

KENYA INSTITUTE OF HIGHWAYS AND BUILDING TECHNOLOGY

REGIONAL FLAGSHIP TVET INSTITUTE IN HIGHWAYS TECHNOLOGY

TRACER STUDY REPORT FINDINGS AND RECOMMENDATIONS

MAY 2023



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List of Abbreviations

EASTRIP: East Africa Skills for Transformation and Regional Integration Project

TVET: Technical and Vocational Education and Training

KIHBT: Kenya Institute of Highways and Building Technology

DHE: Diploma in Highway Engineering

DCE: Diploma in Civil Engineering

CCRC: Craft Certificate in Road Construction

LVSr: Low Volume Seal Road

List of Symbols

N: Total population

n: Sample population

μ : Measurement of mean score

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1. INTRODUCTION

1.1 BACKGROUND INFORMATION

Kenya Institute of Highways & Building Technology (KIHBT) was originally established as a training division within the Public Works department in May 1948. The purpose was to cater for skills improvement which had become necessary in the country. The training areas included Roads Road Foremen, Water Foremen, Inspectors and Survey Assistants.

The institute is now a major skill improvement training centre, that specializes in equipping staff from the National Government, County Governments and the private sector with skills that are aimed at enhancing their performance in the infrastructure sector and more specifically in the road sub-sector.

In addition KIHBT offers training in other fields of Infrastructure including Civil Engineering, Mechanical Engineering, Electrical Engineering and various building related courses.

The institute is well staffed and with an annual trainee turn over of more than three thousand.

The mandate has now been revised to include training for the infrastructure sector and client countries from the sub-Saharan region.

Vision: *The Preferred Infrastructure Training Institution in Africa and Beyond.*

Mission: *To Facilitate the provision of High-Quality training, research and consultancy in Infrastructure development and Maintenance in Africa and beyond.*

1.2 OBJECTIVES OF THE STUDY

The objective of this tracer study is to track the effectiveness of Kenya Institute of Highways and Building Technology in equipping TVET graduates with the necessary skills to successfully gain employment. To do so, the study traced the whereabouts of graduates and assessed how successful they have been able to integrate into the labour market after completing their learning programmes in 202e. The study was conducted in 2023, between six (6) months to one (1) year after the students graduated.

EASTRIP Tracer Study examines;

- a. The perceptions of employers regarding the quality of the employees they recruited from KIHBT graduates;
- b. The attitudes of the graduates themselves regarding job quality, relevance, and effectiveness of their TVET education in securing employment.

2. METHODOLOGY

The tracer survey was conducted in May 2023. It was done by administering questionnaires to graduates and employers which addressed the following areas: course of study, employment status, transition to work relevance of training, job satisfaction, working (salary, working hours, kind of contract) conditions relationship between study employment, training conditions

The Methodology covers Database of Potential Participants, Target Study Groups, Access to the People, Survey Instruments and Tools, Ethical Considerations, Sampling Strategy, and Methodological Challenges and Mitigations.

2.1 DATABASE OF POTENTIAL PARTICIPANTS

The population of this study included KIHBT graduates and employers of the graduates. The study concentrated on the long courses covered under the EASTRIP thematic area; DHE and CCRC. The graduates were reached out via phone calls to determine their whereabouts and employers' details. From these, a consolidated database was created.

2.2 TARGET GROUPS FOR THE SURVEY

Two groups; KIHBT Graduates and Employers of KIHBT Graduates were targeted in the survey.

2.2.1 KIHBT Graduates

The total number of graduates for the year 2022 is eighty eight (88), (Male 60, Female 28). The data on this report is based on fifty (50) graduates which constitutes 57% of the population (Male 35, Female 15) who were responsive, whereas 43% were unreachable through phone calls and snowballing technique.

The participants were picked according to availability of their contact details, such as, a working phone number and/or an active email address. The study concentrated on graduates from DHE and CCRC. The study targeted the TVET graduates who are employed, unemployed, self-employed or progressing with further academic or vocational studies.

2.2.2 Employers of KIHBT Graduates

Six (6) Employers were targeted for the study. They employed TVET graduates from KIHBT and other TVET institutes. They completed the questionnaire that was administered to them.

2.3 ACCESS TO THE PEOPLE

Multiple communication channels were used to reach the participants, that included, phone calls, and email addresses.

2.3.1 Research Participant Invitation

The participants were invited to participate in the tracer exercise through phone call.

2.4 SURVEY INSTRUMENTS AND TOOLS

Two Questionnaires were designed for the tracer study, Graduate Survey Questionnaire (33 questions, 140 variables) for graduates of 2022. Employer Survey Questionnaire (18 questions, 77 variables), for both public and private enterprise employers. The questionnaires consist of both closed-ended and open-ended questions. The questionnaires were administered via email and a face to face sit down session. Six KIHBT staff assisted in the data collection process.

2.5 ETHICAL CONSIDERATIONS

Upon contacting a potential respondent, the objectives of the study were explained to him/her, and then they were left to decide whether they wanted to participate in the study or not. The respondents were assured that all information collected would be treated in confidence and only used for the purpose of this tracer study.

2.6 SAMPLING STRATEGY

2.6.1 Sample Frame

A sample frame was designed, and sample size determined to ensure that it is adequately representative of the graduates and the employers concerned. This was followed by the design of the questionnaires covering the parameters to be measured.

KIHBT selected the survey sample by convenience sampling. KIHBT purposely selected graduates who were readily/easily available while still satisfying the sampling conditions by year/cohort and gender. For the EASTRIP Tracer Study, a variation of the convenience sampling was used, identified graduates were asked to help share the latest contacts/whereabouts (snowballing technique) of their former colleagues. Although this was time consuming, it helped KIHBT in providing/compiling current contacts for the target graduates.

2.6.2 Sample Size

For the study, the following Graduates sampling approach was adopted for KIHBT.

Where the Total (N) population was less than 100, a census (N=n), that is, a survey of the entire population was conducted.

2.7 METHODOLOGICAL CHALLENGES AND MITIGATIONS

The identification of graduates began using admission records.

Graduates who were available to participate in the survey were encouraged to speak to their employers to inform them of the visit by KIHBT staff.

While these approaches were expected to facilitate and increase the response rate, the fieldwork indicated otherwise. The main recorded constraints included the following:

1. Some graduate contact information had changed, and others refused to be interviewed, particularly those who were unemployed because of social conventions.
2. Some graduates were not willing to give correct information on their employment status, hoping that the institute could provide them with opportunities in the road construction industry
3. Some graduates declined to pick our phone calls on the materials day of the survey
4. Some of the addresses that were collected were no longer valid. This is because the more time that has passed from graduation to survey, the more the validity of addresses is in question.
5. Online Questionnaires – some respondents had challenges with either accessing online system due to internet connectivity or their own inability to participate in online survey types.

Despite the above-mentioned challenges and in order to secure a high response rate, the researchers reverted to snowball sampling techniques where both graduates and employers were asked to identify other graduates that could participate in the study. This meant that while graduates could identify both employed and unemployed peers, employers on the other hand could only identify other employed graduates. The unemployed graduates were reached through the provided databases and snowballing techniques.

It is also important to note that indications were given in the study about the students who decided to pursue further education in the vocational training centres. Although TVET graduates that fall under this category would neither be considered employed or unemployed, they fell under the category of employed as per the project interpretation. The study also took into consideration graduates who decided to pursue self-employment or were working in the informal sector.

3. DATA ANALYSIS

The data and the information obtained from the survey was compiled, processed and analysed to form the basis of the analysis conclusions and findings of this report. Percentage, Mean and Standard Deviation was applied and the tabulated data. The nature of data obtained from this study is both quantitative and qualitative. The quantitative data results, which were compiled and analysed using Excel. Output from the analysis is presented in both tabular and graphic forms, and in verbatim qualitative statements. This Chapter presents the KIHBT Graduates' Findings (see 3.1), Employers findings (see 3.2) this is followed by two sets of cross tabulation.

3.1 KIHBT GRADUATES' FINDINGS

The Graduate Survey for KIHBT focuses on the program of Craft Certificate in Road Construction and Diploma in Highway Engineering. All the traced TVET graduates from KIHBT were based in Kenya. They came from different regions, such as, Nairobi, Kisumu, Kiambu, Makueni, Murang'a, Thika, Meru, Mombasa, Laikipia, Nakuru, Eldoret, Kisii, Siaya, Vihiga, Busia, Bungoma, Bomet, Kitui, Transzoia and Kajiado. The data obtained from the completion of the questionnaires was analysed and interpreted as follows.

3.1.1 Demographic Information of the KIHBT Graduates Respondents

In this section Tracer Study report examines the Demographic Information of the traced KIHBT graduates, their gender, age, county of residence, year of graduation, and their situation in the first six months post-graduating.

3.1.1.1 The Gender of traced graduates

Table 3.1, Column 2 and Column 3 summarizes the Gender distribution of the sample of male and female graduates. The survey was able to trace 50 graduates. 68 per cent of the traced graduates were Male while 32 per cent were female.

	Gender		Year of graduation
	Male	Female	2022
Frequency	34	16	50
Per cent	68	32	100

Table 3.1. Traced Graduates by Gender, Year of graduation

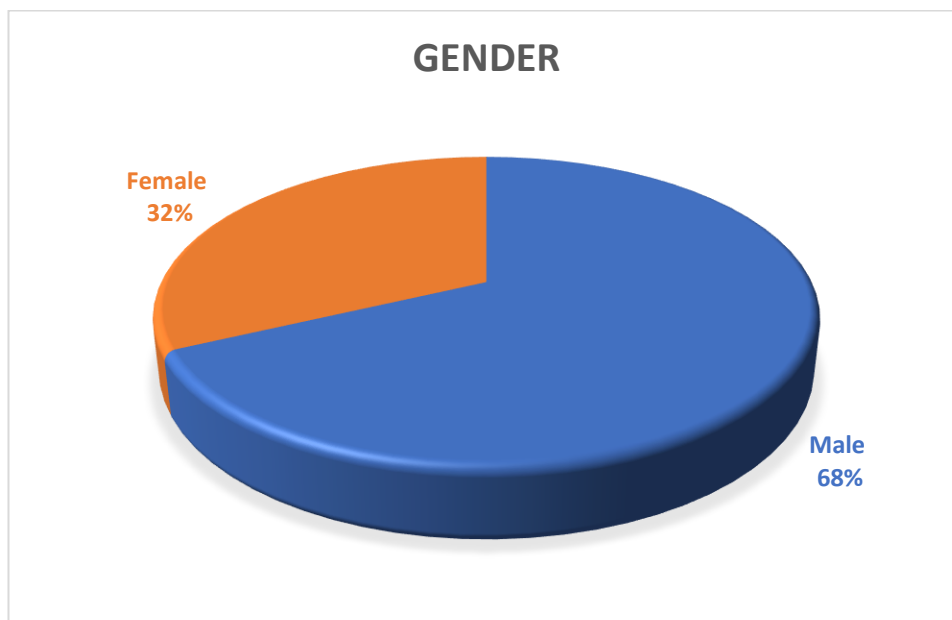


Figure 3.1 Gender of traced graduates

3.1.1.2 Year of Graduation of Traced graduates

Table 3.1 Column 4 summarizes the Year of Graduation of the traced graduates. The survey was able to trace 50 graduates, out of which 100 percent graduated in 2022.

3.1.2.1 The Age of traced graduates

Table 3.2 Column 2, Column 3 and Column 4 summarizes the Age Bands of traced graduates. Out of the 50 traced graduates, 54 per cent were below 25 years, 46 percent were Between 25 and 35 years, and none of the graduates were Above 35 years.

Table 3.2 Traced graduates by Age

	Age Bands in Years		
	Below 25	25 -35	Above 35
Frequency	27	23	0
Percent	54	46	0

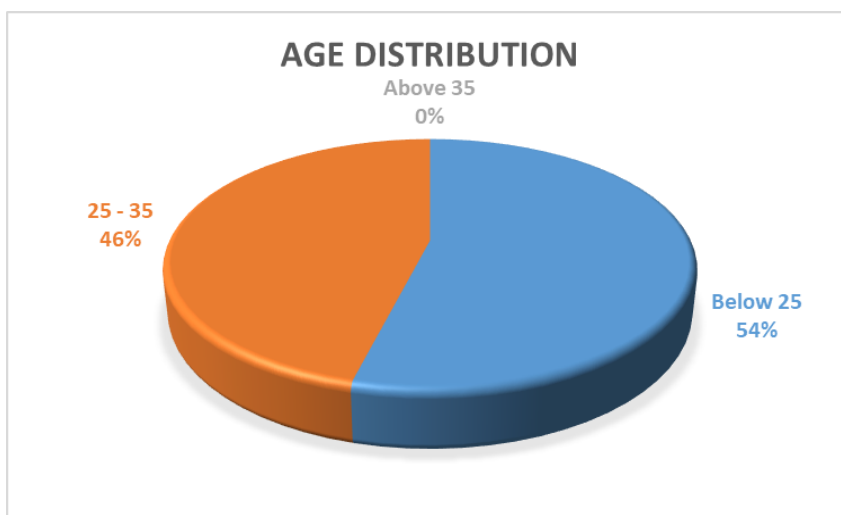


Figure 3.2 Age Distribution

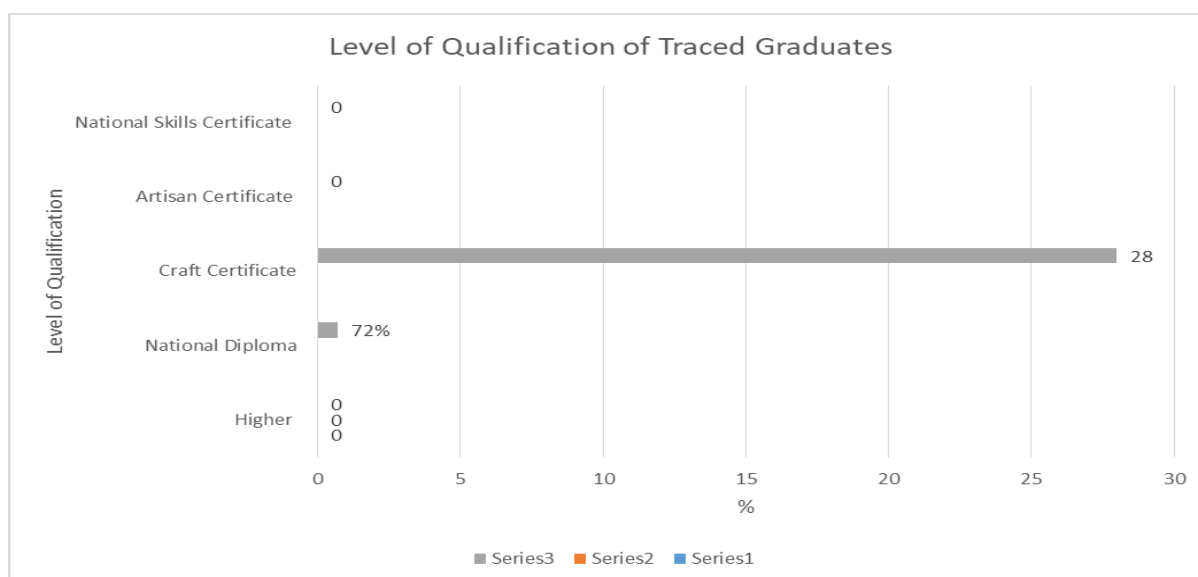
3.1.2 Level of qualification of traced TVET graduates

From Table 3.3, 28 percent are Craft Certificate graduates, 72 percent are National Diploma graduates.

Table 3.3: Level of qualification of traced graduates

Level of Qualification	Higher National Diploma	National Diploma	Craft Certificate	Artisan Certificate	National Skills Certificate	Others
Frequency	0	36	14	0	0	-
Per cent	0	72%	28	0	0	-

Figure 3.3: Level of qualification attained by traced graduates



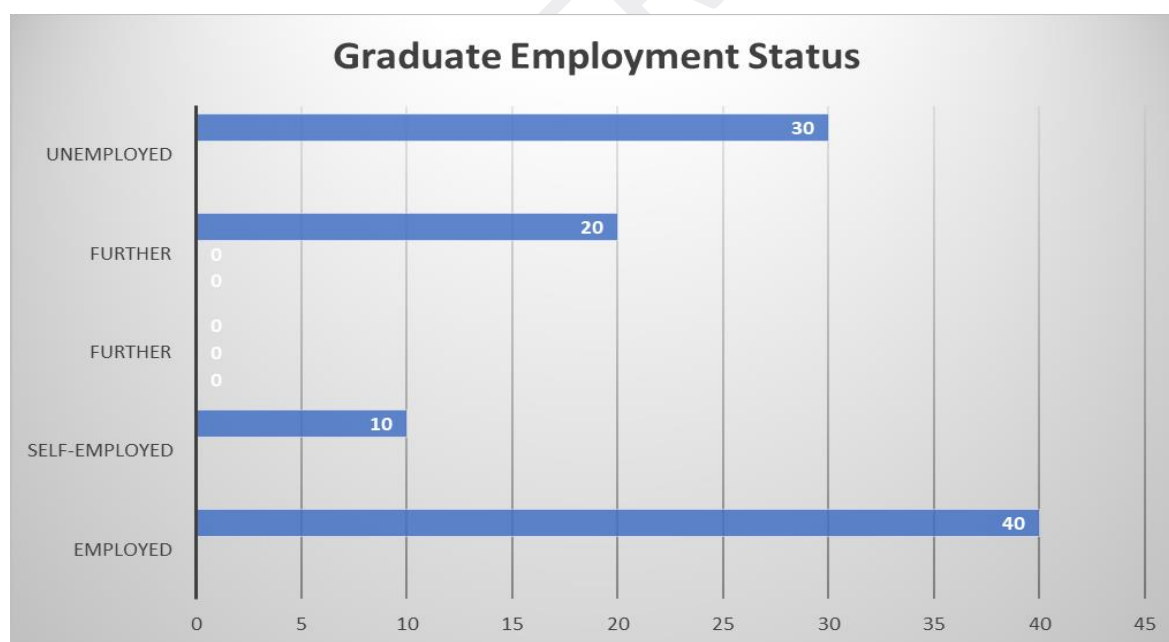
3.1.3 Graduates situation in the first six months post-graduating

Table 3.4 summarizes the situation of the traced KIHBT graduates in the first six months after graduating from KIHBT. It shows that among the 50 KIHBT graduates that were traced in the study, 40 percent were Employed within the first six months after graduating. 10 percent were Self-Employed. none went for Further Academic Education, 20 per cent went for Further Vocational Education. 15 percent were unemployed.

Table 3.4 Situation in the first six months after graduating

Employment Status	Employed	Self-employed	Further Academic Education	Further Vocational Education	Unemployed
Frequency	20	5	0	10	15
Percent	40	10	0	20	30

Figure 3.4. Situation in the first six months after graduating



3.1.4 KIHBT Graduates Employment Results

In this section the Tracer Study report examines the employment status of the traced KIHBT graduates, the industry sectors they are engaged in, their present employment status, type of employment contracts they hold, number of hours worked per week, time taken to find their first job, their salary structure, means and ways with which they found their jobs and reasons for not being in employment (for those not employed).

3.1.4.1 Present Employment Status

Table 3.5 summarizes the Present Employment Status of the traced graduates after graduating from KIHBT. 54 percent are Employed. 12 percent are Self-Employed without Employees. 34 percent are Neither employed nor Self-Employed.

Table 3.5: Present employment status

Employment Status	Employed	Self-employed with employees	Self-employed without employees	Neither employed nor self-employed
Frequency	27	0	6	17
Percent	54%	0%	12%	34%

Figure 3.5: Present employment status

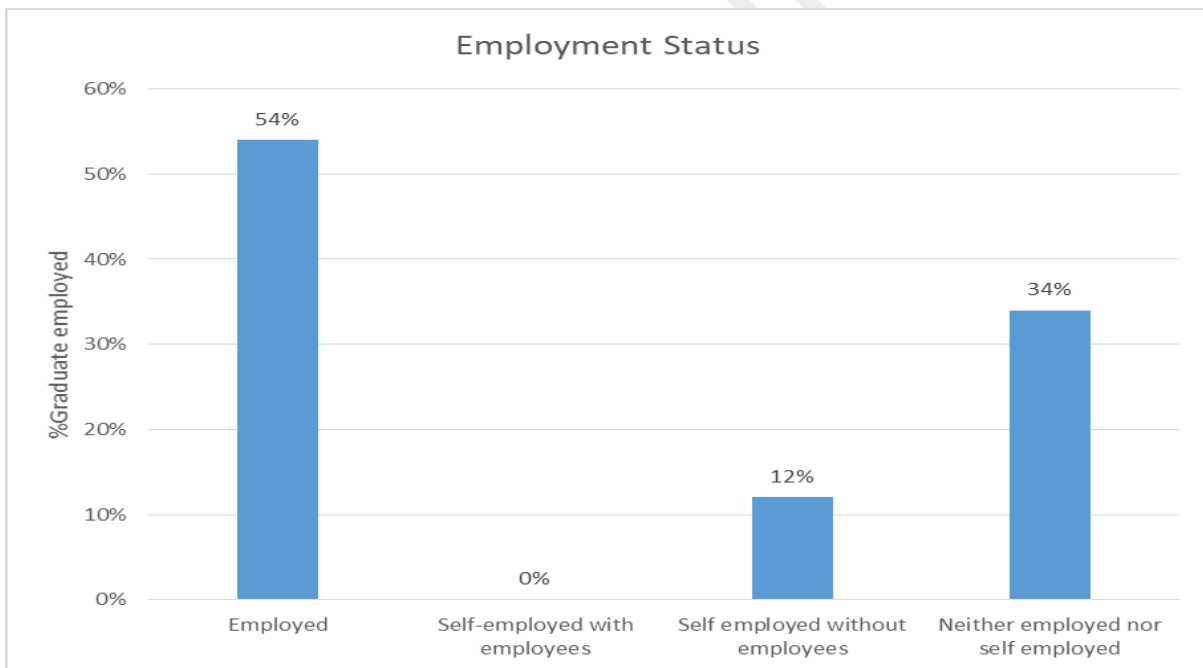
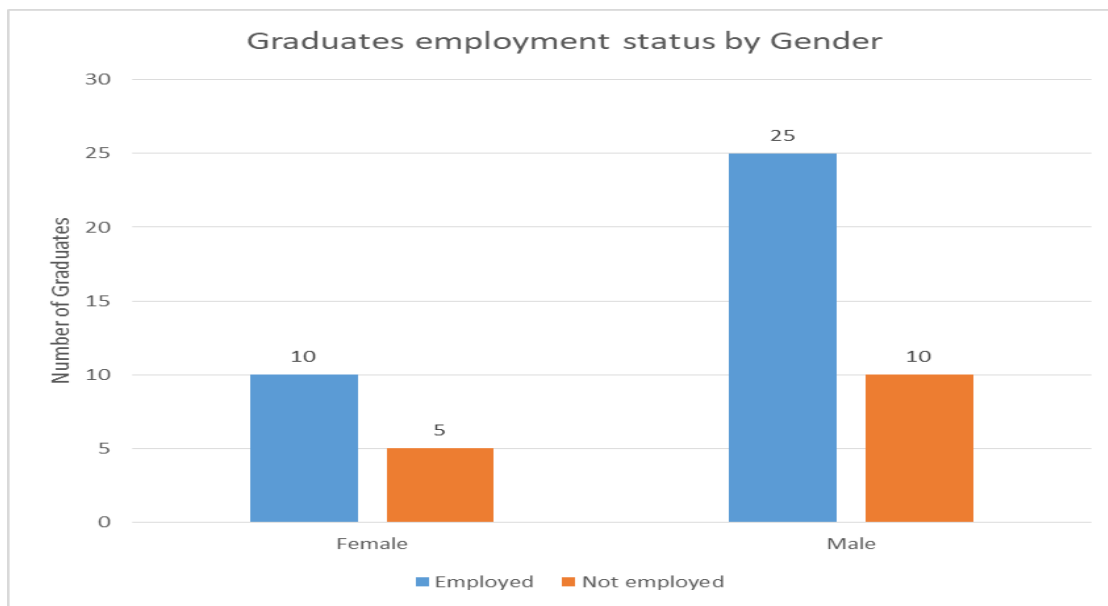


Table 3.6 summarizes the present employment status of the traced graduates by gender. Female employment is at 67% percent and male employment is at 71%.

Table 3.6: Employment status by Gender

Employment Status	Female	Male
Employed	10	25
Not employed	5	10

Figure 3.6: Employment status by Gender



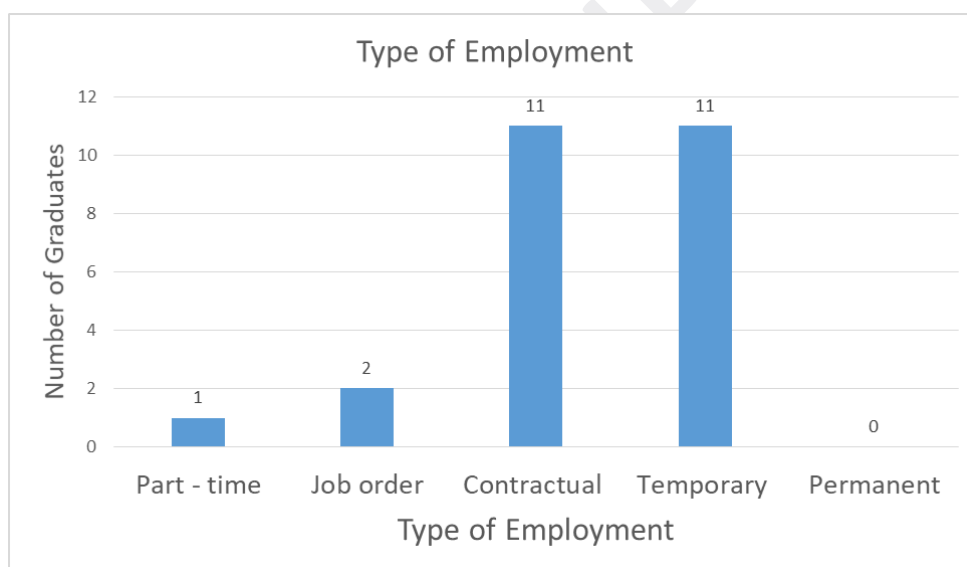
3.1.4.2 Status of Employment

Table 3.7 summarizes the type of Employment Contracts held by the traced graduates after graduating from KIHBT. For the 50 traced TVET graduates who are in some form of employment; 4 percent are on part-time, 8 percent are on a Job Order arrangement, 44 percent are on some fixed term Contract arrangement, while 44 percent are working on a Temporary agreement.

Table 3.7: Status of employment

Type of Employment	Part-time	Job order	Contractual	Temporary	Permanent
Frequency	1	2	11	11	0
Per cent	4	8	44	44	0

Figure 3.7: Status of employment



3.1.4.3 Working Hours per Week

Table 3.8 summarizes the Number of Working Hours per Week for the traced graduates after graduating from KIHBT. Out of the traced graduates 26 responded to this question and 42.3 percent work between 0-40 Hours per Week, while 57.7 percent work more than 40 Hours per Week.

Table 3.8: The number of working hours per week

Working hours	Number of Working Hours	
	0 -40	Above 40
Frequency	11	15
Percent	42.3	57.7

Figure 3.8: Number of Working Hours per Week



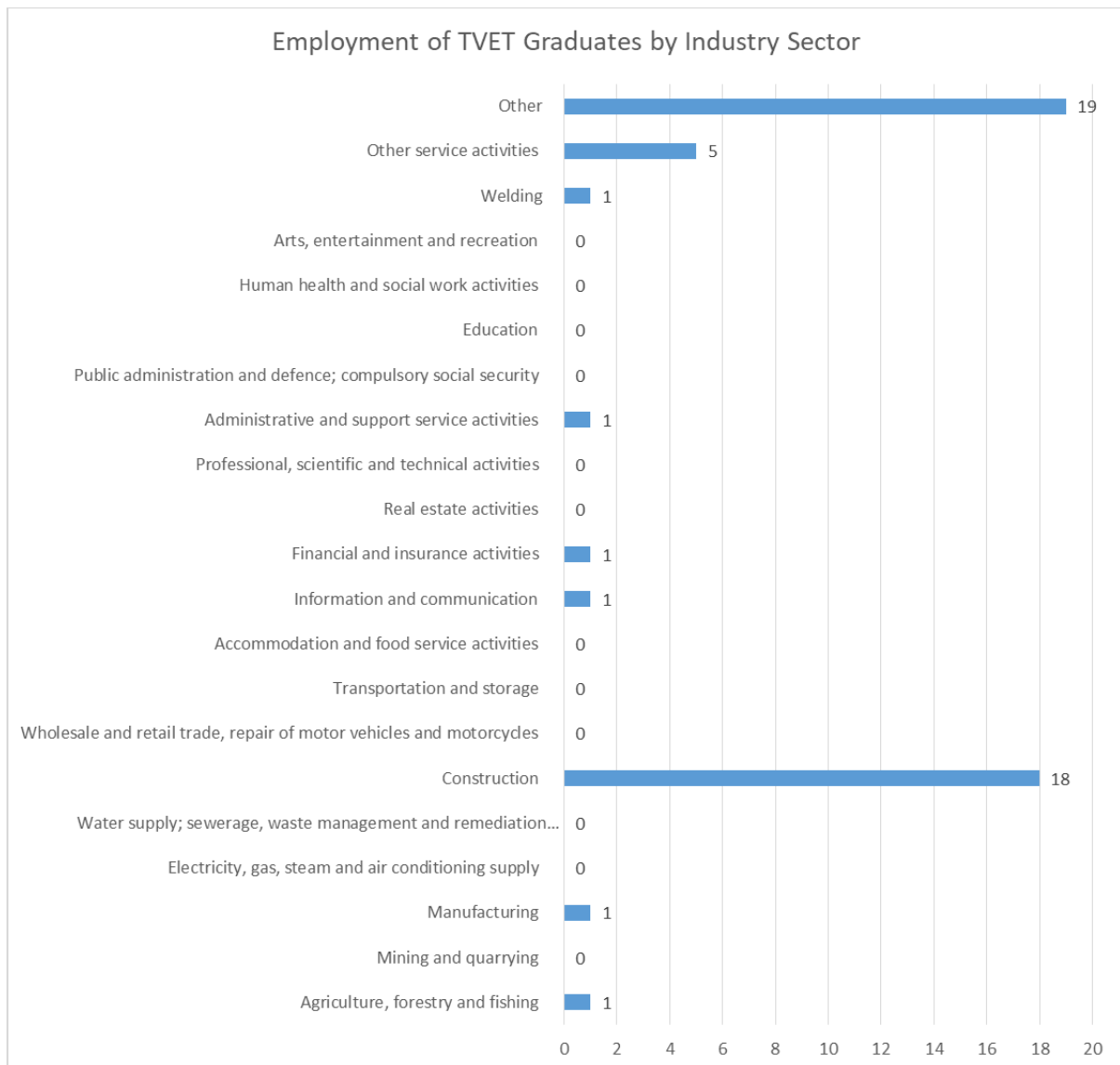
3.1.4.4 Employment of TVET Graduates by Industry Sector

Table 3.9 summarizes how the traced graduates gained Employment in different Industry Sectors after graduating from KIHBT. Out of the 50 traced graduates that are in some form of employment; 37.5% of them are in the construction industry, 39.6% are engaged in other occupations.

Table 3.9: Employment of graduates by industry sectors

EMPLOYMENT OF TVET GRADUATES BY INDUSTRY SECTOR		
Industry Sector	Frequency	Percent
Agriculture, forestry and fishing	1	2.1
Mining and quarrying	0	0
Manufacturing	1	2.1
Electricity, gas, steam and air conditioning supply	0	0
Water supply; sewerage, waste management and remediation activities	0	0
Construction	18	37.5
Wholesale and retail trade, repair of motor vehicles and motorcycles	0	0
Transportation and storage	0	0
Accommodation and food service activities	0	0
Information and communication	1	2.1
Financial and insurance activities	1	2.1
Real estate activities	0	0
Professional, scientific and technical activities	0	0
Administrative and support service activities	1	2.1
Public administration and defence; compulsory social security	0	0
Education	0	0
Human health and social work activities	0	0
Arts, entertainment and recreation	0	0
Welding	1	2.1
Other service activities	5	10.4
Other	19	39.6
Total	48	

Figure 3.9: Employment of graduates by industry sectors



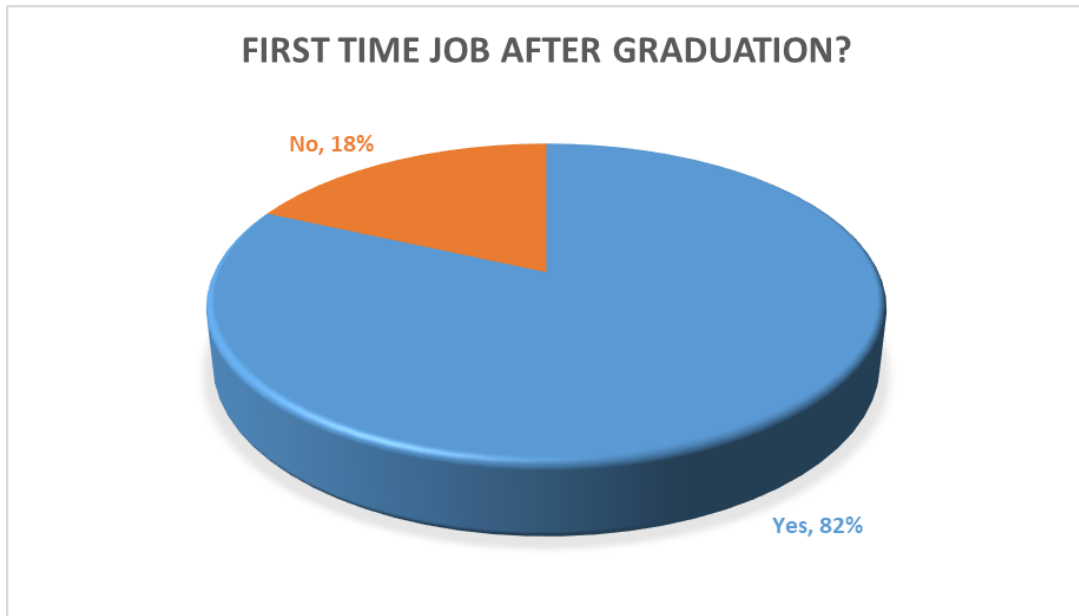
3.1.4.5 First job after graduating

Table 3.10 summarizes if this is the first job after graduating. 81.8 percent were still in their First Job after Graduating while 18.2% percent have held more than one Job after Graduating. This indicates that the KIHBT training received by these graduates were to a large extent relevant or matched the jobs available in this sector.

Table 3.10: First Job after Graduating

First job after graduating?	Yes	No
Frequency	27	6
Per cent	81.8%	18.2%

Figure 3.10: First Job after Graduating



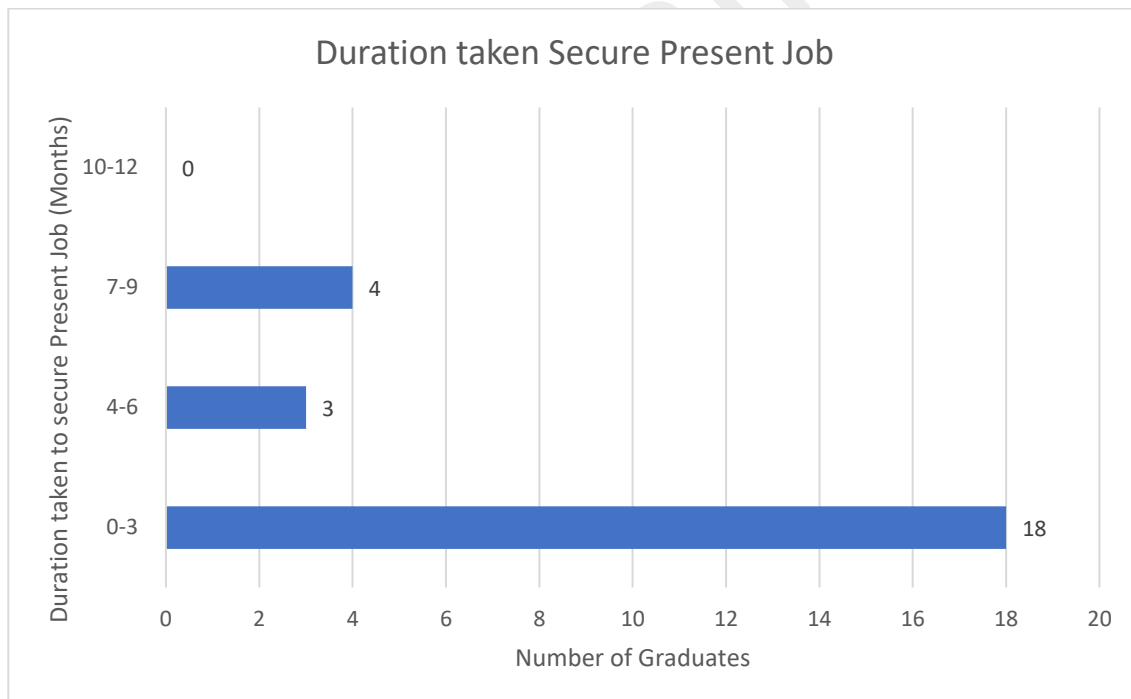
3.1.4.6 Duration Taken to Secure Present Job

Table 3.11 captures data on the Duration Taken to find their present Job. Out of 25 graduates, 72 percent took Less than 4 Months to secure their Present Job. 12 percent took Between 4 and 6 Months to secure their Present Job. 16 percent took Between 7 and 9 Months to secure their Present Job.

Table 3.11: Duration Taken to Secure Present Job

Duration Taken to Secure Present Job	Duration in Months				Total
	0-3	4-6	7-9	10-12	
Frequency	18	3	4	0	25
Percent	72	12	16	0	100

Figure 3.11: Duration Taken to Secure Present Job



3.1.4.7 Duration Taken to Secure First Job after graduating

Table 3.12 captures data on the duration taken to secure the first Job after graduating. 66.7% percent took Less than 4 Months to secure their first Job after graduating. 22.2% percent took Between 4 and 6 Months to secure their first Job after graduating. 11.1% percent took Between 7 and 9 Months to secure their first Job after graduating.

Table 3.12: Duration Taken to Secure First Job after graduating

Duration Taken to Secure first job after graduating	Duration in Months				Total
	0-3	4-6	7-9	10-12	
Frequency	6	2	1	0	9
Percent	66.7%	22.2%	11.1%	0	100%

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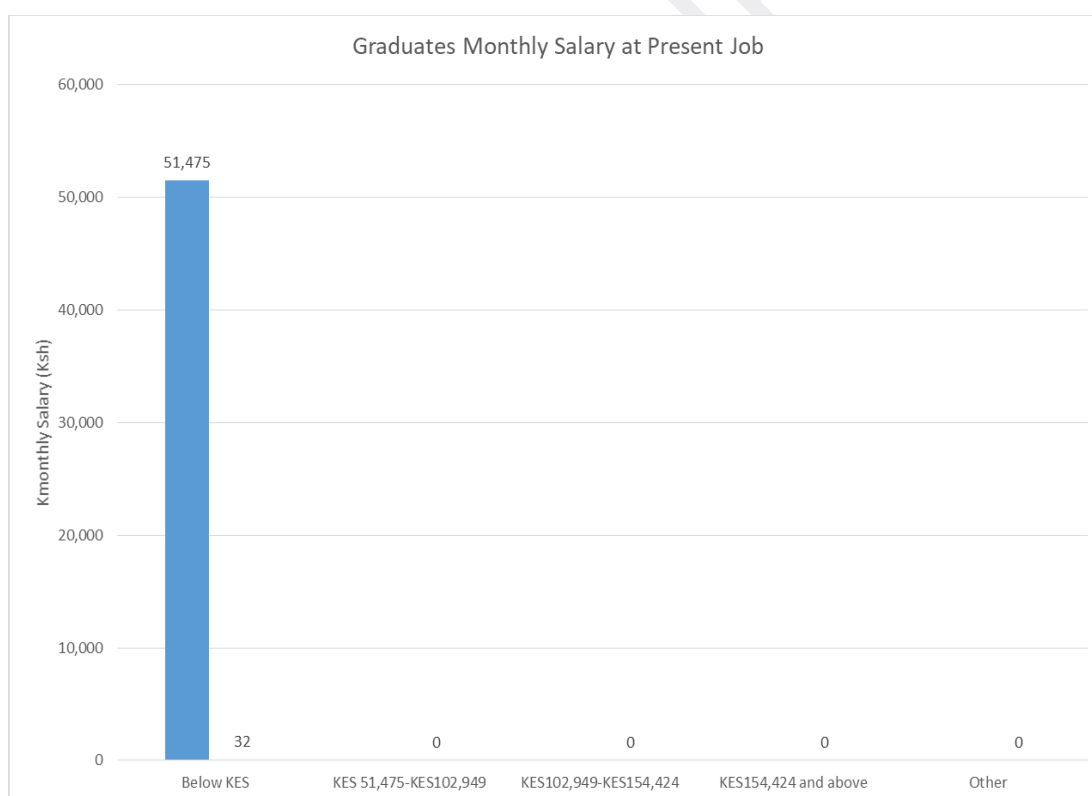
3.1.4.8 Monthly Salary at Present Job

Table 3.13 captures the graduates Monthly Salary at Present Job. Results have been taken from a sample of 32 graduates. 100 percent earn Below KES 51,475.

Table 3.13: Monthly Salary at Present Job

GRADUATES MONTHLY SALARY AT PRESENT JOB						
	Kenya Shillings					Total
	Below KES 51,475	KES 51,475- KES102,949	KES102,949- KES154,424	KES 154,424 and above	Other	
Frequency	32	0	0	0	-	32
Per cent	100	0	0	0	-	100%

Figure 3.12: Monthly Salary at Present Job



3.1.4.9 How Graduates Found their Present Jobs

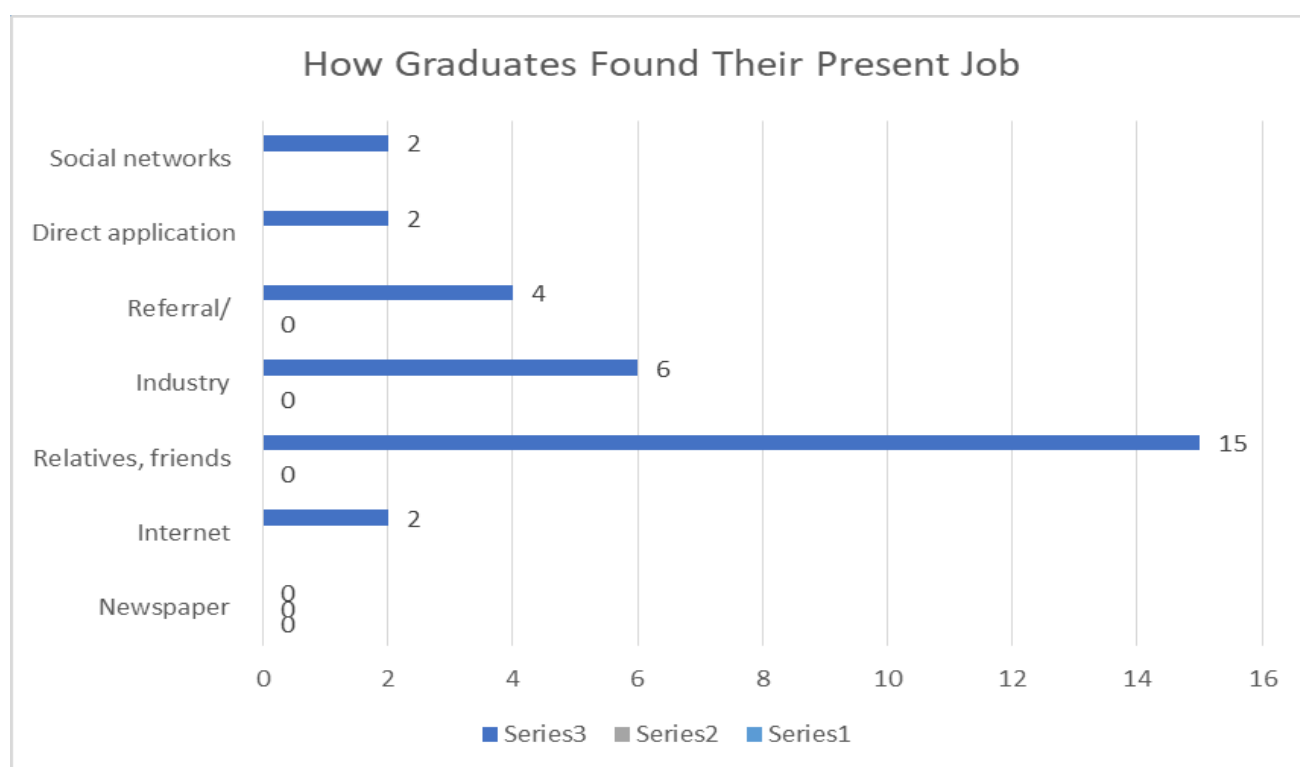
Table 3.14 captures the means and ways with which graduates Found their Present Jobs. Results have been taken from a sample of the KIHBT graduates who are presently in employment. The statistics in Table 3.14 shows that of the Graduates, 6.5 percent secured employment via the Internet searches on government or company websites, 48.4 Percent Relatives, friends and colleagues. 19.4 per cent got

employed through Industry Linkages that took place while still undergoing training. 12.9 percent were employed through Referral and School Endorsement.

Table 3.14: How Graduates Found their Present Jobs

How graduates Found their Present Jobs	Newspaper /Television/ Radio	Internet	Relatives, friends & Colleagues	Industry Linkages	Referral/ Endorsement	Direct application	Social networks
Frequency	0	2	15	6	4	2	2
Per cent	0	6.5%	48.4%	19.4%	12.9%	6.5%	6.5%

Figure 3.13: How Graduates Found their Present Jobs



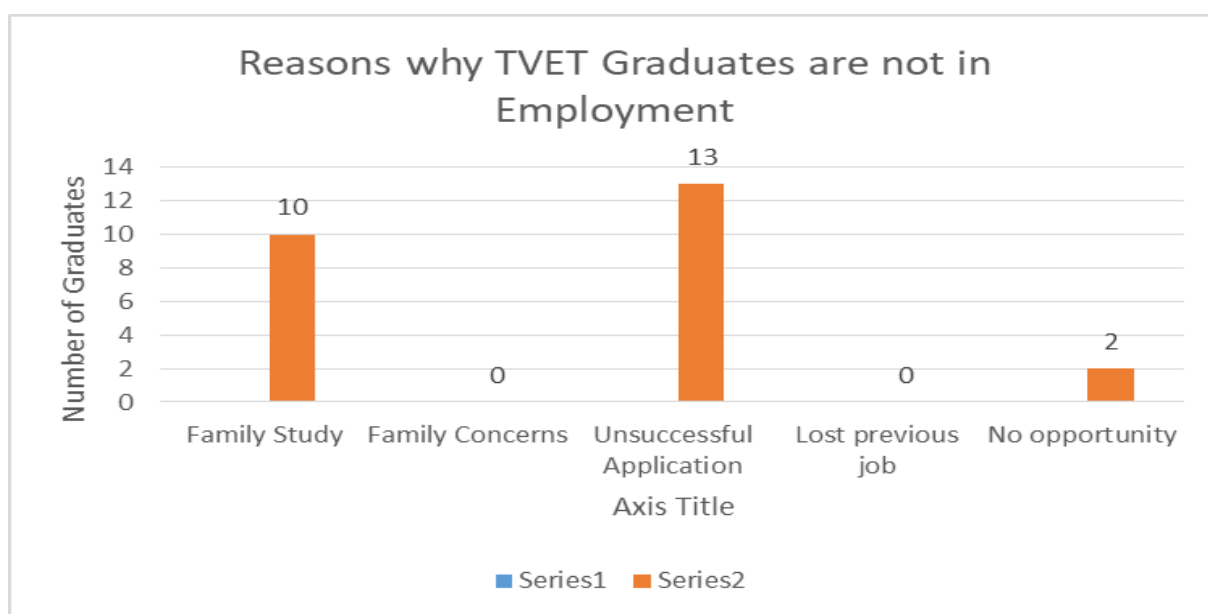
3.1.4.10 Reasons for not Being Employed

Table 3.15 below captures the reasons as to Why graduates are not in Employment. Results have been taken from a sample of the graduates who are not in employment. 40 percent went for Further Studies. 52 percent had Unsuccessful Job Applications, 8 percent Did Not Receive Job Opportunities in the Desired Field. In a depressed economic conditions suitable jobs may not be available.

Table 3.15: Reasons why TVET graduates are not in Employment

REASONS	Further study	Family concerns	Unsuccessful application	Lost previous job	No opportunity
Frequency	10	0	13	0	2
Percent	40	0	52	0	8

Figure 3.14: Reasons why TVET graduates are not in Employment



3.1.5 Relevance of training received by KIHBT graduates

In this section the Tracer Study report examines the relevance of training received by traced graduates. It examines the relationship between work and the course followed, the areas of training that are most helpful in performing the present job; reasons for taking jobs that have relevance with the course studied, details of further training undertaken post-graduating. It also checks if KIHBT graduates could be interested to attend further training.

As will be seen in Section 3.2, the assessment of employer views towards graduates' work and the course followed provides an opportunity to highlight some of the areas where decision makers should focus education and employment reform and policies.

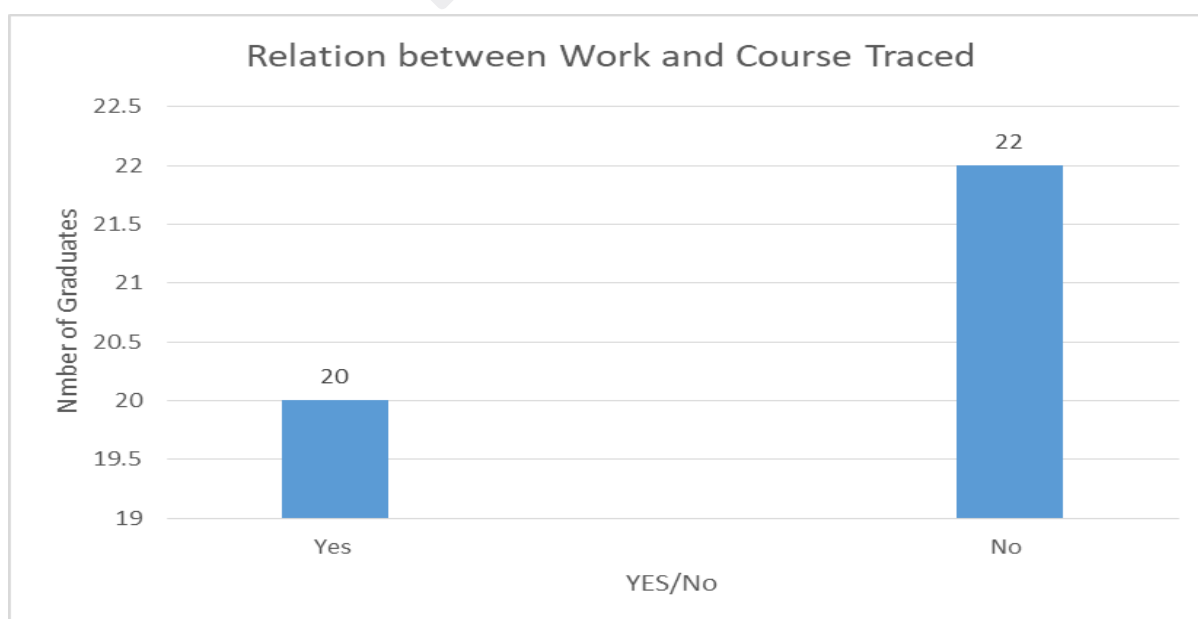
3.1.5.1 Relation between work and the course followed

Table 3.16 captures Relation between work and the course followed. Results have been taken from a sample of 42 traced TVET graduates. 47.6 percent are working in a field related to their area of study. 53.4% are working in other unrelated fields.

Table 3.16: Relation between work and the course followed

Relation	Yes	No
Frequency	20	22
Percent	47.6%	53.4%

Figure 3.15: Relation between work and the course followed



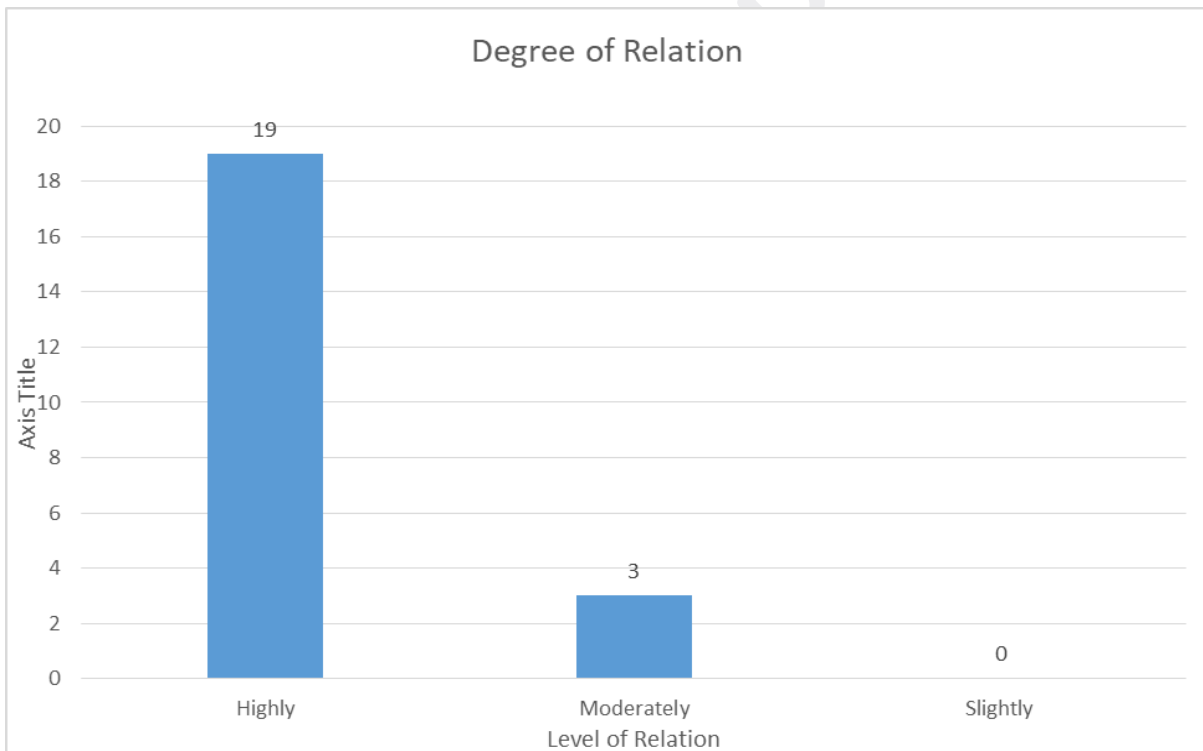
3.1.6.2 Measurement the degree of Relation between Study and Work

Table 3.17 captures the Degrees of Relation between Study and Work done by KIHBT graduates. Results have been taken from a sample of 22 KIHBT graduates. Out of the 22 KIHBT graduates, 86.4 percent agree that work and course followed were Highly Related. 13.6 percent said the two were Moderately Related.

Table 3.17: Measurement of the degrees of Relation between Study and Work

Degree of Relation	Highly	Moderately	Slightly	Total
Frequency	19	3	0	22
Percent	86.4	13.6	0	100%

Figure 3.16: Degrees of Relation between Study and Work



3.1.5.3 Reasons for lack of relationship between Study and Work

The 22 graduates who are not working in a field not related to the course studied at KIHBT. They all cite their reason as not finding a job opportunity related to the course they studied.

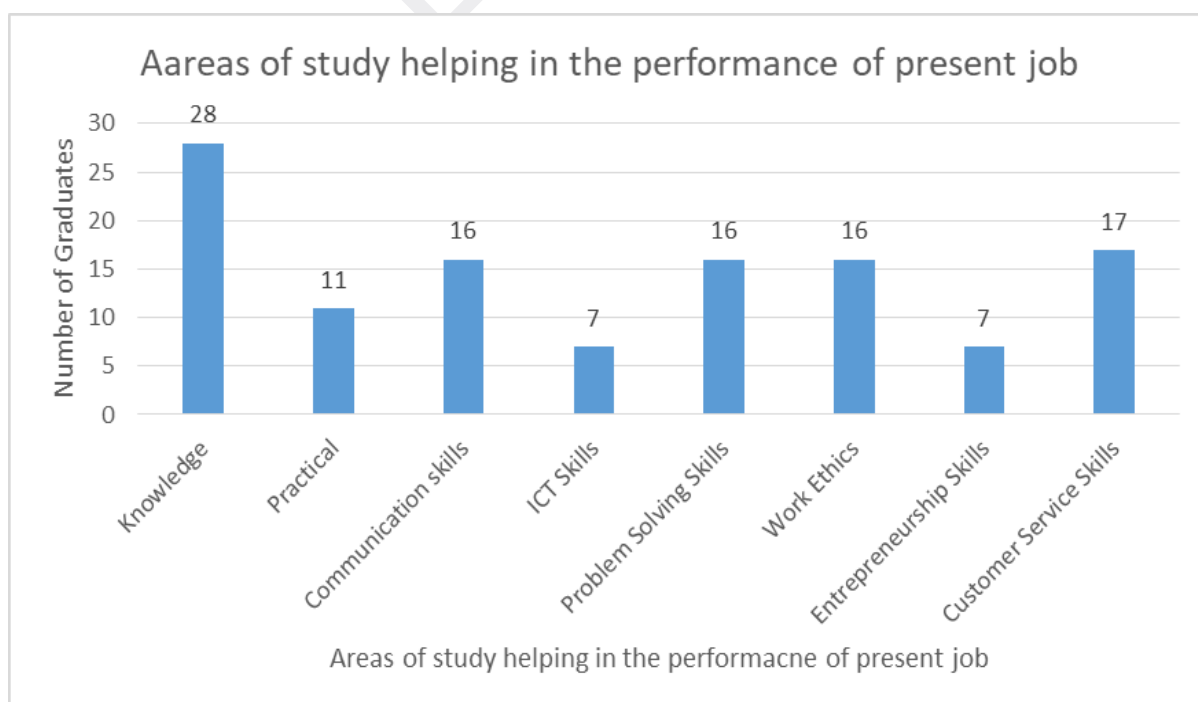
3.1.5.4 Areas of study helping in the performance at present job

Table 3.18 captures the Areas of study helping KIHBT graduates in the performance at their workplaces. The statistics show that for the traced Graduates, Knowledge (*theoretical and practical related to my specialization*); Communication skills (*spoken and written*); Problem-solving skills (*being able to analyse a problem and find creative solutions*); Work ethics (*such as, attendance at work, reliability, punctuality, team work*) and Customer service skills (*such as, personal presentation, being polite, understanding a customer's needs and being able to meet these*) were really helpful in performing their duties at work. ICT skills (*use of computers*) and Entrepreneurship skills (*such as, market research, business planning, financial management, leading others*) had the least impact.

Table 3.18: Areas of study helping in the performance at present job

Areas	Knowledge	Practical	Communication Skills	ICT Skills	Problem Solving Skills	Work Ethics	Entrepreneurship Skills	Customer Service Skills
Frequency	28	11	16	7	16	16	7	17

Figure 3.17: Areas of study helping in the performance at present job



3.1.5.5 Access to further training

This section looks at the KIHBT Graduates participation in further training after graduation, the reasons for not participating in further training and the likelihood of attending further training courses later.

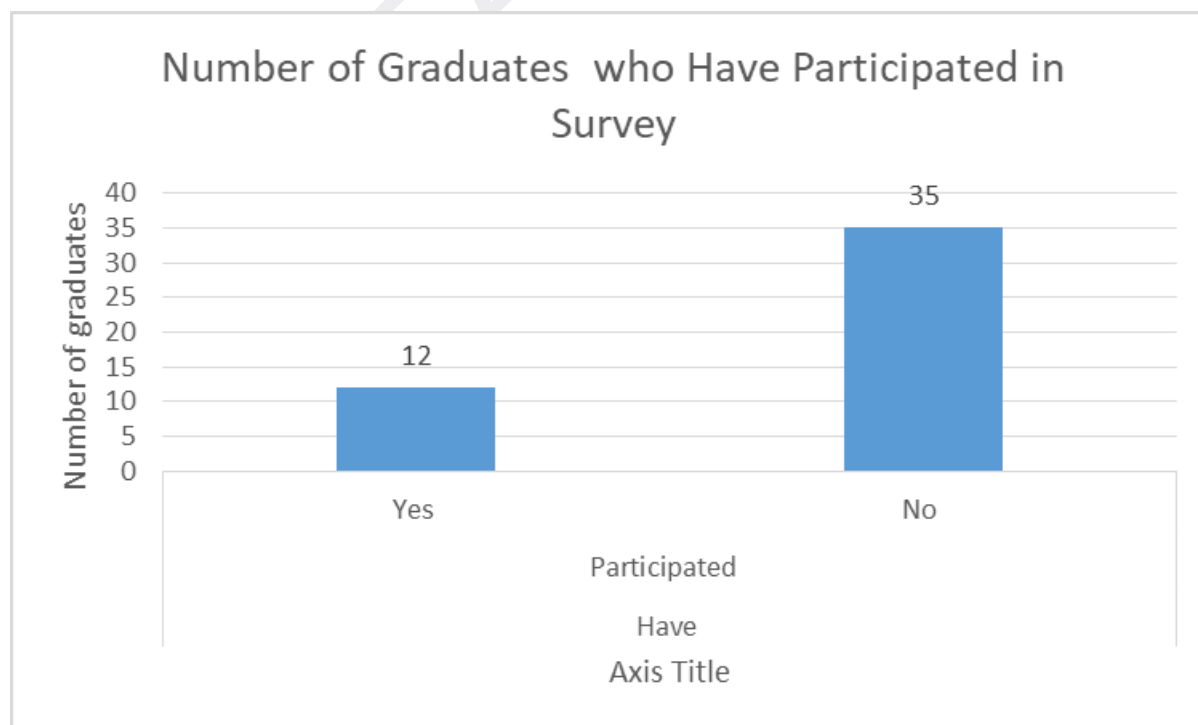
Table 3.19: Participation in further training, Reasons for not participating and likelihood of attending further training courses

	Have Participated		Reasons for not Participating				Likely to Participate	
	Yes	No	No Course	No Need	No Money	Others	Yes	No
Frequency	12	35	0	0	33	2	47	1
Per cent	25.5	74.5	0	0	94.3	5.7	97.9	2.1

3.1.5.5.1 Participation in further training after graduation

Table 3.19 Column 2 and Column 3 indicates Participation in Further Training (university, evening classes, short courses) after graduation. Results have been taken from a sample of 47 KIHBT graduates. 25.5 percent have Participated in Further Training. 74.5 percent have not participated in Further Training.

Figure 3.18: Participation in further training after graduation



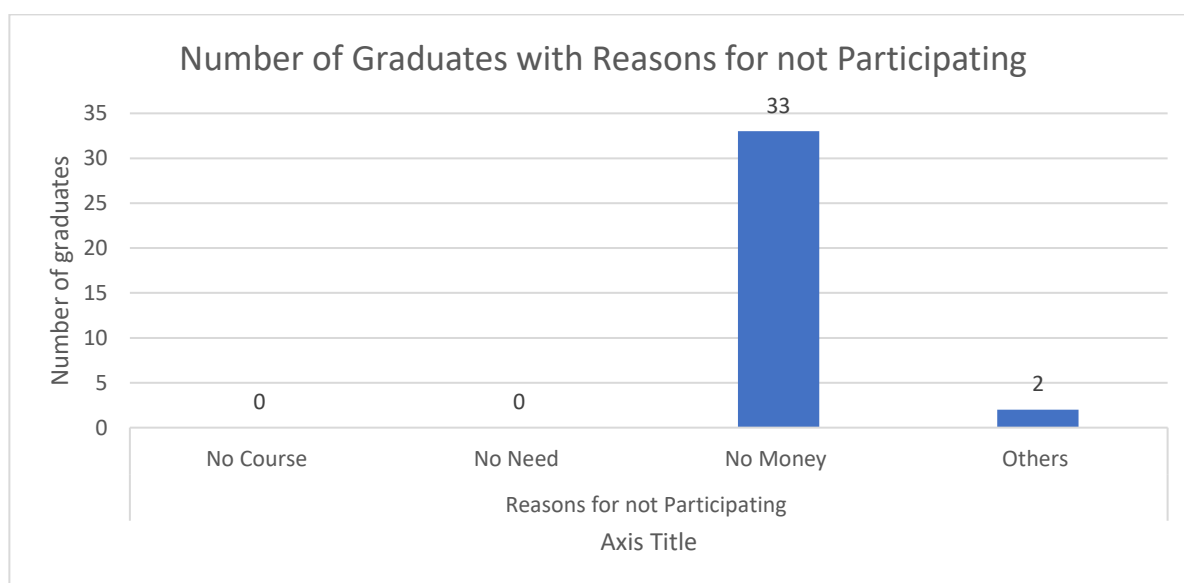
Among the type of courses undertaken as part of further training include;

- Diploma in Civil Engineering
- Diploma in Highway Engineering
- Low volume sealed road work
- Craft Certificate in Road Construction
- Fire and Safety course

3.1.5.5.2 Reasons for not participating in further training after graduation

Table 3.19 Column 4, Column 5, Column 6 and Column 7 captures Reasons for not undertaking further training (*university, evening classes, and short courses*) after graduation. Results taken from a sample of the 35 graduates who have not participated in further training after graduation. 94.3 percent did not have money to pay for further training.

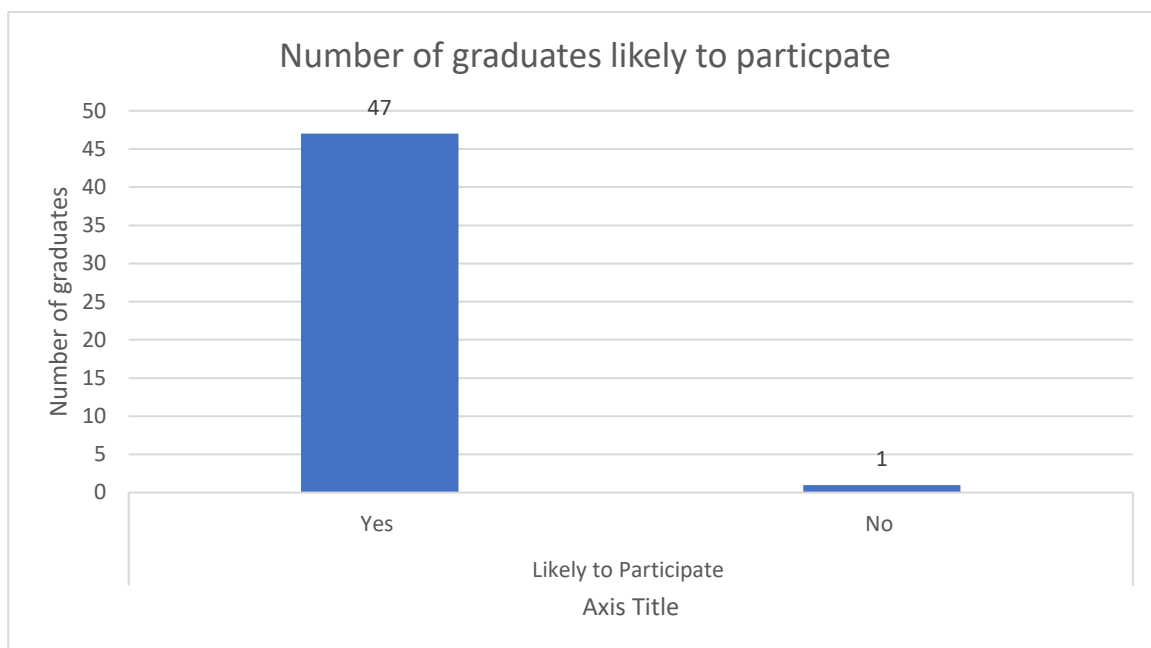
Figure 3.19: Reasons for not participating



3.1.5.5.3 The likelihood of attending further training courses

Table 3.19 Column 8 and Column 9 captures the likelihood of TVET graduates attending further training courses later (*university, evening classes, short courses*) after graduation. Results have been taken from a sample of 48 KIHBT graduates. These findings reveal that most graduates who took part in the study recognize the importance and need for further skill building for promotion and career development.

Figure 3.20: Likelihood of attending further training courses



3.1.6 Assessment of job satisfaction by KIHBT graduates

The following sections of this tracer study report will outline findings of the study with regards to employment issues. This section examines Job satisfaction by the traced graduates. It is an assessment of employees towards their present jobs.

First the general satisfaction is measured on a five-point scale. This is followed with the measurement of eleven parameters on the same scale. The eleven parameters include; Interesting work tasks, working with some independence, Clear and regulated work tasks, applying what was learned when studying, Job security, Social status and recognition, putting own ideas into practice, Income and benefits, Good social climate / work setting, Good career advancement prospects and Ability to coordinate/ supervise work.

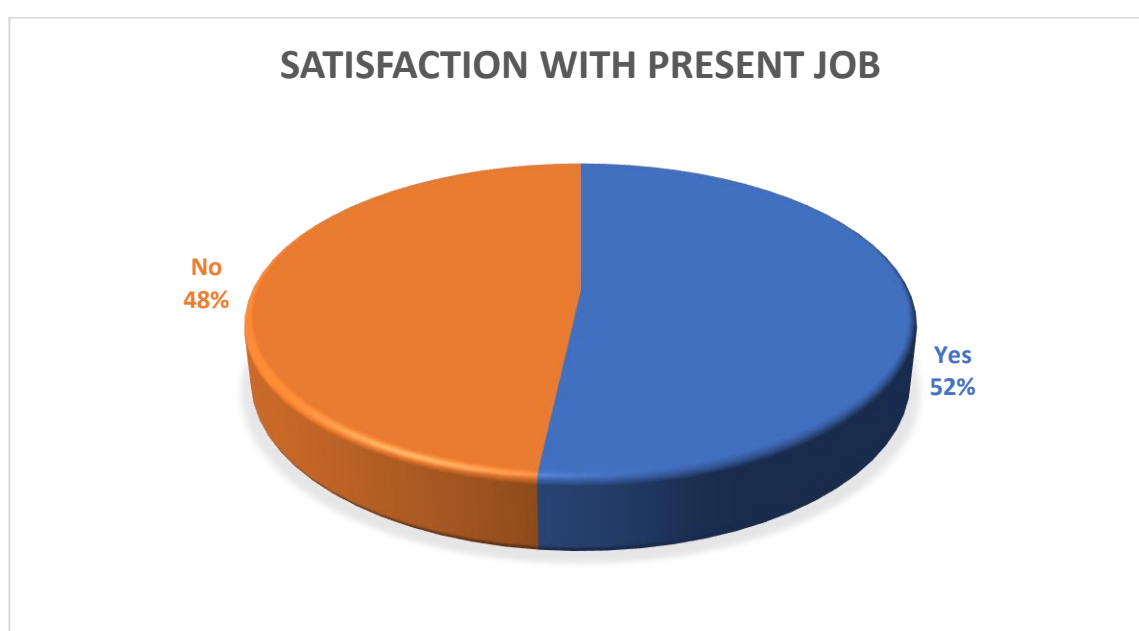
3.1.6.1 General Satisfaction with present job

Table 3.20 captures general satisfaction with a present job. Results have been taken from a sample of 29 KIHBT graduates. 51.7 percent are satisfied with their present job while 48.3 percent are not satisfied with their present job.

Table 3.20: General Satisfaction with present job

SATISFACTION WITH PRESENT JOB			
SATISFACTION	Yes	No	Total
Frequency	15	14	29
Per cent	51.7%	48.3%	100%

Figure 3.21: General Satisfaction with present job



3.1.6.2 Degree of satisfaction along 11 individual job parameters

The degree/extent of satisfaction along 11 individual job parameters is measured on a five-point scale as shown below.

3.1.6.2.1: Interpretation of the Degree of Satisfaction with Job Parameters

The results will be interpreted based on the level of satisfaction on individual job parameters among the graduates

This scale of satisfaction has been defined as either not satisfied (1), least satisfied (2), moderately satisfied (3), satisfied (4) and Very satisfied (5).

INTERPRETATION OF THE LEVEL OF SATISFACTION					
Level of satisfaction	1	2	3	4	5.0
Satisfaction	Not satisfied	Least Satisfied	Moderately Satisfied	Satisfied	Very Satisfied
Colour Code					

Table 3.21: Measurement of satisfaction along individual job parameters

Job parameters	Job Satisfaction					Maximum Satisfaction	Level of satisfaction
	1	2	3	4	5		
Interesting work tasks	2	1	12	8	6	41.4%	Moderately satisfied
Being able to work with some independence	1	2	8	9	8	32.1%	Satisfied
Clear and regulated work tasks	2	4	0	12	9	44.4%	Satisfied
Possibilities for applying what you learned when studying	3	1	8	10	8	33.3%	Satisfied
Job security	9	4	10	5	4	31.3%	Moderately satisfied
Social status and recognition	4	5	10	6	5	33.3%	Moderately satisfied
Possibilities to put your own ideas into practice	1	3	5	13	8	43.3%	Satisfied
Income and benefits	7	8	9	6	4	26.5%	Moderately satisfied
Good social climate / work setting	0	0	9	14	6	48.3%	Satisfied
Good career advancement prospects	6	2	5	11	6	36.7%	Satisfied
Being able to coordinate/supervise work	0	4	5	10	11	36.7%	Very satisfied

From Table 3.21 above graduates are very satisfied with their jobs since they are given an opportunity to coordinate / supervise work. Job security, income and benefit, interesting work tasks and social status and recognition gave the graduates moderate satisfaction.

3.1.8 Relationship between study and employment

In this section the Tracer Study report examines the Teaching-learning conditions and provisions, experienced by the traced graduates, at KIHBT. It is an assessment of the 20 employed, 5 self employed and 10 on further vocational education and 15 unemployed graduates traced graduates towards their former institute.

3.1.8.1 Teaching-learning conditions and provisions experienced at TVET Institute

The measurement of the Teaching-learning conditions and provisions uses 28 parameters on a five-point Likert scale as shown below.

3.1.8.1.1 Interpretation of the Ratings for the Teaching-Learning Conditions and Provisions

The results will be interpreted based on the level of satisfaction on Teaching-learning conditions and provisions among the graduates.

This scale of satisfaction has been defined as either not satisfied (1), least satisfied (2), moderately satisfied (3), satisfied (4) and Very satisfied (5).

INTERPRETATION OF THE LEVEL OF SATISFACTION					
Level of satisfaction	1	2	3	4	5
Satisfaction	Not satisfied	Least Satisfied	Moderately Satisfied	Satisfied	Very Satisfied
Colour Code					

Table 3.22: Rating the teaching-learning conditions and provisions experienced at KIHBT

Teaching-learning Conditions and Provisions						Maximum satisfaction	Level of satisfaction
	Job Satisfaction						
	1	2	3	4	5		
Theoretical training related to the occupation	1	2	5	10	7	40.0%	Satisfied
Practical use of computers	7	6	6	5	5	24.1%	Not Satisfied

Practical use of working tools	1	3	4	12	5	48.0%	Satisfied
Practical use of machines and equipment	2	1	8	5	9	36.0%	Very Satisfied
Practical use of materials and parts	1	2	8	8	6	32.0%	Satisfied
Theory and practice of equipment maintenance	2	2	3	12	7	46.2%	Satisfied
Understanding and producing drawings	3	6	8	8	1	30.8%	Satisfied
Doing measurements at work	6	2	7	8	9	28.1%	Very Satisfied
Use of written instructions and working guides	0	1	1	15	8	60.0%	Satisfied
Communication	0	0	1	7	23	74.2%	Very Satisfied
Working with other people	0	1	0	3	24	85.7%	Very Satisfied
Knowledge of national laws	1	6	6	5	12	40.0%	Very Satisfied
How to work in a safe way	0	1	3	12	14	46.7%	Very Satisfied
How to do high quality work	0	0	2	3	15	75.0%	Very Satisfied
Discipline and accuracy at work	0	0	1	6	22	75.9%	Very Satisfied
How to start a business	3	4	5	9	11	34.4%	Very Satisfied
General education subjects	1	0	6	11	14	43.8%	Very Satisfied
Management of the institution	3	3	7	10	9	31.3%	Satisfied
Standard of buildings, classrooms and workshops/labs	4	6	8	5	6	27.6%	Moderately satisfied
Recreational activities	11	8	7	3	5	32.4%	Not Satisfied
Support from teachers	1	2	4	16	17	42.5%	Very Satisfied
Competence of teachers	1	0	6	17	7	54.8%	Satisfied
Teachers' experience of industry	2	1	6	16	8	48.5%	Satisfied
Careers advice	6	3	10	8	7	29.4%	Moderately satisfied
Providing internship/industry-based training	12	6	4	6	5	36.4%	Not Satisfied
Help in finding a job	11	3	6	4	4	39.3%	Not Satisfied
Extent of satisfaction with studies in general	1	1	6	15	7	50.0%	Satisfied

Graduates were not satisfied by the following teaching-learning conditions and provisions at KIHBT; Practical use of computers, Recreational activities, providing internship/industry-based training, help in finding a job. On the other hand, they were very satisfied by the practical use of machines and equipment, doing measurements at work, communication, working with other people, knowledge of national laws, how to work in a safe way, how to do high quality work, discipline and accuracy at work, how to start a business, general education subjects and support from teachers.

3.1.9 Section VI - Comments and recommendations by graduates

In this section, traced Graduates share their opinions on the weak areas that require improvement in the course of the study. Essentially these are areas that require professional attention to apply knowledge and skills to perform the job perfectly and efficiently. They also give their comments and suggestions regarding this survey.

3.1.9.1 Changes recommended for KIHBT programmes by Graduates

KIHBT Graduates shared their opinions on areas that require professional attention to apply knowledge and skills to perform the job perfectly and efficiently.

Table 3.23: Important changes recommended for the programme of study

IMPORTANT PROGRAMME OF STUDY CHANGES RECOMMENDED BY GRADUATES	
Themes	Recommended Changes
Attachment	<ul style="list-style-type: none"> ● During the course work the management should try to place all students during the attachment period.
Internship	<ul style="list-style-type: none"> ● Provide internship programs in the various fields of study. ● Students to be attached to government projects on the highways as they are equipped to do the job ● Request industry to give paid internships ● The training only problem is getting internships and job, requesting the institute to intervene on internship programs ● Graduates need support to find jobs
Distinction Students	<ul style="list-style-type: none"> ● Support students who get Distinction qualification to find jobs or internship ● Give the best student in their class sponsorship

Practicals	<ul style="list-style-type: none"> ● Recommends the institute to offer material testing lessons to students ● Academic trips for students ● Equip students with practical skills ● Expose students to the industry and modern equipments ● Improve on practical hour engagement with the students and help to get exposed on challenges faced and solving skills on field work ● Expose the students to the industry especially during the first and second module ● Improvement of survey instruments such as theodolite and increase of learning materials ● Provide more practicals instruments/materials ● More exposure to the field would be very helpful to help students learn and understand fieldwork ● Equip laboratories ● In Diploma courses less practicals are offered hence giving us a hectic time at our workplace ● Visiting the laboratory more training for further learning ● Provision of working tools e.g dumpy levels
Quality of Teachers	<ul style="list-style-type: none"> ● Engage tutors who are specialized in Technical Education Programs and not only in Civil and Building especially matters structures and or compulsory units
Curriculum	<ul style="list-style-type: none"> ● Benchmark with other TVET institutes ● Industrial visits for students

Administration	<ul style="list-style-type: none"> ● The institute to favour the students with huge school fees balance to sit for their examination ● To introduce counselling programmes for students
Facilities	<ul style="list-style-type: none"> ● TVET institutions are required to be well equipped with practical machines/equipment and should provide placement for the students ● Introduce recreational facilities ● Improve the standard of infrastructure ● Improvement of workshops and equipping of laboratories ● Recreational facilities should be more ● Introducing advance survey equipments ● Expose students to modern equipments ● There is need to improve the conditions of the classrooms ● Improve on the infrastructure
Graduation	<ul style="list-style-type: none"> ● Make Graduation ceremonies more frequent to motivate the students
Student Leadership	<ul style="list-style-type: none"> ● Students leadership is required at KIHBT

Table 3.23 summarizes the important changes recommended for the TVET Institute’s programme of study by TVET Graduates. The findings indicate that the most common changes recommended for the TVET Institute’s programme of study by their Graduates are; (1) Enhance practical teaching, (2) Enhance quality and quantity of teachers, (3) Enhance Job placement and career guidance.

3.1.9.2 TVET Graduates Comments and suggestions regarding this survey

Table 3.24: TVET Graduates Comments and suggestions regarding this survey

Themes	Comments and Suggestions
Good survey	<ul style="list-style-type: none"> ● It's a good survey that helps to know the well being of the students who were out of school are out of school ● It was a good one and hopes the institutes exposes the students to field work ● It motivates if the institution does the follow up for their alumni ● Keep up the follow up! ● Friendly questionnaire and staff member ● The survey was direct to the point ● It is very convenient ● Commendable job ● It is a privilege to have the study since it will help to improve the performance and standards of the school ● Satisfied ● The survey was good all i do request is if there are any openings regarding my course i will appreciate if they do the same follow up for job openings ● It was a good survey and i appreciate to be considered part of it ● Hopes the survey will help place students on internships and jobs ● The activity was well done and well communicated ● It's good to follow up on former students ● Excellent job
Administration	<ul style="list-style-type: none"> ● Benchmark with other technical institutes
Job Opportunities	<ul style="list-style-type: none"> ● I hope after the survey the institute will help us find jobs
Request for Scholarship or Bursary	<ul style="list-style-type: none"> ● Give scholarship to well performing student especially at craft level to do Diploma courses

3.2 EMPLOYERS' FINDINGS AT KENYA INSTITUTE OF HIGHWAY & BUILDING TECHNOLOGY

The Employers survey assessment was based on the level of satisfaction with regards to their skills and performance level on the job. This provided the institute with a review of the effectiveness and relevance of training of TVET graduates from the employers' perspectives. Additionally, the employers gave their assessment on the courses that the institute offers in relation to meeting the job market needs

3.2.1 Demographic Information

The following is a demonstration of the role/position of the traced employers in the sample and the industry sectors they are engaged in.

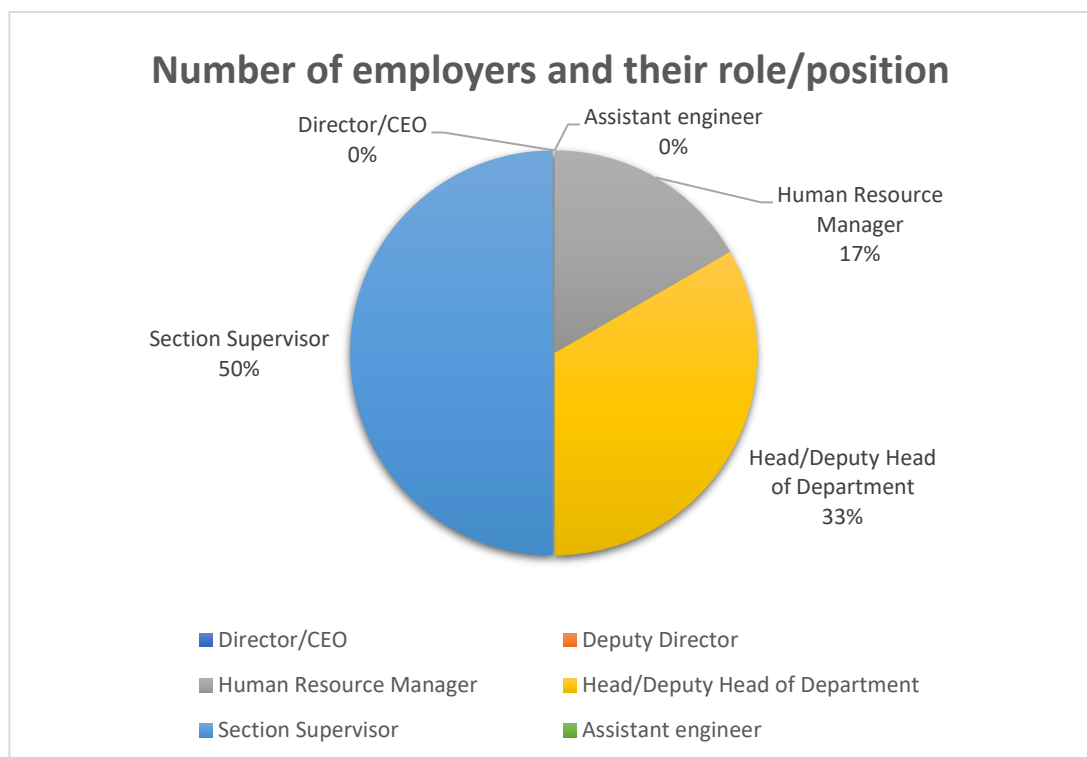
3.2.1.1 Role/Position of traced Employers

Table 3.25: The Role/Position of traced Employers

THE NUMBER OF EMPLOYERS AND THEIR ROLE/POSITION						
	Role/Position					
	Director/CEO	Deputy Director	Human Resource Manager	Head/Deputy Head of Department	Section Supervisor	Assistant engineer
Frequency	0	0	1	2	3	0
Per cent	0%	0%	16.7%	33.3%	50%	0%

The survey was able to trace 6 employers. The statistics in Table 3.25 shows that out of the traced Employers traced, 16.7% were human resource managers, 33.3% were the head/deputy heads of department, and 50% were supervisors.

Figure 3.22: The Role/Position of traced Employers



3.2.1.2 Traced Employers of Graduates by Industry Sector

The industry sectors were grouped to adequately accommodate all sampled employers.

Table 3.26: Employers of graduates by Industry Sectors

EMPLOYERS OF GRADUATES BY INDUSTRY SECTOR		
Industry Sector	Frequency	Per cent
Agriculture, forestry and fishing	-	-
Mining and quarrying	-	-
Manufacturing	-	-
Electricity, gas, steam and air conditioning supply	-	-
Water supply; sewerage, waste management and remediation activities	-	-
Construction	6	100%
Wholesale and retail trade, repair of motor vehicles and motorcycles	-	-
Transportation and storage	-	-

Accommodation and food service activities	-	-
Information and communication	-	-
Financial and insurance activities	-	-
Real estate activities	-	-
Professional, scientific and technical activities	-	-
Administrative and support service activities	-	-
Public administration and defence; compulsory social security	-	-
Education	-	-
Human health and social work activities	-	-
Arts, entertainment and recreation	-	-
Other service activities	-	-
Other	-	-
Total	6	100%

Table 3.26 summarizes how the traced employers spread across different industry sectors. The statistics shows that all 6 employers traced were from the Construction sector (100%).

3.2.2 Recruitment Procedures and Criteria

The survey examined the procedures and criteria applied by Employers during recruitment as follows:

- The number of TVET graduates in both permanent and casual employment
- Important aspects when it comes to employing TVET graduates
- The ways and means of recruiting TVET graduates
- Satisfaction with quality of training received by TVET graduates
- Demonstration of Knowledge and skills aspects
- Reasons for not employing TVET graduates from Kenya Institute of Highway and Building Technology
- Challenges they face with engaged TVET interns.
- Attitude of the TVET graduates that they have employed

This assessment attempted to highlight education and employment reform and policies where decision makers in the institute should focus on

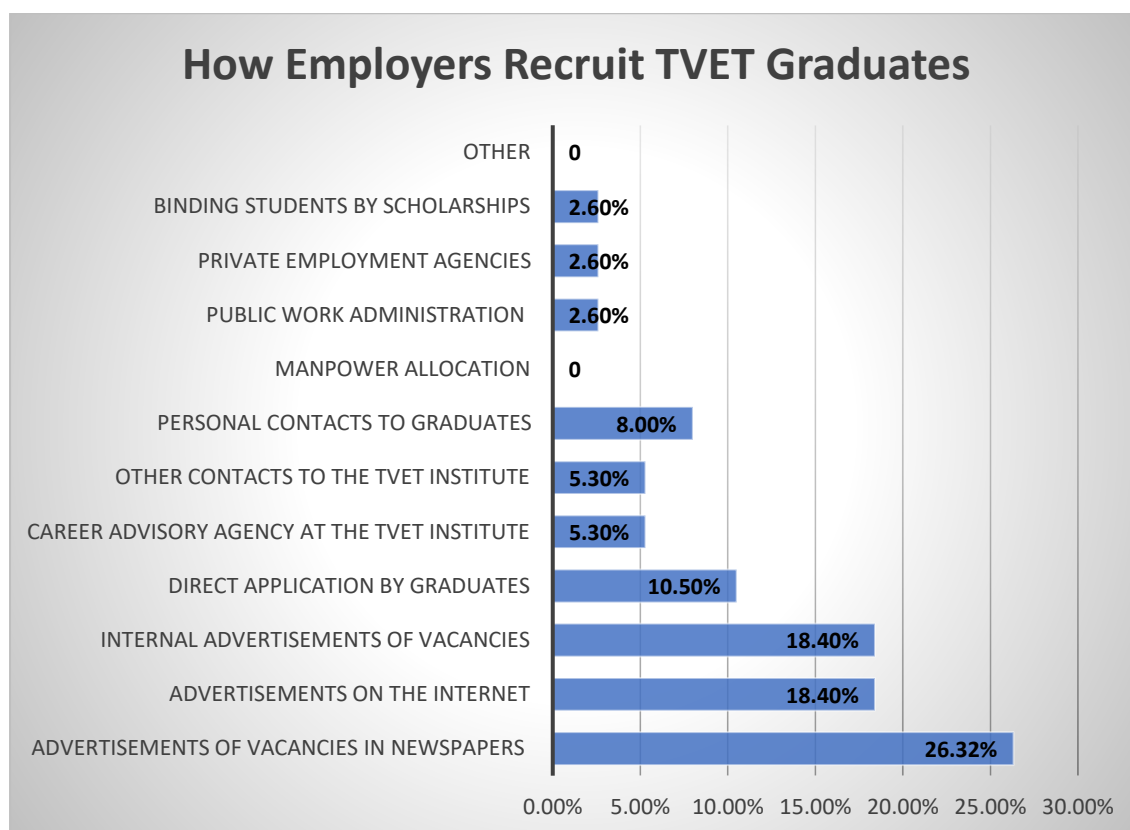
3.2.2.1 How Employers Recruit TVET Graduates

Table 3.27: How Employers Recruit Graduates

How Employers Recruit Graduates	Frequency	Per cent
Advertisements of vacancies in newspapers <i>(Such as, daily papers, special periodicals)</i>	1	11.1%
Advertisements on the Internet	1	11.1%
Internal advertisements of vacancies	2	22.2%
Direct application by graduates	5	55.6%
Career advisory agency at the TVET Institute	-	-
Other contacts to the TVET Institute	-	-
Personal contacts to graduates	-	-
Manpower allocation	-	-
Public work administration <i>(Such as, public placement services, manpower allocation system)</i>	-	-
Private employment agencies	-	-
Binding students by scholarships	-	-
Other	-	-
Total	9	100

Table 3.27 captures the means and ways with which Employers recruit Graduates. All the 6 employers currently absorb recent TVET graduates. 11.1% of employers use Advertisements of vacancies in newspapers, 11.15% of employers use advertisements on the internet, 22.2% of employers use internal advertisement of vacancies and 55.6% use direct application of TVET graduates.

Figure 3.23: How Employers Recruit TVET Graduates



Advertisement of job vacancies in the newspapers was the most preferred means of recruiting graduates.

There is a need to enhance internship programs so that graduates can establish crucial contacts with employers. The results obtained through this tracer study reveal that there is need for industrial linkages which could potentially secure vacancies for the graduates

3.2.2.2 Statistics of TVET Graduates in Employment

Table 3.28: Number of TVET Graduates in Employment

KENYA INSTITUTE OF HIGHWAY AND BUILDING TECHNOLOGY GRADUATES IN EMPLOYMENT BY GENDER			
	Male	Female	Total
Total	25	10	35
Per cent	71.5%	28.5%	100%

The statistics in Table 3.29 shows that of the employed TVET graduates, **71.5 %** are male and **28.5 %** are female.

3.2.2.3. Important Aspects for the recruitment of TVET Graduates

Using a five-point Likert scale, employers measured the degree of importance of eleven (11) aspects for the recruitment of TVET Graduates.

	1	2	3	4	5	
Not at all important	()	()	()	()	()	Very important

3.2.2.3.1 Interpretation of the Degree of Importance of Multiple Aspects for the Recruitment of TVET Graduates

INTERPRETATION OF THE DEGREE OF IMPORTANCE					
Level of Importance	1	2	3	4	5
Importance	Not important	Less Important	Moderately Important	Important	Very Important
Colour Code					

Table 3.29: Importance of Aspects for the recruitment of TVET Graduates

Recruitment Aspects	Degree of Importance					Max Importance	Importance Level
	1	2	3	4	5		
Field of study	0	0	1	4	1	66.7%	Important
Main focus of subject area/specialization	0	0	0	4	2	66.7%	Important
Grades of examinations at the TVET Institute	1	0	1	3	1	50%	Moderately important
Practical experience acquired during course of study	0	0	0	4	2	66.7%	Important
Reputation of TVET Institute	0	1	1	0	3	60%	Important
Recommendations/reference s from third persons	1	0	2	0	1	50%	Moderately important

Results of recruitments tests	0	0	0	5	0	100%	Very Important
Communication skills	0	0	0	4	2	66.7%	Important
Personal presentation	0	0	3	5	1	55.6%	Important
Personality and behaviour	0	0	0	4	2	66.7%	Important
Candidate's own world view	0	0	1	2	1	50%	Important

Table 3.29 captures the degree of importance of the aspects considered when recruiting TVET Graduates. Results have been taken from a sample of 6 Employers who presently employ TVET graduates. The reputation of the TVET institute is a very important recruiting aspect while recommendations from third parties is less important.

3.2.2.4 Employers' Satisfaction with quality of training received by graduates

Using a five-point Likert scale, employers measured their degree of satisfaction with the training received by the Graduates

3.2.2.4.1 Interpretation of the Employers' Satisfaction with Quality of Training

Using a color-coded score, the scale has been interpreted as shown below.

Interpretation of level of satisfaction					
Range	1	2	3	4	5
Satisfaction	Not satisfied	Least satisfied	Moderately Satisfied	Satisfied	Very Satisfied
Colour Code					

Table 3.30: Employers' Satisfaction with quality of training received by TVET graduates

Satisfaction	Satisfaction with Quality of Training					Max %	Level of Satisfaction
	1	2	3	4	5		
Frequency	0	0	0	3	9		
Per cent	0%	0%	0%	25%	75%	75%	Very Satisfied

Table 3.30 captures how employers measured their degree satisfaction with the training received. Results have been taken from a sample of 6 of the 12 Employers who presently employ TVET graduates 75 per cent of the respondents said that they were generally very satisfied with the quality of training.

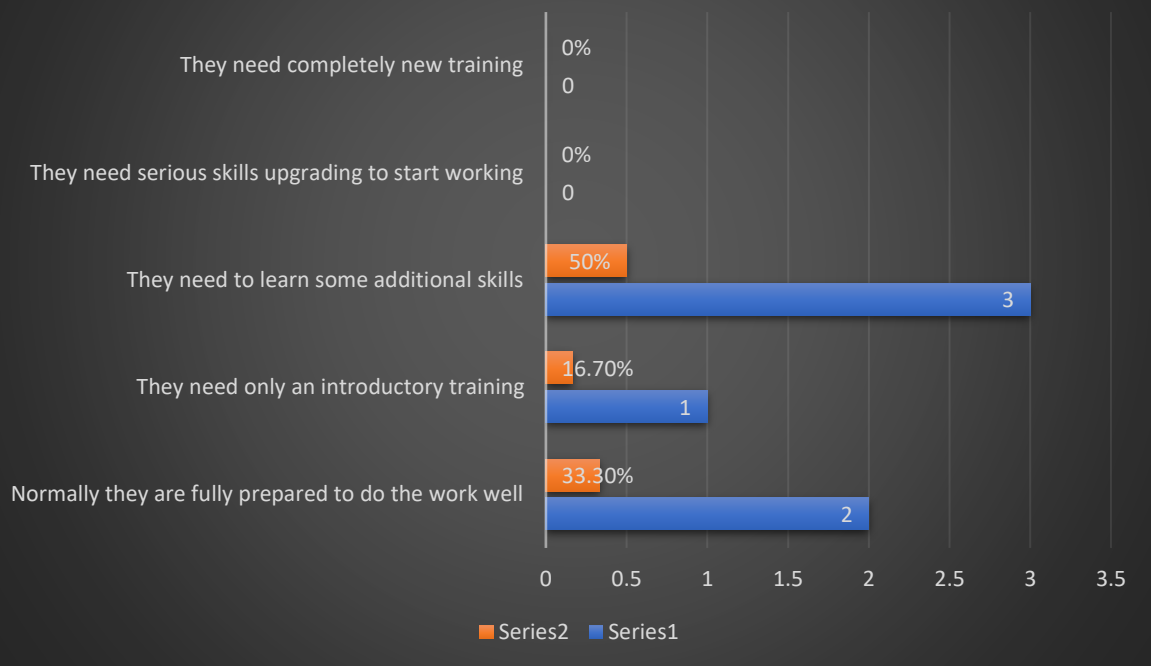
3.2.2.5 The need for additional training of TVET graduates

Table 3.31: Employers Opinions on the need for additional training of TVET graduates

EMPLOYERS' PERSPECTIVE ON EXTENT OF ADDITIONAL TRAINING REQUIRED BY KENYA INSTITUTE OF HIGHWAY & BUILDING TECHNOLOGY GRADUATES		
	Frequency	Per cent
Normally they are fully prepared to do the work well	2	33.3%
They need only an introductory training	1	16.7%
They need to learn some additional skills	3	50%
They need serious skills upgrading to start working	0	0%
They need completely new training	0	0%
Total	6	100%

Table 3.31 summarizes the employers' views of the extent of additional training required by graduates from TVET institutes. The statistics shows that from traced Employers, 33.3% of graduates normally are fully prepared to do the work well, 16.7% need only an introductory training, 50% need some additional skills.

Employers Perspective on Extent of Additional Training Required by KIHBT



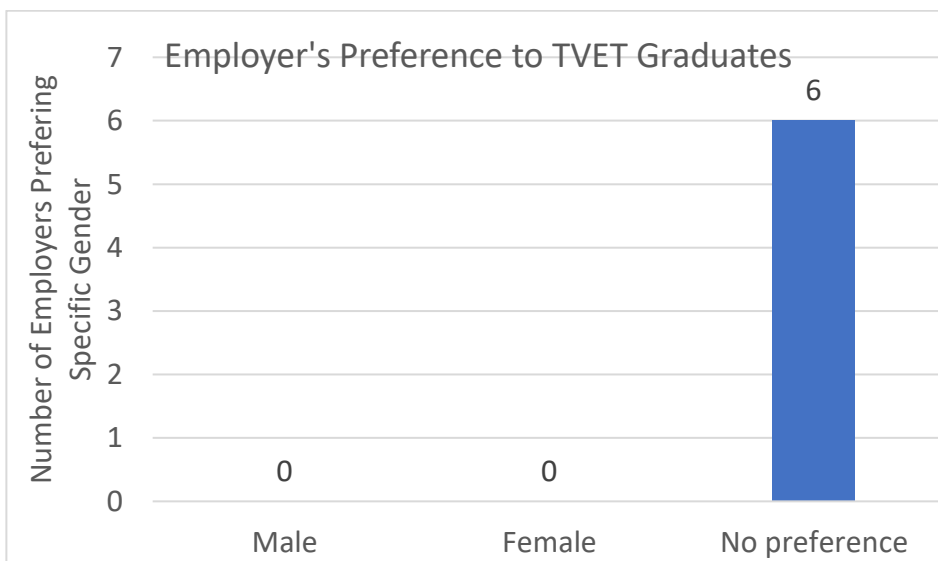
3.2.2.6 Employer's preference regarding gender of graduates

Employer's preference regarding gender of graduates

Table 3.32: Employer's preference regarding gender of graduates

Male	Female	No preference
-	-	6

Figure 3.24: Employer's preference regarding gender of graduates



Reasons for no preference

- i. We give equal opportunities to all
- ii. Every graduate is offered equal opportunity regardless of the gender, what matters is integrity
- iii. Recruitment done by the Ministry
- iv. All gender work hard since the standard of living is becoming harder

3.2.2.7 Employers' responses to the importance of knowledge and skills of graduates

Using a five-point Likert scale, employers measured their degree satisfaction with the Knowledge and skills aspects as demonstrated by TVET Graduates

	1	2	3	4	5	
Not at all Satisfied	()	()	()	()	()	Very Satisfied

3.2.2.7.1 Interpretation of the Employers' Level of Satisfaction with the Knowledge and Skills of TVET graduates

Using a color-coded score, the scale has been interpreted as shown below.

Range	1	2	3	4	5
Verbalisation	Not at all Satisfied	Somewhat not Satisfied	Neither Satisfied Nor Dissatisfied	Satisfied	Very Satisfied
Colour Code					

Table 3.33: Employers' Level of Satisfaction with the knowledge and skills of graduates

EMPLOYERS' LEVEL OF SATISFACTION WITH THE KNOWLEDGE AND SKILLS OF GRADUATES							
Knowledge and Skills Aspects	Level of General importance					(Max %)	Level of Satisfaction
	1	2	3	4	5		
Theoretical training related to the occupation	0	0	0	4	2	66.7%	Satisfied
Practical use of computers	0	0	1	1	4	66.7%	Satisfied
Practical use of working tools	0	0	2	2	2	33.3%	Somewhat not satisfied
Practical use of machines and equipment	0	0	0	3	2	60%	Satisfied
Practical use of materials and parts	0	0	0	3	2	60%	Satisfied
Theory and practice of equipment maintenance	0	1	1	2	1	40%	Neither satisfied Nor Dissatisfied
Understanding and producing drawings	0	0	3	1	1	60%	Satisfied
Doing measurements at work	0	0	1	1	2	50%	Neither satisfied Nor Dissatisfied
Use of written instructions and working guides	0	0	0	2	1	66.7%	Satisfied
Communication	0	0	1	2	1	50%	Neither satisfied Nor Dissatisfied
Working with other people	0	0	0	1	3	75%	Satisfied
Knowledge of the industry	0	0	1	2	1	50%	Neither satisfied Nor Dissatisfied
How to work in a safe way	0	0	1	2	3	50%	Neither satisfied Nor Dissatisfied
How to do high quality work	0	0	1	2	3	50%	Neither satisfied Nor Dissatisfied
Discipline and accuracy at work	0	0	0	3	2	60%	Satisfied

How to start a business	0	1	2	1	0	50%	Neither satisfied Nor Dissatisfied
General education subjects	0	0	0	2	2	50%	Neither satisfied Nor Dissatisfied
Research and innovation	0	0	2	1	1	50%	Neither satisfied Nor Dissatisfied
The quality of the TVET graduates in general	0	0	0	2	2	50%	Neither satisfied Nor Dissatisfied

Table 3.33 illustrates the employers' level of satisfaction with the knowledge and skills demonstrated by TVET graduates. The statistics shows that theoretical training related to the occupation, practical use of computers, practical use of materials and parts, understanding and producing drawings, working with other people among other skills were demonstrated satisfactorily.

Research and innovation, how to do high quality work were among the skills that demonstrated not satisfactorily.

Figure 3.25: Employers' Level of Satisfaction with the knowledge and skills of graduates



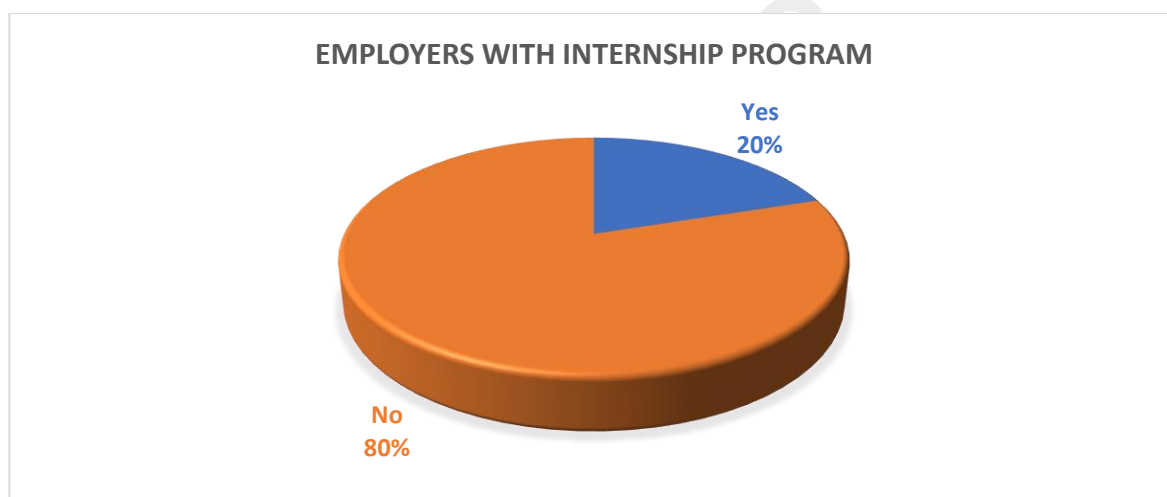
3.2.2.8 Employers' Internship Program for Graduates.

Table 3.34: Statistics of Graduates Undergoing Internship

KENYA INSTITUTE OF HIGHWAY AND BUILDING TECHNOLOGY AND OTHER TVET INSTITUTE GRADUATES THAT ARE UNDERGOING INTERNSHIP		
Internship program	Yes	No
Frequency	1	4
Percentage	20%	80%

Table 3.34 summarizes the Employers' Internship Program for Graduates. Results have been taken from a sample of the 5 Employers who presently employ TVET graduates. The statistics shows that 20 per cent have an internship program for TVET graduates while 80 per cent do not have an internship program for TVET graduates.

Figure 3.26 Employers with internship programs



3.2.2.9 Employers' Perspective on Problems finding employees with the needed skills

Table 3.35: Problems experienced in finding employees with the needed skills

PROBLEMS EXPERIENCED IN FINDING EMPLOYEES WITH THE NEEDED SKILLS		
	Yes	No
Frequency	1	12
Per cent	7.8%	92.3%

Table 3.35 summarizes the responses from employers on the question of Problems experienced in finding employees with the needed skills. Results have been taken from a sample of the 13 Employers who have had some experiences finding employees with the needed skills. The statistics shows that of the traced Employers, 92.3 per cent have not experienced some challenges finding employees with the needed skills. 7.8 per cent have experienced some challenges finding employees with the needed skills.

3.2.2.10 Severity of the skills shortages

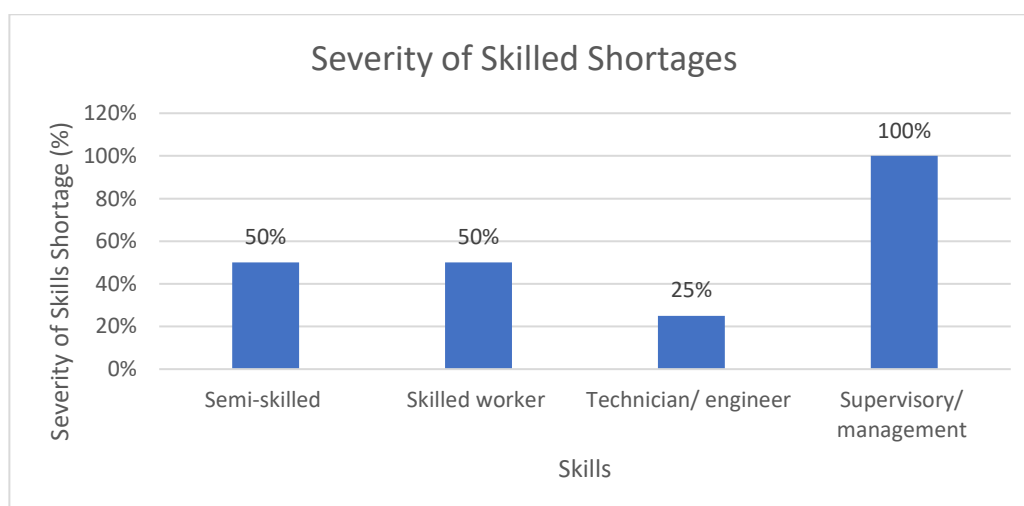
Using a five-point Likert scale, employers measured the extent of severity of the skills shortages.

Range	1	2	3	4	5
Verbalisation	Very Severe	Severe	Moderately severe	Adequate	Very adequate
Colour Code					

Table 3.36: Severity of the skills shortages

	Frequency					Max %	Level of severity
	1	2	3	4	5		
Semi-skilled	1	2	0	1	0	50%	Moderately Severe
Skilled worker	1	0	0	2	1	50%	Moderately severe
Technician/ engineer	0	1	1	1	1	25%	Very severe
Supervisory/ management	1	0	0	0	0	100%	Very adequate

Table 3.36 summarizes the employers' views of the extent of severity of the skills shortages. The findings indicate that the severity of the skills shortages varies from semi-skilled to supervisory/management. The statistics shows that according to the traced Employers, supervisory/management workers are the easiest compared to technicians / engineers are the most difficult to find.



3.2.2.11 Occupations in which Skills shortages are commonly experienced

Table 3.37: Occupations in which Skills shortages are commonly experienced

OCCUPATIONS IN WHICH SKILLS SHORTAGES ARE COMMON EXPERIENCED	
1.	Surveyors
2.	Laboratory technicians
3.	Mechanics
4.	Skilled worker
5.	Plant manager (Concrete/Asphalt)

Table 3.37 summarizes the occupations in which skills shortages are commonly experienced. The statistics in Table 3.37 shows that the occupations with the most common Skills shortages according to traced Employers are Surveyors, Laboratory technicians, Mechanics, Skilled workers and Plant Manager (Concrete/Asphalt)

3.2.3 Comments and Recommendations

Traced employers share their opinions on the weak areas that require improvement during the study, essentially areas that require professional attention to apply knowledge and skills to perform the job perfectly and efficiently. They also give their comments and suggestions regarding this survey.

3.2.3.1 Important changes recommended for the Institute's programme of study by Employers

Table 3.38: Important changes recommended for the programme of study

IMPORTANT PROGRAMME OF STUDY CHANGES RECOMMENDED BY EMPLOYERS	
1	To train for more practical
2	Increase industry training
3	Do more research in material testing
4	Train on use of RTK Machine
5	Should introduce more practicals in their studies
6	Introduce more mechanical works
7	Supervisory skills
8	Project management
9	ICT (Design drawing and detailing)

Table 3.38 summarizes the important changes recommended for the TVET Institute’s programme of study by Employers. The statistics in Table 3.38 shows that the most common changes recommended for the Institute’s programme of study by traced Employers is the need to introduce more practical work for learners.

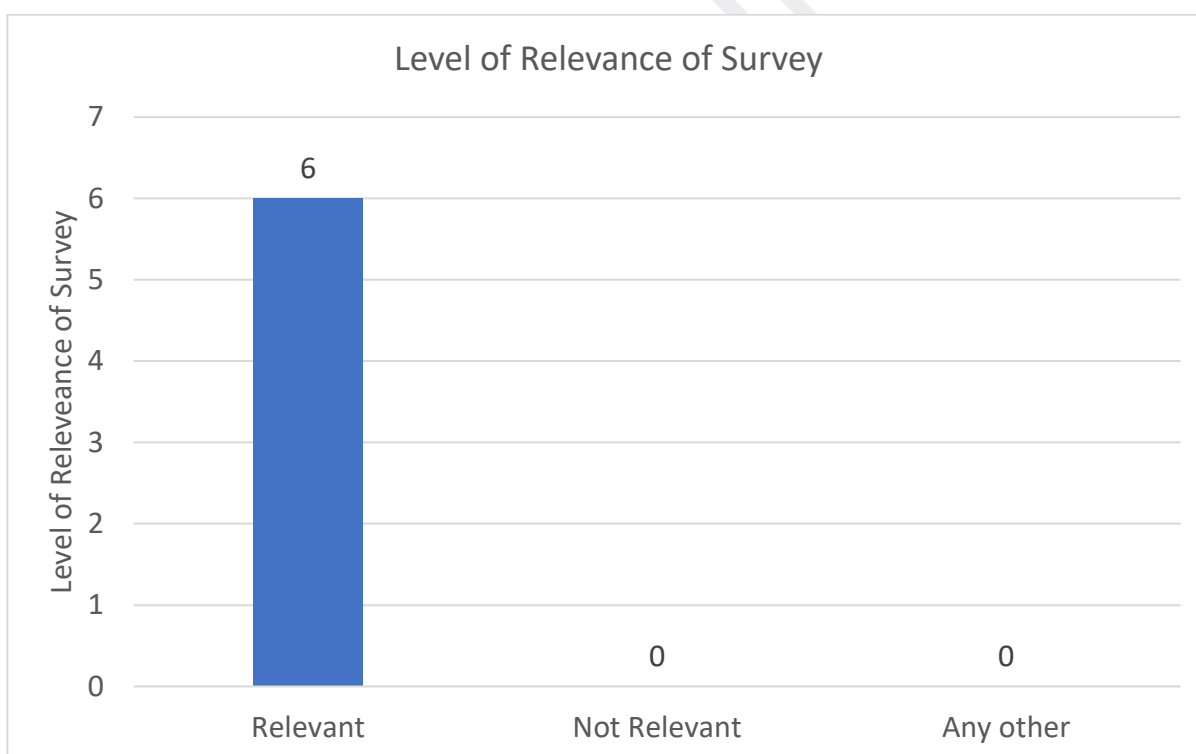
3.2.3.2 Employers’ Comments and suggestions regarding this survey

Table 3.39: Employers’ Comments and suggestions regarding this survey

Comment regarding survey	Frequency
Relevant	6
Not Relevant	0
Any other	0

Table 3.39 summarizes the comments and suggestions regarding this survey as made by employers. All employers traced in this study indicate that the survey was relevant.

Figure 3.27 Level of relevance of the survey



4. SUMMARY OF FINDINGS AND THE CORRESPONDING RECOMMENDATIONS

The specific and general findings of the tracer study were derived through analysis of quantitative and qualitative data and information obtained from the sample survey as well as literature review of relevant studies and policy documents. Below is the summary of the specific and general findings of the tracer study.

4.1. GENERAL FINDINGS

4.1.1. Database and Management System of the database

Finding: The institute is doing relatively well on the database of the graduates.

Recommendation: A standard format of the type of information to be furnished by the graduates should be prepared and made available to all.

The standard form for data collection should contain the following information: name of the graduate, telephone number, home address, age, sex, type of course pursued, year started, year of graduation, and employment status (employee, self-employed and unemployed). Every year the database administrator should select a sample of KIHBT graduates that passed out the previous year so as to find out their employment status and if employed their place of work. This of course implies that the database that KIHBT would maintain will include variables from the standard form and two more variables - employment status and place of work. The telephone numbers and, if needed, the home address would be used by the database administrator to collect the required information from the sampled graduates.

Recommendation:

It is recommended that the already established alumni associations could assist in updating the database.

4.2. MAJOR SPECIFIC FINDINGS OF THE TRACER STUDY

4.2.1. KIHBT Graduates

4.2.1.1 Gender Balance

Finding: More than 68 percent respondents were male and 32 percent were female. It is needed to consider improving gender balance within Road Construction.

Recommendation: One of the remedies suggested by the graduates is to have Gender consideration during admission to have more female students enrol for practical courses.

4.2.1.2 Employment Rate

Finding: 40 percent of the respondents were employed within six months of graduating. A further 10 percent were self-employed. Currently 54 percent of the graduates are employed and a further 12 percent are self-employed. All the employed graduates earn “Below USD 500” per month.

Finding: employment status of the traced graduates by gender indicates that female employment is at 67 percent and male employment is at 71 percent.

4.2.1.3 Media of employment

Finding: Relatives, friends & colleagues (48.4 percent) and Industry linkages (19.4 percent) are the most popular means of securing employment. Only 6.5 percent obtained employment through direct application.

The results obtained through this tracer study can potentially reveal several crucial issues for review in the implementation of the apprenticeship model and enhancement of industry linkages.

Furthermore, it is also interesting to highlight that 6.5 percent secured employment via the “Internet searches, in government or company websites and through the social networks and 12.9 percent through referral / endorsement.

Recommendations: Graduates should try to access the job placement/vacancies notices on a regular basis.

4.2.1.4 Reasons for lack of employment

Finding: 8 percent of unemployed graduates traced stated that they could not secure jobs because the job opportunities available in the market were not related to the subject areas, they trained in.

Recommendations: This indicates that there is the need to provide career guidance and counselling in some of the TVET training institutions.

Finding: 52 percent of unemployed graduates traced stated that they had “Unsuccessful Job Applications”. This could be attributed to their not having the required level of professional qualification and job experience. This information confirms that under circumstances where there are shortages of jobs in the labour market, graduates find it difficult to secure jobs. It also shows that where graduates do not have the level of professional qualification and experience relevant to jobs available in the labour market this category of people cannot compete and tend to have difficulties in securing jobs.

Recommendations: Graduates to undergo a mandatory Internship (cooperative training) program for a minimum of three months before graduating to acquire some on the job experience.

4.2.1.5 Relationship between Work and Course Followed

Finding: The study revealed that 47.6 percent of graduate respondents indicated that there is a “Relationship between work and the course followed” and among them 86.4 percent said that their job is highly related to their training. However, a significant number of the respondents representing 53.4

percent did not agree that there is a “Relation between work and the course followed”. The main “Reasons for lack of relationship between Study and Work” done is that graduates did not find job opportunities that are related to their course of study.

Recommendations: It is important that students are helped to make the right choice of courses and subjects that could eventually help them obtain the right jobs.

Recommendations: Establish a career guidance and counselling unit within Kenya Institute of Highways and Building Technology

4.2.1.6 Participation in Further Training

Finding: 25.5 percent of the traced graduates have “Participated in Further Training”. 74.5 percent “Have not participated in Further Training”. 94.3 percent of the traced graduates said the main reason for not Participated in Further Training was that they “did not have money to pay for further training”.

Recommendation: One of the remedies suggested by the graduates is to considering offer scholarships to good performing students. Majority (98 percent) of respondents indicated that there is a “likelihood of attending further training courses”. These findings reveal that most graduates who took part in the study recognize the importance and need for further skill building for promotion and career development. It is also an indication of their low-level satisfaction with the education they recently completed.

4.2.1.7 Satisfaction with Present Job

Finding: Only 51.7 percent of the traced graduates were “Generally satisfied with their present job”. When asked to measure satisfaction against 11 individual parameters on a five-point scale, graduates are very satisfied with their jobs since they are given an opportunity to coordinate / supervise work. Job security, income and benefit, interesting work tasks and social status and recognition gave the graduates moderate satisfaction. There are 4 parameters graduates are moderately satisfied and 7 were satisfactory.

4.2.1.8 Teaching-learning conditions and provisions

When asked to rate 28 teaching-learning conditions and provisions” experienced at KIHBT. Results on a five-point scale, 4 parameters were not satisfactory at all. 11 parameters were very satisfactory

Recommendations: There is need to Help/facilitate/support graduates find jobs.

4.2.2. Employers perspective

4.2.2.1 Recruitment of KIHBT Graduates

Findings: On a five-point scale, measuring the degree of importance of 11 recruitment aspects, the most important Aspects for the recruitment of KIHBT Graduates was the results of the recruitment test. The least important aspects were grades of examinations at the Institute and recommendations/ references from third parties.

Recommendations: Kenya Institute of Highways and Building Technology should work very closely with employers on their concerns. That way they will be able to prepare their graduates well for employment.

4.2.2.2 Additional Training

On the need for additional training of KIHBT graduates 50 percent of the Employers believed the KIHBT Graduates should learn some additional skills so that they are more equipped to handle work tasks.

Recommendations: There is needing to regularly liaise with employers so as to reduce the gap between level of training at TVET level and the requirement by employers.

4.2.2.3 Knowledge and skills

On a five-point scale showing the level of satisfaction with the knowledge and skills of graduates two of the most important drivers for employers' Level of satisfaction was Discipline and accuracy at work and the quality of the KIHBT graduates in general. The least drivers for employers' Level of satisfaction with the knowledge and skills demonstrated by graduates was practical use of working tools.

Recommendations: Enhance practical use of computers and tools as these are important to employers.

4.2.2.4 Finding Employees with the needed Skills

7.8 percent of the employers have Experienced some challenges finding employees with the needed skills. While, another 92.3 percent have Not experienced some challenges finding employees with the needed skills.

Recommendation: KIHBT should work closely with employers, who are the consumers/users of their services, to fill the gaps of the graduates.

This way they will be able to have market driven courses.