you rate the supervision of your lectures?					
7. In your opinion, how prepared are your lecturers?					

**PART C – Training Facilities**

	5	4	3	2	1
1. How would you rate the suitability of the workshop / laboratory facilities?					
2. In your view, how adequate are the facilities for your course of study?					
3. Comment on the upkeep and maintenance of the facilities					
4. In your judgement, rate the need for practicals in your course					
5. How would you rate your lecturers in practicals?					

**PART D – General Comments**

Suggest three ways in which technical education and training can be improved.

Thank you

