BOTSWANA TRAINING AUTHORITY

TRACER STUDY ON THE EMPLOYMENT OUTCOMES OF THE VOCATIONAL TRAINING GRADUATES

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Submitted by:

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ACRONYMS

BNVQF	Botswana National Qualification Framework
BOTA	Botswana Training Authority
BTEP	Botswana Technical Education Programme
CITF	Construction Industry Trust Fund
DVET	Department of Vocational Education and Training
NCC	National Craft Certificate
TOR	Terms of Reference
VT	Vocational Training
VTI	Vocational Training Institutions

THE EXECUTIVE SUMMARY

Introduction

The purpose of this study is to establish employment outcomes of the Vocational Training Graduates of BOTA accredited institutions. The main survey instruments were a closed format questionnaire for graduates and semi structured questionnaires for key informants of trainers and employers. The study targeted 1080 graduates, 100 trainers and 50 employers. The response rates were 53% for graduates, 58% for employers and 110% for trainers.

The findings of the study are presented herein by its specific objective as detailed below.

Methodological Issues

Findings

i) Some institutions did not keep databases for their graduates. In cases where databases existed, they were not up to date.
ii) This study was preceded by other tracer studies of BOTA accredited institutions of CITF and DVET, that targeted the same category of respondents, hence some signs of interview fatigue and low response rate

Recommendations

i) It is recommended that institutions should keep databases of their graduates on completion and to establish alumni associations that could assist in updating the database.
ii) In order to minimize possibilities of interview fatigue in future tracer studies, it is recommended that BOTA accredited institutions that conduct tracer studies should cooperate and share output of such studies with BOTA.

Employment outcomes and occupation of VT graduates

Key Findings

i) The employment rate among respondents was 50.45%. The majority of these graduates were employed fulltime and the rest were employed on a temporary basis or part-time. Unemployment was more prevalent among females, while employment was high among males. The construction trades, craft trades and industrial area of specialization recorded the highest proportion of both the unemployed and those in fulltime employment. Fulltime employment was found to be high among graduates who attained the National Craft Certificate.

ii) Employment income for VTI graduates is varied with the majority of them (31.01%) earning more than P4000/month. A large proportion (46.5%) of those who earned at least P4000/month was employed in the private sector. However, the private sector also has the highest ratio (75%) of graduates who earned less than P1000/month.

iii) It was found that 56% of the respondents who indicated their employment status by area of specialization were unemployed and looking for employment specialized in the construction trades, craft trades and industrial area. Similarly, 71.9% of respondents who were employed fulltime, graduated in the construction trades, craft trades and industrial specialization. The same pattern of unemployment and employment status is reflected in the commercial, clerical, business and public administration specialization.

Recommendations

i) The high rate of unemployment could be a pointer to skills mismatch with the vocational sector. It is highly recommended that there should be an audit of skills required by the employment sector and VTI programmes and enrolment rates should be tailored to match the required skills.

ii) The recently launched labour market observatory will assist in collecting information and forecasting the employment situation for vocational training graduates.

iii) Wages are related to supply and demand of a certain skill. A fair wage, could probably be achieved by balance of supply and demand of skills, hence a further need for a skills audit.

Occupational mobility of the VT graduates and the means by which graduates acquire employment

Key Findings

i) There is limited mobility of graduates across areas of specialization, with 84.1% and 83.3% of graduates in the construction trades, craft trades and industrial, and commercial, clerical, business and public administration specializations respectively employed in their vocations. There is also limited mobility of graduates across employers with 68.6% of the respondents having changed jobs at most once.
ii) The study found that the predominant method used by graduates in finding employment was responding to media advertisements. It was also found that it is generally difficult for graduates to get a job as reflected by the high unemployment rate, with 48.7% of the respondents indicating that they have difficulties getting a job. The mainly difficulty in getting a job was identified as limited job opportunities in the geographical area where the graduate resided, which was identified by 32.57% of the respondents.

Recommendations

i) There is limited mobility of graduates across areas of specialization. This could be indicative of that the programmes are highly specialized. There may be a need to offer programmes to equip graduates with multiple skills.
ii) To further enhance graduate employment, employers and employer organization should form linkages with VTI institutions that are intended to recruit graduates upon completion of their studies.
iii) Institutions should also conduct career fairs where they could sensitize the employers of the skills offered by their graduates

The relevance and effectiveness of learning in VT in relation to employability (Skills Mismatch)

Key Findings

i) It was found that out of the total 535 graduates who indicated their employment status by area of specialization the majority of them (56%) who were unemployed and looking for employment specialized in the construction trades, craft trades and industrial area. Similarly, the majority of respondents who were employed fulltime (71.9%), graduated in the construction trades, craft trades and industrial specialization. This could be indicative of skills mismatch between training and industry requirements.

ii) Respondents rated the skills they acquired from vocational skills highly. They are generally of the view that the skills acquired at VTIs are adequate to enable them to perform the tasks in their work adequately to the satisfaction of their employers. The views of graduate respondents were in tandem with those of employers who rated the skills of graduates as fair.

iii) Graduates rated the programmes they went through highly in terms of content and instructional quality. The overwhelming majority of the respondents (89.41%) indicated that they would recommend the programmes they went through to others.

Recommendations

i) It is highly recommended that there should be an audit of skills required by the employment sector and VTI programmes and enrolment rates be tailored to match the required skills.

ii) The recently launched labour market observatory will assist in collecting information and forecasting the employment situation for vocational training graduates.

iii) The level of the VT programmes appears to be adequate in terms of the skills they provide. Employers, Trainers and Graduates are satisfied with the levels of skills

acquired. The scope of the VT programmes should be expanded to expose the graduates to more skills but maintaining the standards.

INTRODUCTION

1.0 INTRODUCTION

1.1 Background

Following a call for tenders by Botswana Training Authority (BOTA) 'to conduct a tracer on the employment outcomes of the vocational training graduates – Tender No: BOTA PR 41/09' and subsequent award tender evaluation, HomeGrown (PTY) LTD has been awarded the project. The project commenced on the 1st of December 2009, with a festive season break after the approval of the inception report. It was scheduled to run for not more than four (4) months. However, some delays were experienced due to problems during data collection as documented in the methodology section.

Throughout the world, different countries are trying to create closer synergies between the needs and purposes of their education training systems, the local and regional labour markets, and their national economies. This is largely a result of an international consensus which, though contested, argues that people and organisations need to embrace new skills and knowledge at regular periods in order to meet the challenges of a much more dynamic and unstable economic climate (Unwin, 2003). Such developments ask important questions of national education systems in terms of curriculum content, teaching and learning processes, skills acquisition and expertise of educational professionals. In an environment where there is lack of a systematic and accurate examination of employment outcomes of vocational training graduates such as is the case in Botswana, it is difficult to establish any synergy between the economy and labour markets. In such cases, tracer studies could be used as a means of maintaining curriculum relevance and providing targeted benefits to graduates to enhance marketability of vocational programs. Adequate knowledge on employment outcomes of vocational training graduates could assist in formulating policy towards combating some of social problems such as unemployment.

The client for this project is Botswana Training Authority (BOTA). BOTA was established by the Vocational Training Act of 1998 as a Parastatal under the Ministry of Labour and Home Affairs. It started operating in 2000. The principal objectives of the authority (BOTA) are to:

- Coordinate vocational training activities in order to achieve better integration and harmonization of vocational training systems being developed;
- Monitor and evaluate the performance of the vocational training system being developed in order to ensure the successful performance of all training activities; and
- Advice on policy related issues on vocational training.

In carrying out this tracer study, the consultants would be mindful of the statutory role of BOTA as laid out in its founding Act.

1.2 Project objectives

The general objective of this project was to track down Vocational Training (VT) graduates in BOTA accredited institutions and establish the impact of employment opportunities for VT graduates in Botswana. More specifically; the project sought to:

- Review relevant project literature , Vocational Training Documents, studies and reports;
- Establish occupation of VT graduates in relation to their field of training;
- Determine the means by which graduates acquire employment;
- Determine the extent of occupational mobility of the VT graduates;
- Establish employment opportunities of VT;
- Establish employment rates of VT graduates;
- Establish the difficulties encountered by those graduates that have not been able to find relevant employment

- Establish waiting times for first employment and associated reasons;
- Establish the level of employer satisfaction with regard to Vocational Training graduate employee's skills and level of performance;
- Provide comprehensive information on labour market outcome of the graduates;
- Review the relevance and effectiveness of learning in VT in relation to employability (Skills Mismatch)
- Advise on database and data collection instruments that would enable BOTA to bi-annually make follow ups on graduates on their occupational movements in the labour market.

1.3 Project deliverables

The deliverables for this project are:

i) Inception Report ;

ii) Report of the preliminary findings;

iii) Draft Final Report;

iv) Final Report (This report).

As already noted the current report is the Final Report and is structured as follows:

Chapter 1 – Introduction

Chapter 2 – Literature review

Chapter 3 – Project Methodology

Chapter 4 – Results and Discussion

Chapter 5 – Perception of vocational skills acquisition from trainers

Chapter 6 – Summary of key findings and recommendations

Chapter 7 – Graduate database

References

Appendices

An Executive Summary is provided, highlighting the key results and recommendations of the study.

LITERATURE REVIEW

2.0 LITERATURE REVIEW

2.1 Introduction

The purpose of education is to enable the society to have a command of knowledge, skills and values for achieving the country's vision of attaining the status of fully developed nation in terms of economic development, social justice and spiritual, moral and ethical strength, towards creating a society that is united, democratic, liberal and dynamic (Abu Bakar et al. 2009). In that regard, the Botswana National Vocational Education and Training Policy (1998) seeks among other things to deliver training that meets the requirements of the industry, thus making people employable; and to provide initial training to school leavers to enhance their opportunities for employment and self-employment (Ministry of Labour and Home Affairs report 2005). When rising demand for skills is not met by supply, the result is a persistent shortage of skilled labour and constrained growth. The root of the shortage of skilled labour can be traced to persistence of antiquated and unresponsive training mechanisms vocational and technical systems are not providing new entrants with appropriate skills (Lopez-Acevedo, 2003).

It is however widely believed that the training system in Botswana is totally out of sync with the economy and the labour market (BOTA, 2005). This requires that the linkage between the economy and labour market should be understood and requires of industries should be communicated to Government to enable it to assist in the development of future skills and career development policies (Bonnell et al, 2003). To ascertain the importance of training to the economy and the labour market (BTEP, 2007), tracer studies are necessary. Tracer studies are generally defined as surveys of graduates from institutions of higher education and are often seen as an important tool of institutional development especially when the world of work is changing rapidly. From information provided by tracer studies, the higher education institutions can get a systematic feedback from their former students. The institutions can know the whereabouts of their graduates; their working conditions and their retrospective assessment of their course of study might stimulate the curricular debate and could be also very interesting for

the current or later students (Schomburg, 2003). Tracer Studies provide quantitative-structural data on employment and career, the character of work and related competencies and information on the professional orientation and experiences of their graduates (Millington, 2008). Guzman et al (2008) advocated for the use of a graduate tracer study as an appropriate tool in determining institutional capability in preparing graduates to meet the demands of the work place. The graduate tracer studies involves the determination of graduates in the job search mode, lead time and employment condition, where the knowledge acquired in schools are used to work, in promotions, and job satisfaction (Guzman et al, 2008).

2.2 Findings from tracer studies conducted in Botswana

A Number of tracer studies have been conducted in Botswana. Ama et al. (2007) conducted a tracer study on trends in First Time Employment of University of Botswana graduates from the faculty of social sciences. The study was an attempt to address concerns from certain quarters that there have been growing numbers of unemployed University of Botswana graduates over the years and to determine the trend in the employment or unemployment of these past graduates. The study found that graduates from University of Botswana get jobs that do match their level of education and area of specialization within 9 months after graduation. The few mismatch between employment and education was mainly due to the graduates' own desire not to wait longer but to start up with some jobs while hoping for better opportunities.

The Construction Industry Trust Fund (CITF, 2006) conducted a tracer study on former CITF trainees between April and July 2006. The specific purpose of the study was to assess the employment situation of CITF graduates in the formal and informal construction sectors in terms of the availability of employment opportunities, the ability of CITF graduates to compete for those opportunities, and the added value that the training provided by CITF offers in relation to seeking employment; the relevance of CITF training courses in terms of skills mismatch; and the labour market in terms of the number of CITF graduates finding employment. The study found that 59% of the graduates who were unemployed when they completed their training with CITF did find some form of employment. The employers of the graduates felt that the CITF

training provided, does contribute to skill development, but also felt that the training needs to be substantially improved.

The Department of Vocational Education and Training (DVET) conducted a BTEP tracer study between April and August 2007. The BTEP tracer study focused on the relevance and quality of the BTEP course in relation to graduate employability and the consequent level of graduate employment or self-employment (Swartland, 2008). The study concluded that nearly 50% of the graduate respondents are still unemployed or economically inactive. The study explains that the high graduate unemployment rates are due to a mismatch between supply and demand.

In June 2005, the Botswana Training Authority (BOTA) conducted a tracer study to look at the types of employment activities that vocational training graduates do as well as to get their opinions about their education in the light of their employment experience. This tracer study considered only the opinions of the institutions and employers and concluded that Botswana's vocational training system; especially institutions based ones', do not produce readily employable skilled graduates (BOTA, 2005). This proposed tracer study follows on the June 2005, the Botswana Training Authority tracer study. It aims at tracking down Vocational Training graduates and establish the impact of employment opportunities for graduates in the Vocational Training sector and whether the qualifications they obtained meet the current needs of the industry. The data shall be collected from the Graduates, Trainers and Employers.

2.3 Conceptual framework

This study uses the employability model as the conceptual benchmark. The concept draws a line between employment and employability. Being employed means having a job and being employable means having the qualities needed to maintain a job and progress at the work place (de Guzman and de Castro 2008). Figure 1 shows the schematic employability model. The model builds on that educational systems shape the matching of people to jobs. To match people to job, they should have acquired knowledge and skills that are required by employers.

Employability can be affected by labour market institution, skills, and knowledge enhanced by education and training (Psacharopoulos at el 2004). The concept of employability can be further divided in some key analytical dimensions as shown in Figure 2.

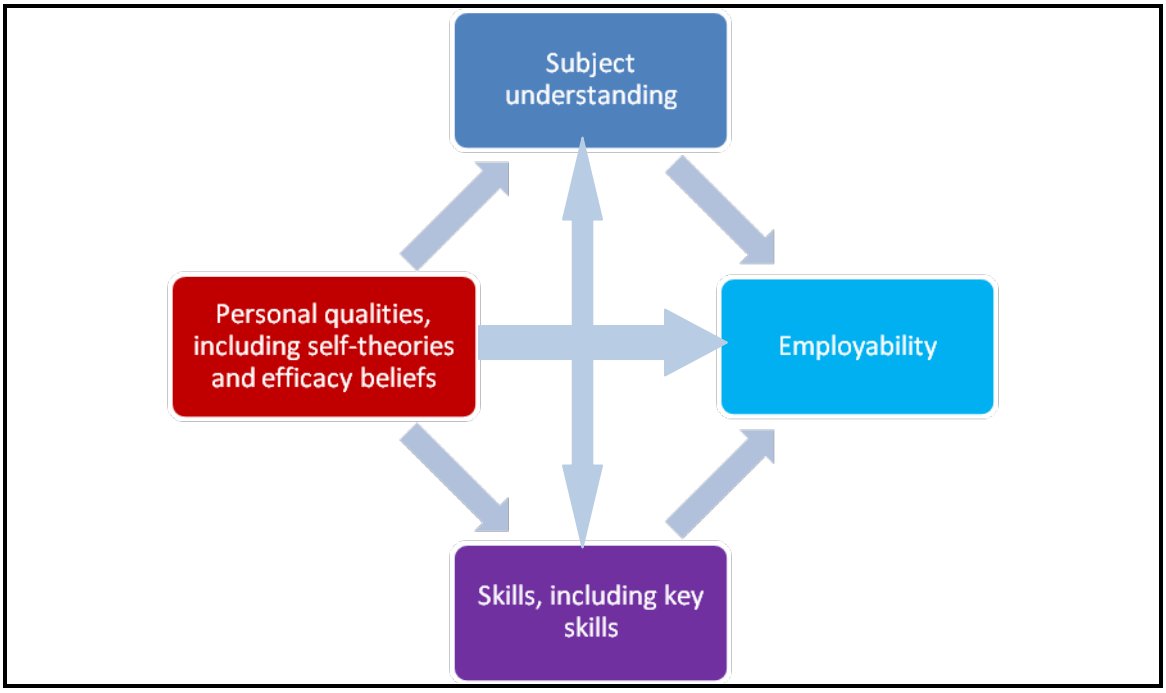

Figure 1: A schematic model of employability (de Guzman and de Castro 2008)

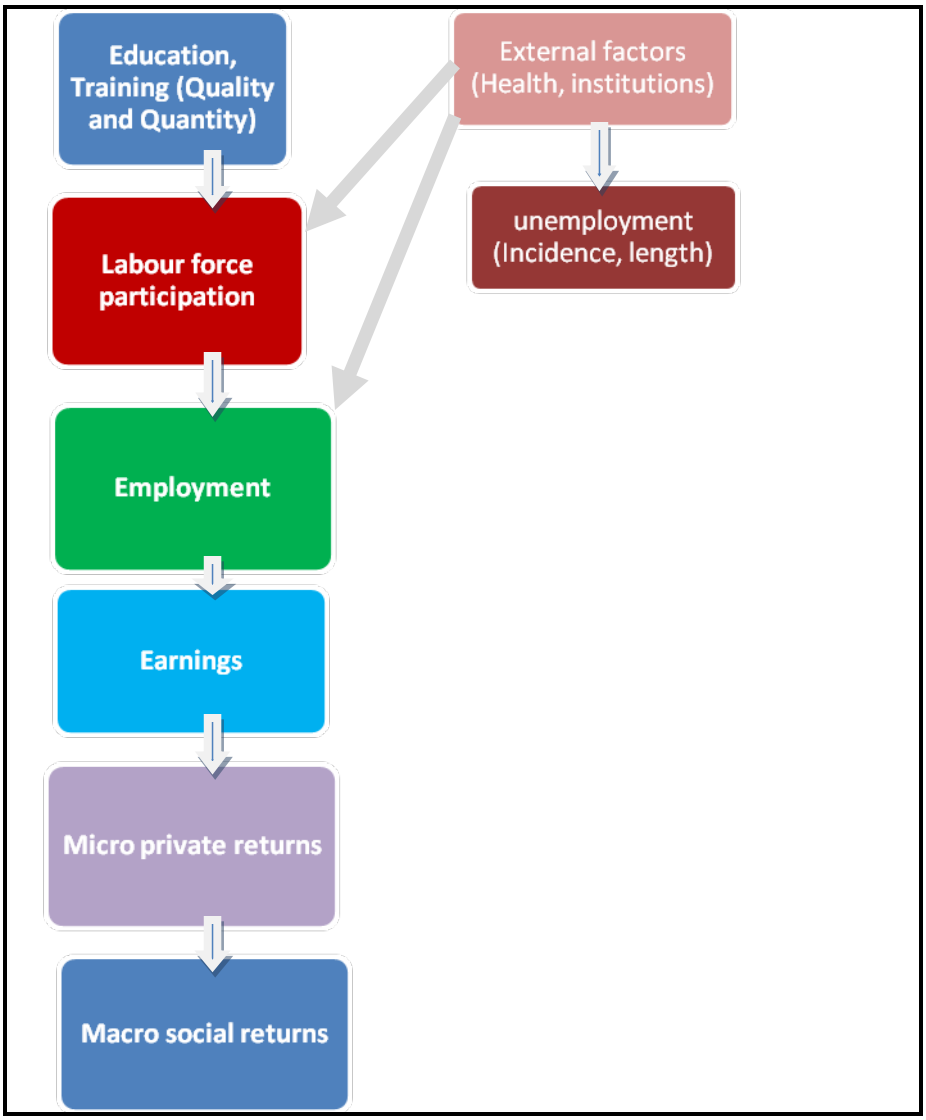

Figure 2: Analytical dimensions of employability (Psacharopoulos and Schlotter 2004)

METHODOLOGY

3.0 METHODOLOGY

3.1 Study design

This study used a combination of qualitative and quantitative data collection and analysis techniques. The qualitative research approaches seeks to understand a given research problem or topic from the perspectives of the local population it involves (Cohen et al., 2009). As Fellows and Liu (2006) argued, in qualitative research, an exploration of the subject is undertaken without prior formulations in the object to gain understanding and collect information and data such that theories will emerge. Quantitative design approach by nature is focused on the collection and analysis of numerical data and statistics hence a scientific method (Molwane, 2002 and Fellows and Liu, 2006). In this study, qualitative approaches in the form of key informant interviews enabled the researchers to have an in-depth insight about the key parameters of investigation. On the other hand, the quantitative approach, which was mainly restricted to graduates, provided data that enabled statistical inferences. The study methodology was divided into two parts of; baseline survey and main survey.

3.2 Baseline survey

The objective of the baseline survey was to set a context for the main study. It was mainly exploratory and used some rapid appraisal techniques. In particular, the baseline survey was a desktop survey that put emphasis on identifying and reviewing secondary information on BOTA accredited institutions and programs they offer. In addition, the baseline survey had informal discussions with some key-informants to generate operational definitions of some study variables that were to be used in the design of the main survey instruments.

The following documents were identified for in-depth analysis during baseline survey:

- BOTA (2005) Tracer Study for Vocational Training Graduates (Draft Report) Phase 1.

- List of approved programs provided by BOTA accredited institutions – 17 November 2009
- The Vocational Training Act of 1998
- CITF (2006) Tracer Study on Former CITF Trainees. Final Report

2.2.1 Summary of finding from the identified documents

i) The Vocational Training Act of 1998

The Botswana Training Authority's (BOTA) was established by the Vocational Training Act of 1998. The Act stipulates the principal objectives of the authority as:

- To coordinate vocational training activities in order to achieve better integration and harmonization of the vocational training system
- To monitor and evaluate the performance of the vocational training system in order to ensure the successful performance of all training activities.
- To advice on policy related issues of vocational training

ii) List of approved programs by BOTA accredited institutions

As of the 17th November 2009, there were 181 BOTA accredited institutions. These institutions offered a total of 1199 programs with enrolment capacity of 17 326 learners. All the accredited institutions offered programs in accordance with the Botswana National Vocational Qualification Framework (BNVQF). The BNVQF as stated in the Vocational Training Act of 1998 consists of the following levels of qualifications:

(*a*) Foundation Level which includes a broad based initial training and reflects competence to perform, under supervision, a limited range of work activities;

(*b*) Intermediate Level which includes competence to perform, with minimum guidance and supervision, routine jobs and some non routine jobs; and

(*c*) Certificate Level which includes competence to perform tasks associated with skilled jobs of non routine and complex nature and indicates potential for supervisory functions.

iii) BOTA 2005 Tracer Study for Vocational Training Graduates

The consultants identified a 2005 Draft Report for BOTA Tracer Study for Vocational Training Graduates Phase 1. The tracer study looked at the types of employment activities that vocational training graduates do as well as to get their opinions about the quality of their education in the light of their employment experiences. The BOTA tracer study concluded that Botswana's vocational training system, especially institution based ones, does not produce readily employable skilled people. This was attributed to limited practical work exposure at the institutions. The out of date curricula was also mentioned as one of the problems undermining skill acquisition. Employers were of the view that graduates do possess basic skills and have to be trained further when they get to the workplace to refine such skills.

iv) The 2006 Tracer Study for former CITF trainees

CITF (2006) carried out a tracer study for its former graduates to assess:

- The employment situation of CITF graduates in the formal and informal construction sectors in terms of the availability of employment opportunities, the ability of CITF graduates to compete for opportunities, and the added value that the training provided by CITF offers in relation to seeking employment;
- The relevance of CITF training courses in terms of both the finding from above and employers' perceptions about the skill and performance level of CITF graduates;
- The labour market in terms of the number of CITF graduates finding employment, the type of employment found, employment sector and permanency of employment.

One of the major findings of this tracer study was that after graduation, 59 percent of the graduates who were unemployed when they completed their training with CITF did find some form of employment (CITF 2006).

3.3 Main survey

The main survey involved two categories of people of;

- Graduates

Data from graduates was mainly collected through self-completed questionnaires covering the key variables of investigation (see Appendix 6 for the questionnaire).

- Key informants

Key informants included employers and course tutors at BOTA accredited institutions. The key informants were interviewed through a semi-structured questionnaire.

3.3.1 Research instruments

The main data collection instruments used were the self-completed closed format questionnaire for graduates and semi-structured interviews for key informants. The questionnaires were developed around the key variables of investigation of; employment situation of VT graduates, employment rate in both formal and informal, relevance and effectiveness of learning in Vocational Training, waiting time for first employment, employer satisfaction with regard to Vocational Training graduates skills and performance levels, and possible networking opportunities between industries and training institutions. The procedure in developing questionnaires that takes into consideration length and clarity was closely followed.

3.3.2 Questionnaire pre-testing

The developed closed format questionnaire was pre-tested with 20 graduates randomly selected from BOTA accredited vocational training institutions to minimize ambiguities, enhance clarity and checking internal reliability. In some instances during pre-testing, questionnaires designed for self-completion were used for questionnaire based interviews. Following pre-

testing, the questionnaire was amended as necessary and subsequently used in the main survey.

3.3.3 Sampling frame, sample size and sampling for self-completed questionnaires

The initial sampling frame for self-completed questionnaires was defined as all graduates of BOTA accredited institutions over a period of 5 years from 2004 – 2008. However, during field survey the methodologies employed captured other graduates outside the initial sampling frame. This was considered a positive development since it gave an even broader picture on the employment outcomes of vocational training graduates.

Suppose we hypothesize that the true population proportion is p_0, (q_0=1-p_0) and that if the effect size (2×margin of error) exceed a value δ then we will reject the hypothesized value and conclude that the population that give rise to the new data set is distributed differently. We need to be confident that as we reject the hypothesis, we do that with high probability (that is, we are doing the right thing with high power). The true population proportion for this study population is not known. But a previous study on Vocational training graduates' employment reported that 59 percent of them got employment upon graduation (CITF 2006). Thus for a hypothesized population proportion of 59 percent, with a type I error of α=0.05, the sample sizes for different power scenarios are given using a formulae below and summarized in Table 1.

$$n = \frac{p_0 q_0 \left(z_{1-\alpha/2} + z_{1-\beta} \sqrt{\frac{p_1 q_1}{p_0 q_0}} \right)^2}{\delta^2}$$

Table 1: Sample sizes for different power scenarios

	Effect size (δ)		
Power	0.10	0.08	0.05
70%	150	235	601
80%	191	299	765
90%	257	401	1026

Thus a sample size of 1026 was deemed ideal, with effect size of 5 percent. The sample was further increased by 5 percent to account for contingencies such as non-response or recording error. This made the sample size to be 1026 x (1.05) = 1080.

In order to arrive at some representative sample, the programs offered by BOTA accredited institutions were stratified by areas of specialisation (learning fields) as established by BOTA (2006) and detailed out in Appendix 1. To further enhance inclusivity, learners were further stratified by districts where they enrolled in vocational institutions. The 2006 BOTA baseline survey established vocational enrolment by district in 2005 as shown in Appendix 2 (BOTA 2006). This baseline survey information formed the basis for stratification of learners by geographical location. Appendix 2 shows that the majority of learners (49 percent) enrolled in Gaborone based institutions followed by Central District with 12 percent.

In order to derive the required sample for each area of specialisation and geographical location of enrolment, the total sample size of 1080 by was proportionately divided by percentages of each area of specialisation and geographical location of enrolment as shown in Appendix 3. It should however be noted that while the distribution of sample size as shown in Appendix 3 is intended for inclusivity, it was not practically possible at implementation because of the difficulty

of identifying respondents with certain specialisations in some locations. But all efforts were made to be as inclusive as possible.

If we consider all the variables used to enhance inclusivity of areas of specialisation (fields of learning) and enrolment of learners by geographical location, and rationalising to ensure that all highly ranked institutions are included according to BOTA ranking system (BOTA 2010), Table 2 shows the target number of respondents by location, area of specialisation and associated institutions. It will be observed from Table 2 that some districts are not represented because of the relatively small numbers of enrolments in vocational training and/or non offering of certain areas of specialisation in such institutions.

Table 2: Target number of respondents by area of specialisation and geographical area

District	Areas of specialisation	Sample size	Source institutions for graduates
Gaborone	Construction trades, Craft, trade and industrial	**265**	CITF, Auto Trades, Madirelo, Roads Training, Naledi Development Trust, Gaborone Technical College
	Commercial, clerical, business and public administration	**130**	Damelin, Self-Cash, GIPS, Ba-Isago,, New Era University College
	Agricultures, forestry and fisheries	**16**	Madirelo Testing and Training Centre
	Health and Health related	**54**	Boitekanelo Training Institute, New Era University College, Bontle le Botsogo
	ICT	**79**	Gaborone Technical College, Ba-Isago, NIIT, Auto Trades< PC Business Training and College, IT-IQ Botswana
	Hospitality and Tourism	**48**	Gaborone Technical College, New Era University College
Central	Construction trades, Craft, trade and industrial	**77**	Palapye Technical College, Palapye Development trust, Madiba Brigade, Serowe Brigade, Bobonong Brigade
	Commercial, clerical, business and public administration	**20**	Mahalapye Development Trust, Palapye Technical College, Palapye Development Trust
	Agricultures, forestry and fisheries	**16**	Palapye Development Trust, Serowe Brigade
	Health and Health related	**12**	Madiba Brigade
	ICT	**14**	Bobonong Bridage, Palapye Development Trust
Southern	Construction trades, Craft, trade and industrial	**52**	Barolong Vocational Training Centre, Kanye Brigade, Moshupa Brigade
	Commercial, clerical, business and public administration	**22**	Moshupa Brigade, Ramatea Vocational School (Kanye)
	Agricultures, forestry and fisheries	**13**	Ramatea Vocational School, Kanye Brigade, Barolong Vocational Training

			Centre
South East	Construction trades, Craft, trade and industrial	**21**	Tswelelopele Brigade, Tlokweng Rural Development Centre
	Commercial, clerical, business and public administration	**9**	Tswelelopele Brigade, Tlokweng Rural Development Centre
	Health and Health related	**9**	Tswelelopele Brigade
	ICT	**6**	Tlokweng Rural Development Centre
Selebi Phikwe	Construction trades, Craft, trade and industrial	**21**	Selibe Phikwe Technical College
	Commercial, clerical, business and public administration	**9**	Selibe Phikwe Technical College
	ICT	**11**	Selibe Phikwe Technical College
North East	Construction trades, Craft, trade and industrial	**31**	Zwenshambe Brigade, Senyawe Brigade
	Commercial, clerical, business and public administration	**13**	Zwenshambe Brigade
North West	Construction trades, Craft, trade and industrial	**15**	Maun Brigade, Maun Technical College
	Commercial, clerical, business and public administration	**7**	Maun Technical College
	ICT	**3**	Maun Brigade
	Hospitality and Tourism	**30**	Botswana Wildlife training institute, Maun Technical College
Lobatse	Construction trades, Craft, trade and industrial	**10**	Lobatse Brigade
	Commercial, clerical, business and public administration	**5**	Lobatse Brigade
	Health and Health related	**10**	Meat Inspection Training Centre
Kweneng	Construction trades, Craft, trade and industrial	**21**	Kweneng Rural Development Association

	Commercial, clerical, business and public administration	**5**	Tshwaragano Brigade (Gabane)
	Agricultures, forestry and fisheries	**10**	Tshwaragano Brigade (Gabane)
Jwaneng	Construction trades, Craft, trade and industrial	**6**	Jwaneng Technical College
	Commercial, clerical, business and public administration	**5**	Jwaneng Technical College
	ICT	**5**	Jwaneng Technical College
TOTAL		**1080**	

Key informant interviews also targeted training institutions and employers within the broader clusters of specialization as shown in Appendix 1.

Identification of graduates for the administration of the questionnaire involved the use of multi-stage sampling techniques, within which purposive sampling and snow ball sampling sufficed. As Maykut and Morehouse (2004) commented, sampling should increase the likelihood that the sample accurately represents the population from which it was selected, allowing for results of the study to be generalised to a larger population.

(i) Purposive sampling

A purposive sample is one that is selected by the researcher subjectively depending on the variables of investigation. Even though this would not give each graduate an equal chance of being selected, it has been considered generally relevant. It involved the researchers identifying relevant industries that could utilise trade skills offered by BOTA accredited institutions, and establishing if they have employed graduates of BOTA accredited institutions. If they have, such graduates were identified and requested to participate in the study.

ii) Snow ball sampling

Snow balling as a sampling technique involves using the first identified subject to identify others. In this case, the respondents identified through purposive sampling were asked to assist in identifying their former colleagues at BOTA accredited institutions. In particular, they were asked if they know anybody else who graduated from BOTA accredited institutions and where that person could be found. The information provided was used to locate and identify other graduates.

3.3.4 Gaining Access

To gain access into the study subjects, gate-keepers were used. Gate-keepers are people with authority and control over the subjects to be studied. This, for example, included Human Resource Managers, Sectional heads who directly supervised vocational training graduates and other Senior Management in employment sector.

3.3.5 Administration of questionnaire to graduates

The questionnaire was self-completed. To optimise the response rate, four approaches were used.

- First the respondent was requested to complete the questionnaire in the presence of the questionnaire administrator so that it could be collected upon completion;
- Secondly, the questionnaire was left with the respondent to be collected at a later date upon completion;
- Third, in cases where a number of graduates are at a single establishment, the distribution and collection of the questionnaires was done through the employer management;
- Finally, the questionnaire was administered telephonically and online. In this study, telephonically interviews proved the most viable.

3.3.6 Key informants interviews

Key informants are people who by virtue of their placement have first-hand knowledge about a topic of interest. Semi-structured interviews were conducted with key-informants who either worked directly as supervisors of vocational training graduates or resource persons (tutors) at vocational institutions.

3.3.7 Ethical considerations

The objectives of the research were explained to the informants and respondents who would then decide on whether they want to participate or not. The respondents and key informants were assured that all information collected would be treated in confidence and only used for the purpose of this study.

3.4 Methodological difficulties

Identification of graduates was mainly expected to begin at Vocational Training Institution (VTI) through the use of databases. Identified graduates from VTI databases were expected to help identify other graduates who could participate in the study. Employers were also to be contacted to establish if they employed VTI graduates with the intention of using the identified employees to indentify other graduates. Employers were also to be requested to administer the questionnaire to the respondents to minimize interference with their production processes. While these approaches were expected to generate a significant number of respondents, fieldwork indicated otherwise. The main limitations were that:

- Some institutions did not keep databases for their graduates. In cases where databases existed, they were not up to date. Some institutions did not want to release databases to a third party despite the letter of support for the study from BOTA. In some cases where databases were provided, graduates had either changed phone numbers or did not want to be interviewed, particularly those unemployed;
- Some graduates wanted to be offered employment before they could be interviewed. This could have been the signs of interview fatigue, because there were two other preceding tracer studies, that of CITF and DVET that targeted the same respondents as this study;
- Graduates in Gaborone and other urban areas appeared generally busy and have little time to spare for seemingly non-productive purposes. They hardly honoured appointments for interviews;
- This study wanted to cover a cross spectrum of graduates by areas of specialisation, geographical location and ranking of institution. While geographical location and ranking of institution did not prove to be difficult variables within the broader sampling frame, it

has been difficult to sample across the areas of specialisation. Sampling across areas of specialization relied more heavily on the databases, and most of the databases obtained were heavily biased towards the construction trades, crafts trades and industrial specialisation. This meant that in sampling from the databases, most of the graduates were from this specialisation that seemed to be the most subscribed;

- Questionnaires left with respondents for completion and to be collected at a later date yielded low returns and were more time consuming since one had to make several follow ups before the questionnaires were completed;
- Several employers, particularly local authorities around the country were approached to administer the questionnaire to their employees. While they agreed to do so, the actual process of administering the questionnaire has been a problem. There has been lack of commitment despite several follow ups. In the majority of cases, the questionnaires never reached prospective respondents. Even in this case there were managers who were not cooperative, insisting that they did not employ VTI graduates.

3.5 Methodological lessons and refinements

Despite the difficulties captured in the preceding section, it was realised that obtaining databases from institutions was the most plausible approach, particularly for graduates who were still unemployed. We extended our search for databases to the Department of Labour in districts which had up-to-date information on graduates they placed on employment and those still looking for employment. But these databases did not reflect the year of graduation, which led to the broadening of the initial sampling of 2004-2008 graduation periods. It was also realised that the return rate of face to face administration of questionnaires was relatively low, because a lot of time was spent travelling from place to place, sometime just to administer a questionnaire to one person who agreed to be interviewed. Another valuable lesson learnt was that it is much easier to interview people in villages, because the atmosphere is more relaxed and people are not that busy and quite often the graduates would have studied from various institutions, not necessarily the one in their village. However, despite a relatively relaxed atmosphere, the main limiting factor was that if you are from outside the village, you were

always treated with suspicion and people may not be readily willing to disclose that they are VTI graduates unless introduced by someone they are familiar with. In refinements:

- Telephone interview became the main focus of questionnaire administration using acquired databases;
- At every village visited, a graduate of a local VTI was identified and engaged on a temporary basis to help identify former graduates from the institution in the village.

3.6 Data analysis

The nature of data to be obtained from this study is both quantitative and qualitative. Quantitative data, which is mainly from self-completed questionnaires, was analysed using Statistical Package for Social Sciences (SPSS). Qualitative data will be coded into themes around the key variables of investigation. A code was placed next to a word or group of words that mentioned these key variables of investigation. Output from the analysis is presented in tabular and graphic forms and verbatim qualitative statements where appropriate.

RESULTS AND DISCUSSION

4.0 RESULTS AND DISCUSSION

4.1 Profile of graduates respondents

4.1.1 Response rates

The initial target of respondents was 1080. However, because the methodological problems already alluded to in section 3.5, 577 graduates respondent to the questionnaire. This represented a response rate of 53% which is comparable to 54% reported by De Guzman at el 2008. The relatively low response rate could be attributed to what appears to be interview fatigue that could be a result of that there were two other studies in recent times that targeted the same respondents. Other studies have recorded even a lower response rate for tracer studies that were repetitive. The Joint Japan/World Bank (2007) study reported a 42.9% and 11.9% response rates for the first cohort and repeat respectively. Debono et al. (2004) conducted a study on career outcomes of University of Malta graduates and reported a response rate of 55.65%, 49% and 45% for the studies conducted in 2000, 2002 and 2004 respectively.

Out of questionnaires distributed to employers and trainers, 29 of employers and 111 of trainers were returned, representing response rate 58% and 111% respectively. The low response rate from employers can be attributed to lack of commitment despite several follow ups as reported in section 3.5.

4.1.2 Response rate by gender and age

Gender and age were not considered key variables in sampling of graduates in this study. However, information on respondents by gender and age is presented here to give insightful understanding of respondents to the study by these variables. Apart from depicting a possible fair distribution of sampling by age and gender, this information could highlight the attractiveness of vocation education by age and gender. Figure 3 shows the distribution of respondents by age. The majority of respondents (67.72%) were between the ages of 25 and 34

followed by 18.07% of respondents who were aged between 16 and 24. A small proportion of graduation (0.70%) was over 50 years of age. This shows that vocational training interests direct school leavers either who have attained either junior certificate of education of O-level certificate. Figure 4 shows the distribution of respondents by gender. The majority of the respondents (53.34%) were male while 46.79% were female.

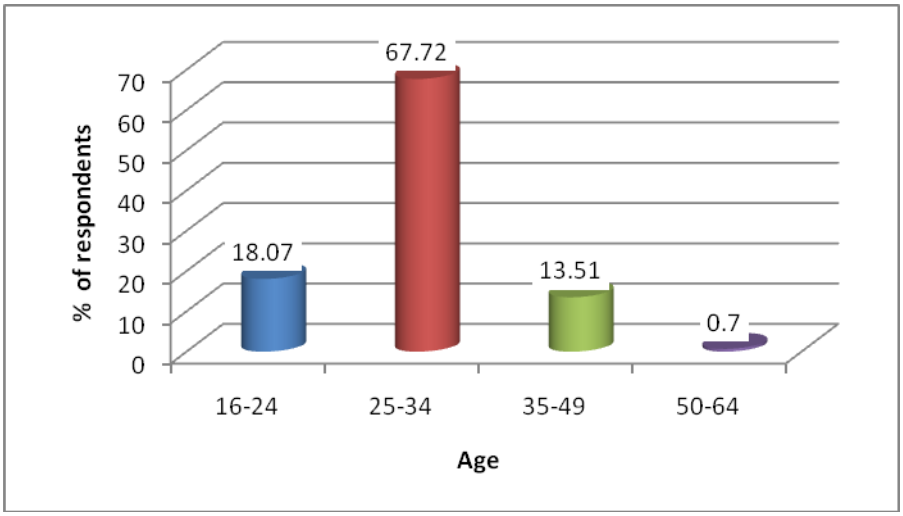

Figure 3: Percentage of respondents by age

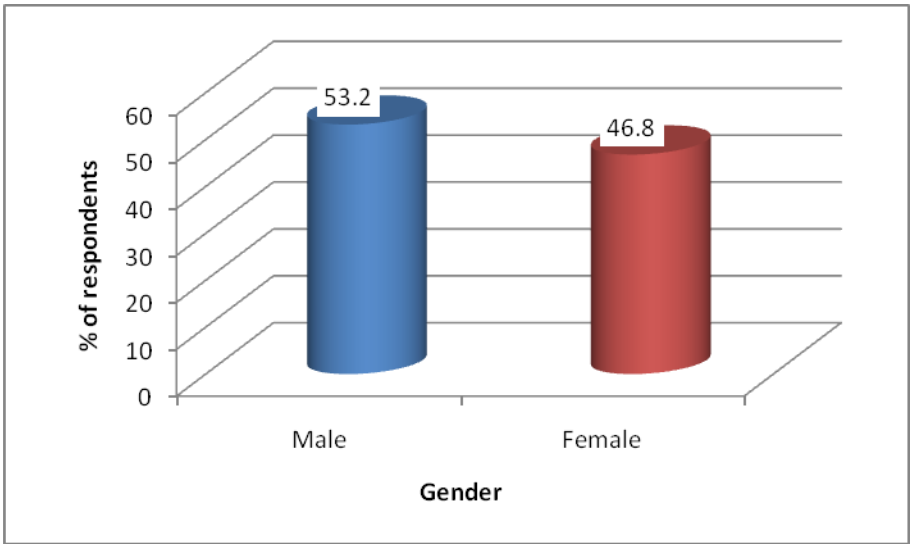

Figure 4: Percentage of respondents by gender

4.1.3 Response rate by area of specialisation

Figure 5 shows that the majority of respondents (64.04%) were in the construction trades, craft trades and industrial cluster, followed by 19.12% who were in the commercial, clerical, business and public administration cluster. This shows that the majority of graduates identified by this study were in the construction trades, craft trades and industrial specialism.

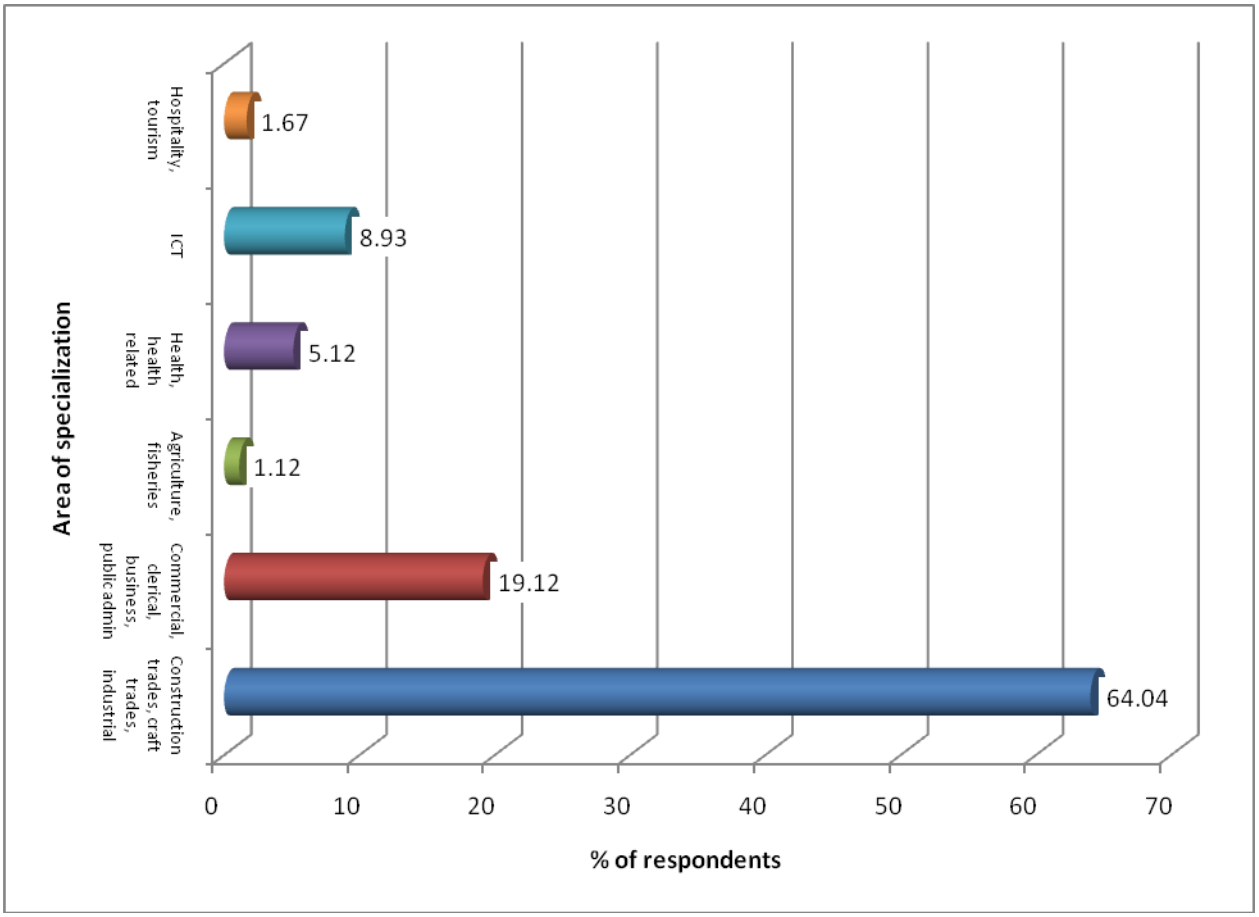

Figure 5: Percentage of respondents by area of specialization

Figure 6 shows the disaggregation of area of specialization by gender. The figure shows that the majority of graduates who specialized in the construction trades, craft trades and industrial were males, while females were dominant in the health and health related, hospitality and tourism, and commercial, clerical, business and public administration areas of specialization. This could indicate that in choosing vocational career paths, females tend to gravitate to those vocations that are less physically demanding. The findings of the study are consistent with the June 2009 Formal Sector Employment report which stated that the proportion of employees by sex at industry level shows that male were dominant in Construction and Mining & Quarrying industries and the highest proportion of females was in Health and Social work.

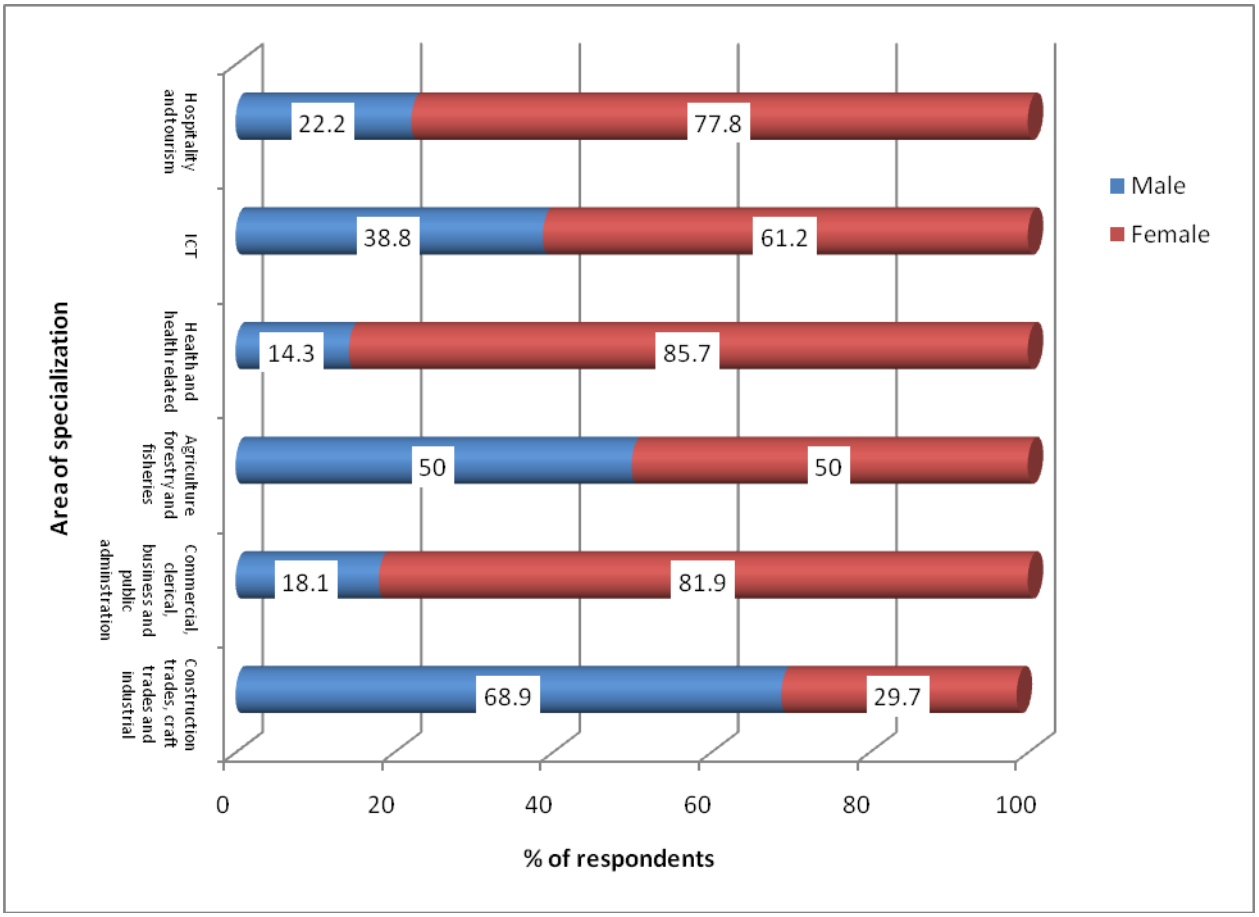

Figure 6: Area of specialization by gender

4.1.4 Response rate by level of qualification

Figure 7 shows proportion of respondents by the completed level of training at a vocational training institution. The majority of respondents (30.77%) graduated from VTIs with a Certificate followed by 30.05% who graduated with a Trade Test Certificate and 26.83% who completed a National Craft Certificate (NCC).

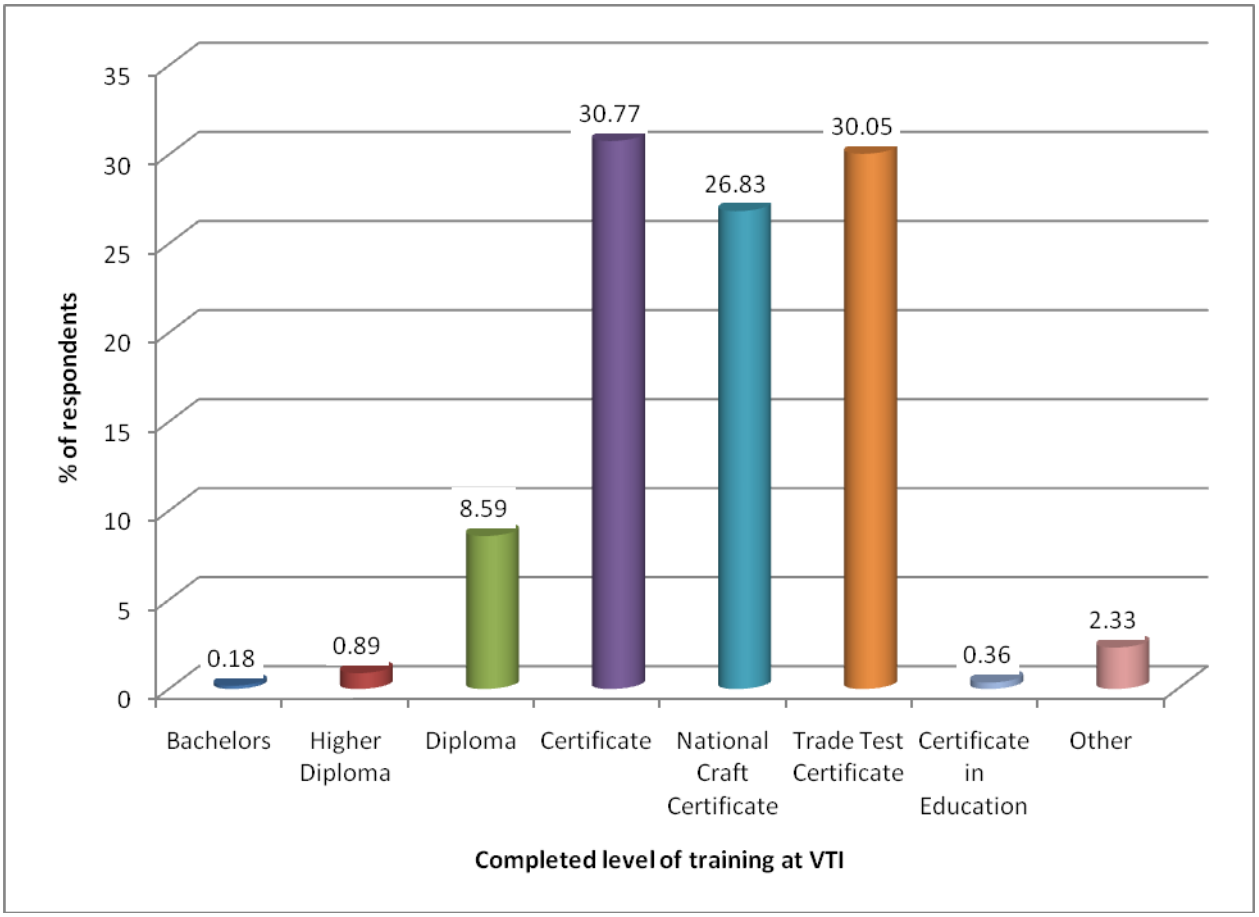

Figure 7: Percentage response rate by completed level of training at VTI

4.1.5 Summary

The majority of respondents were males aged between 25 and 34. This could be indicative of that the respondents enrolled for vocational training directly from junior and senior secondary school. The respondents had mainly graduated in the construction trades, craft trades and industrial cluster of specialization, mainly acquiring certificates, Trade Test Certificates and National Craft Certificates respectively. The highest proportion of males was in the construction trades, craft trades and industrial cluster of specialization, while the highest proportions of females were in the health and health related, hospitality and tourism, and commercial, clerical, business and public administration specialization.

4.2 Employment and Unemployment status

The graduates were asked to indicate whether they were currently employed fulltime, employed part-time, employed temporarily and unemployed and looking for employment. The general employment status of graduates is shown in Figure 8. Figure 8 shows that 49.55% of respondents were unemployed and looking for a job, 36.96% were employed fulltime, 10.16% were employed temporarily and 3.33% were employed on a part-time basis. The results show that unemployment is generally high among graduates of Vocational Training Institutions. These findings are in consonant with those of the BTEP Tracer Study that found that employment among BTEP graduates was 50% (DVET 2007). The CITF tracer study reported an unemployment graduate rate of 41%. Employment status of graduates is disaggregated in the following sections by gender, area of specialisation, level of qualification and sectors of employment.

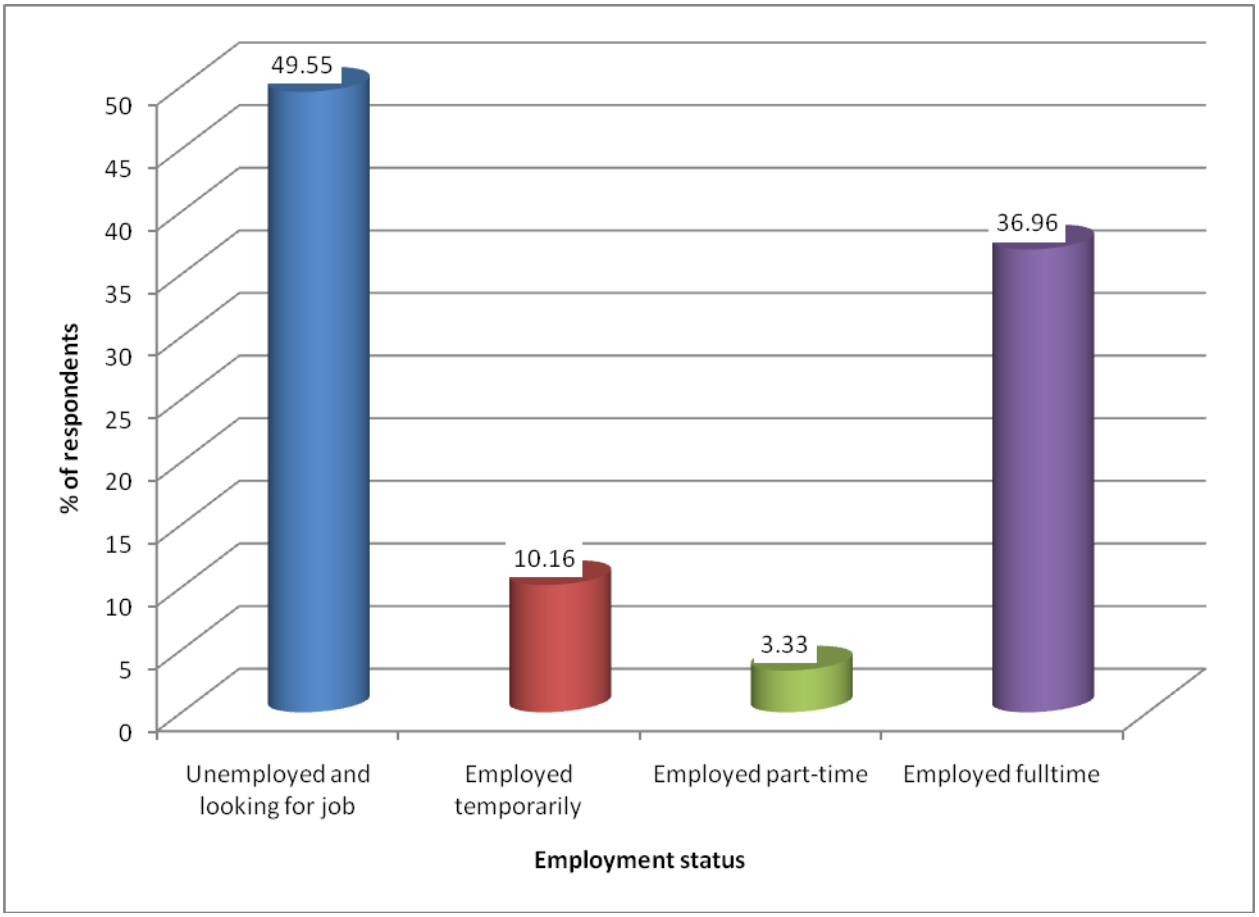

Figure 8: Employment status of graduates

4.2.1 Employment status by gender

The graduates' status of employment was classified by gender (male, female) as shown in Figure 9. Figure 9 shows that of the 549 respondents who indicated their employment status by gender, the majority of those unemployed and looking for a job (59.07%) were females while the majority 44.14% of those employed fulltime were males. The result of the BTEP study also found that the majority of unemployed graduates were female (DVET 2007).The 2005/06 Labour force report reports that females accounted for 55.4% of those who were looking for paid employment.

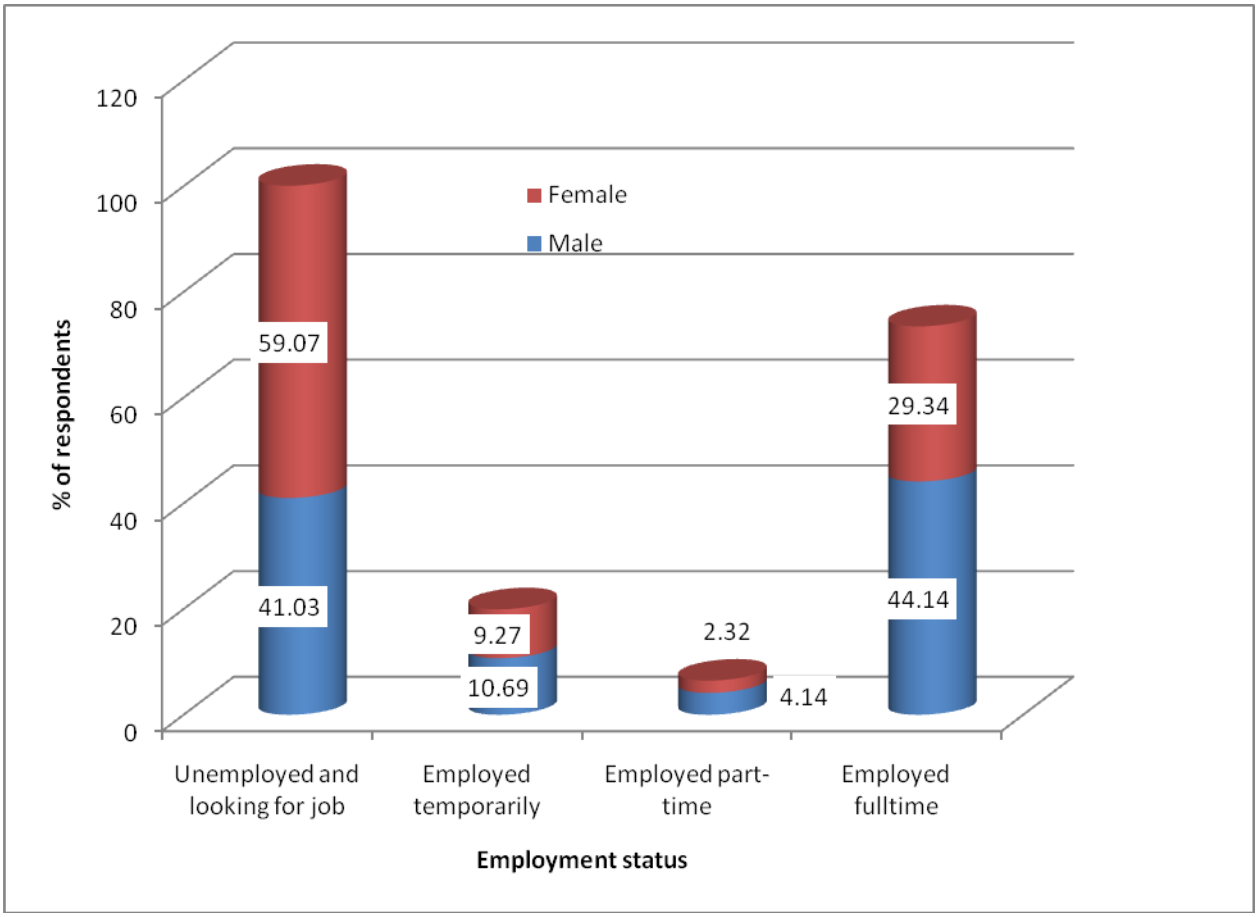

Figure 9: Employment status of graduates by gender

4.2.2 Employment status by area of specialisation

The graduates' status of employment was cross-tabulated with area of specialisation. The results of the cross-tabulation are presented in Figure 10. Figure 10 shows that of a total 535 graduates who indicated their employment status by area of specialization the majority of them (56%) who were unemployed and looking for employment specialized in the construction trades, craft trades and industrial area. Similarly, the majority of respondents who were employed fulltime (71.9%), graduated in the construction trades, craft trades and industrial specialization. The same pattern of unemployment and employment status is reflected in the commercial, clerical, business and public administration specialization. This could be indicative of that at

some point in the development of vocational training; these areas of specialisation were attractive because of the available job opportunities. However, the areas of specialisation has since become oversubscribed. It is possible that the over subscription could be biased towards one trade of the broader areas of specialisation concerned but this study would not detect that because it worked on the basis of cluster of trades to establish the area of specialisation.

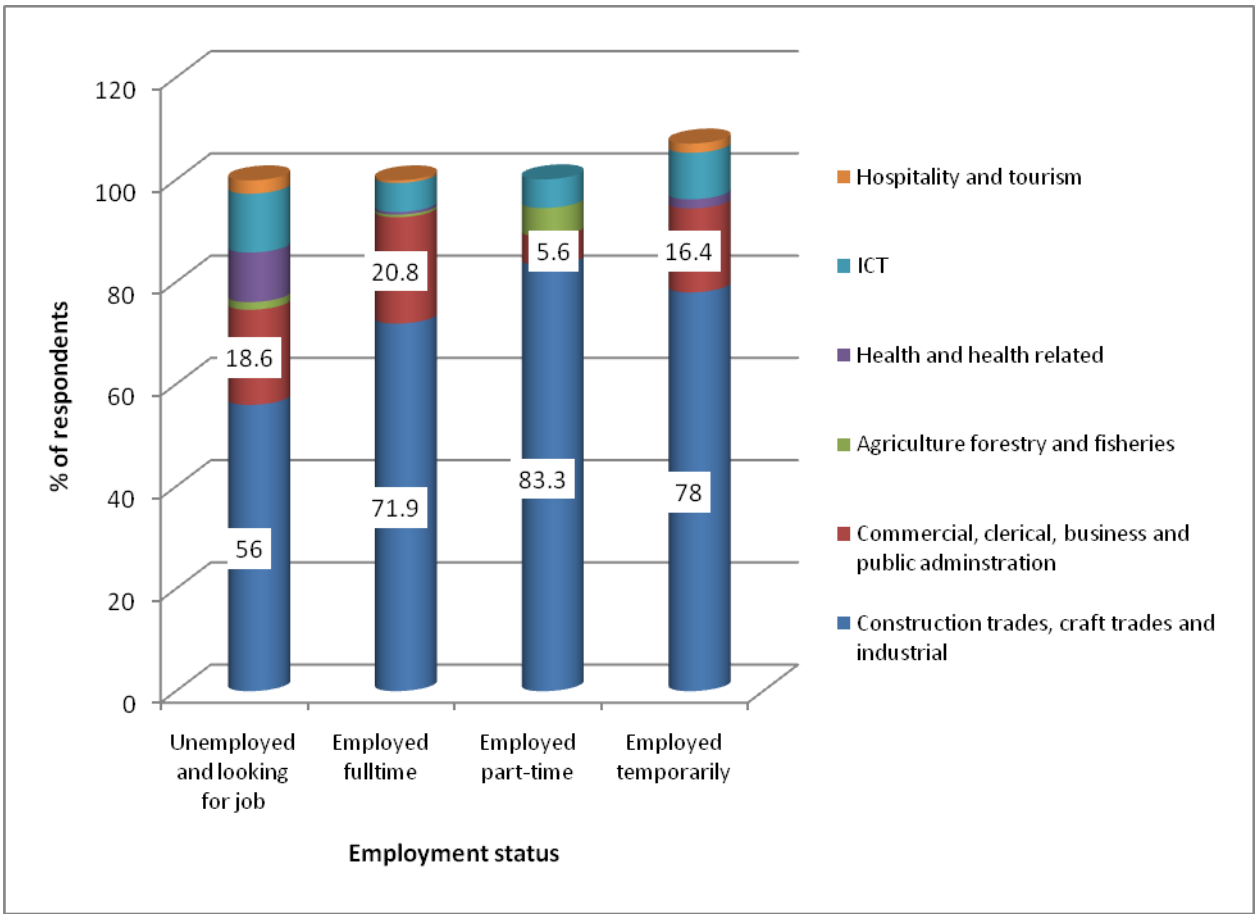

Figure 10: Employment status by area of specialisation

4.2.3 Employment status by level of qualification

The graduates' status of employment was cross-tabulated with area of specialisation. Figure 11 shows the results of the cross-tabulation. Out of a total of respondents of 542, the majority of

graduates who were employed fulltime, 38.1% have completed National Craft Certificate. The highest proportions of graduates who were unemployed have completed Certificates 37.2% and Trade Tests Certificates (32.3%) respectively at Vocational Training Institutions. There is a clear negative relationship between the incidence of unemployment and the level of one's education, with NCC graduates the most employed. The attractiveness of National Craft Certificate holders by virtue of the majority of them being employed on a fulltime basis could indicate that the learning outcomes at this level are what are required by employers. Graduates stay longer at vocational schools to acquire National Craft Certificates, which could have further refined their level of skill and competency to the desire of employers.

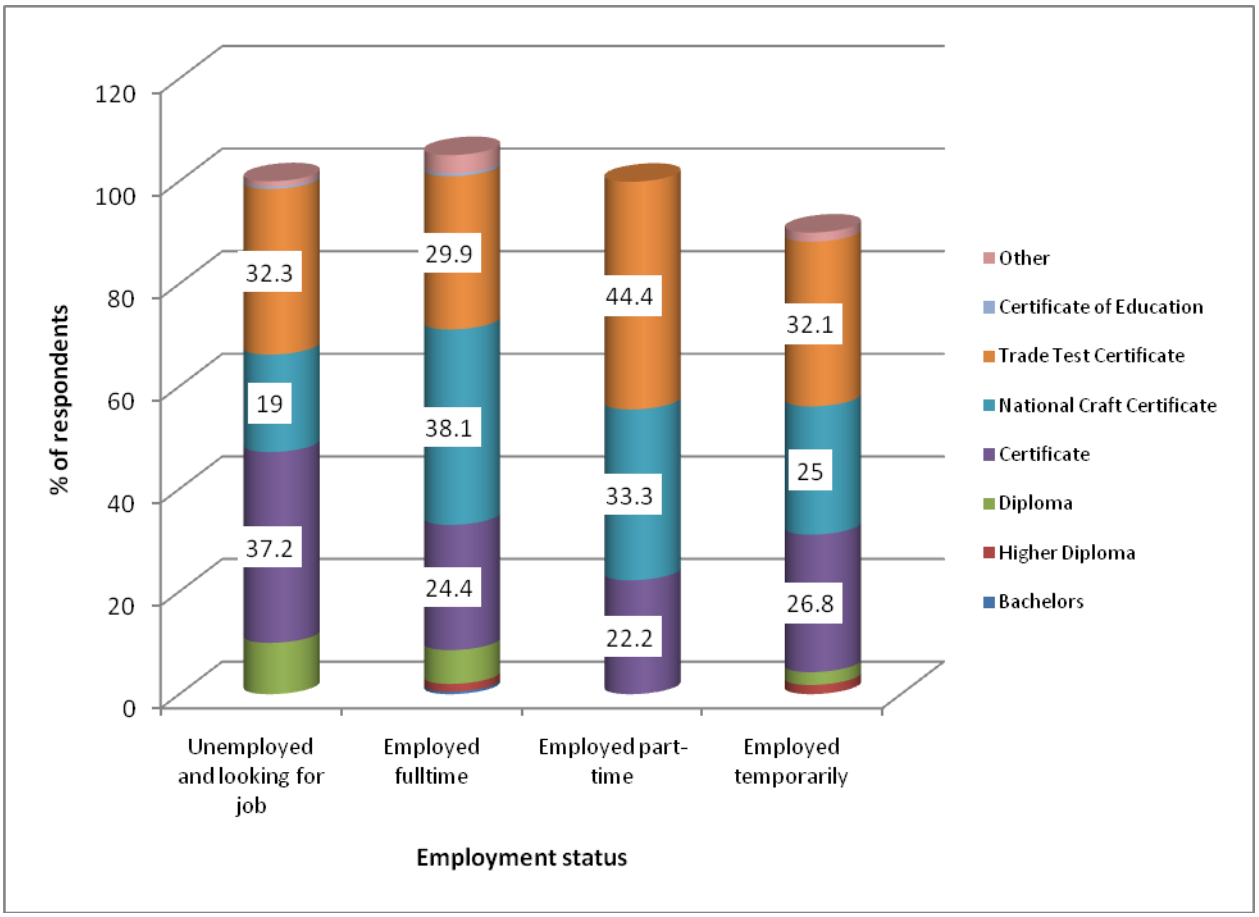

Figure 11: Employment status by level of training at VTI

4.2.4 Employment status by year of graduation

The relationship between employment status and year of graduation is important in establishing the time lag between graduation and employment. In addition, it could indicate the cohort of graduates who have stayed longer on the employment queue. Figure 12 shows the status of employment of graduates by year of graduation. The majority of graduates (31.8%) who were unemployed graduated in 2009, followed by 26.7% who graduated in 2008. On the other hand, 19.2% of 2008 graduates were on fulltime employment, with 21.9% of those who graduated in 2009 also on fulltime employment. These results are not conclusive on the time lag between graduation and employment. However, the results in Figure 12 had shown that there has been a sharp rise in unemployment since 2008.

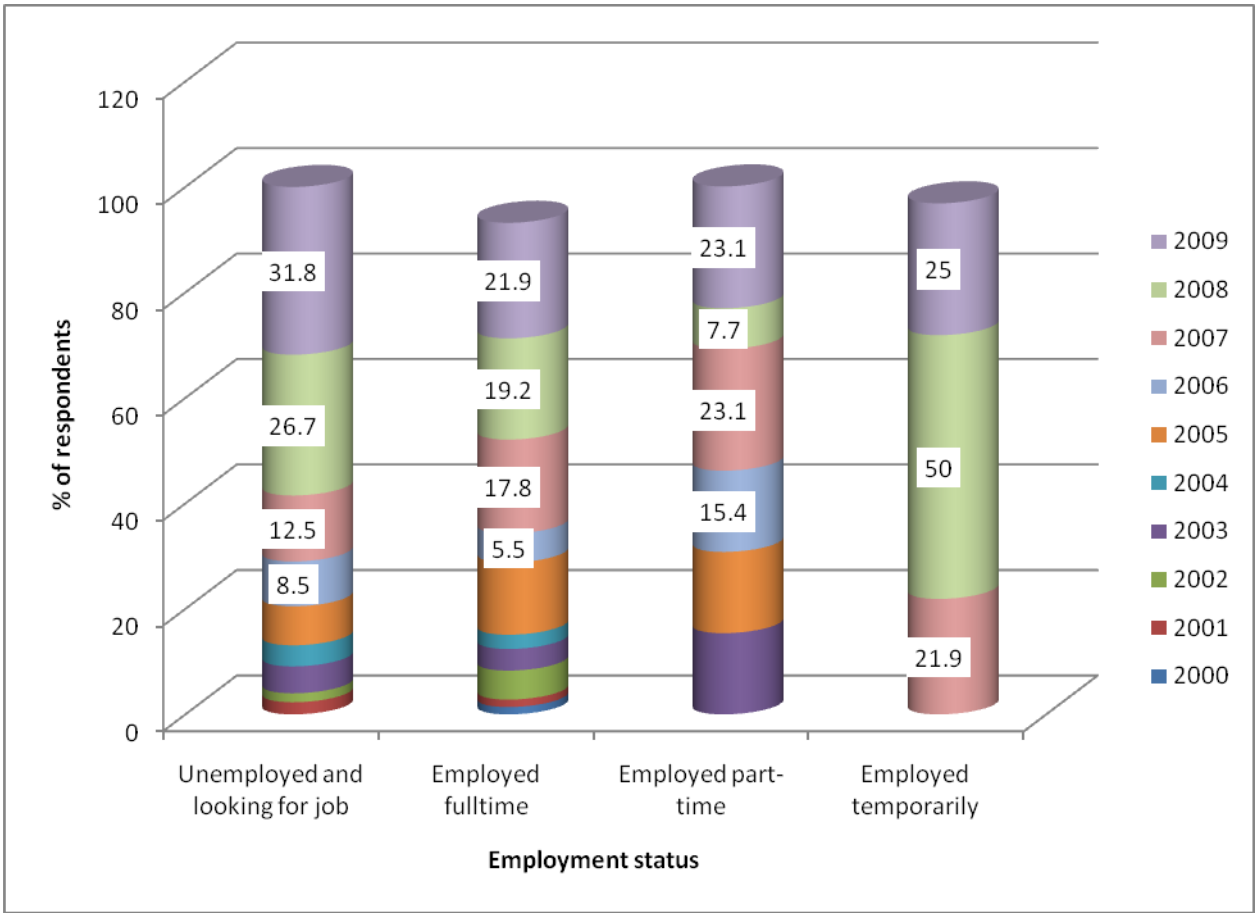

Figure 12: Employment status by year of graduation

4.2.5 Employment status by geographical location

The relationship between employment status and geographical location is important in establishing the spatial location of jobs. This relationship is shown in Figure 13. The figure shows that the largest proportion of graduates on fulltime employment, 47.8% and 39.7% are employed in urban areas, while those employed part-time are in rural areas. This is understandable because by its nature, vocation training trains people for industrial production and such activities in Botswana are mainly in urban areas. In rural areas, employment is mainly of a casual nature, often over a period of a few months, not necessarily in the area of specialization.

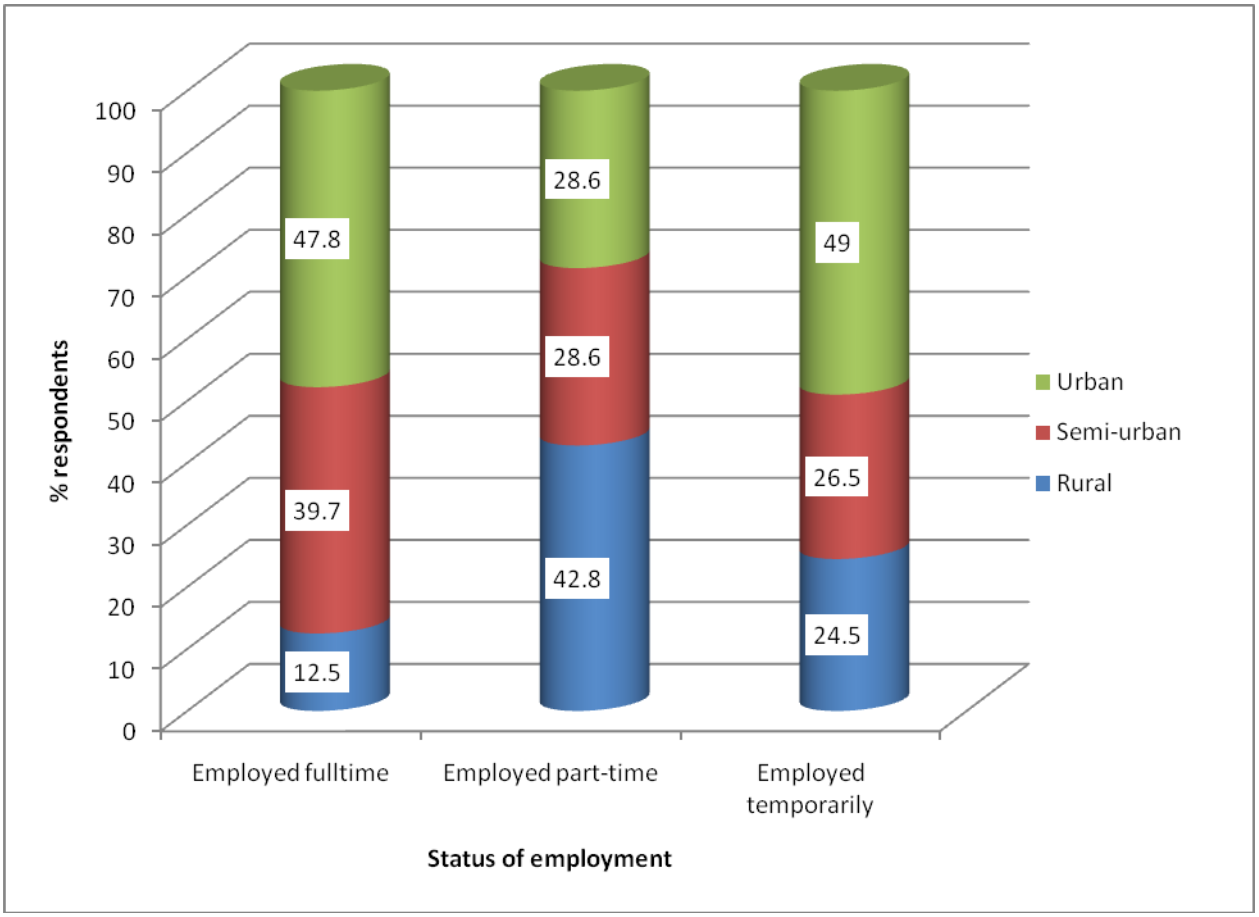

Figure 13: Employment status by geographical area

4.2.6 Sectors of employment

Having established the employment status by gender, area of specialisation, completed level of specialisation at Vocational Training Institution, year of graduation and geographical location, the study sought to find out who their employers are. Figure 14 shows the distribution of respondents by sector of employment. Figure 14 shows that of fulltime employed vocational training graduates at least 43.02% were employed in the public sector, followed by 36.63% who were employed by the private sector. The private sector provided the highest proportion of graduates employed on a temporary and part-time basis at 62.5% and 56.75% respectively. This means, the private sector is the main employment sector that requires the skills obtained from vocational institutions, particularly in the construction trades, craft trades and industrial. In

that regard, any policy development on vocational training should solicit the input of private sector. The June 2009 formal sector employment report reports that Private sector had the largest employment share accounting for 46.2% followed by Local Government with 25.1%, Central Government and parastatals recorded 24.9% and 3.8 % respectively.

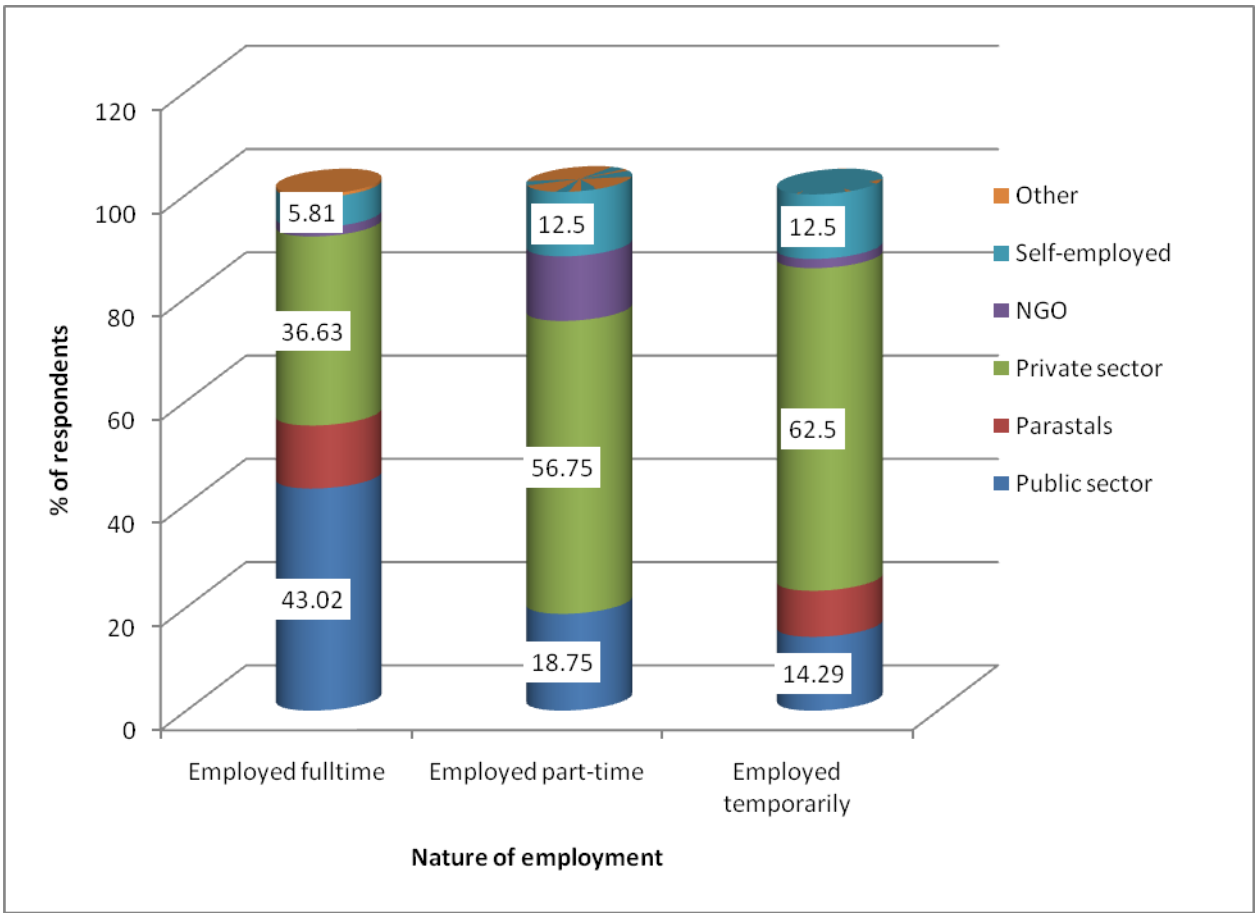

Figure 14: Employment status by sector of employment

4.2.5 Summary

The employment rate among respondents was 50.45%. The majority of these graduates (36.87%) were employed fulltime and the rest were employed on a temporary basis or part-time. Graduates employed fulltime were mainly in urban and semi-urban areas. The proportion of

graduates respondents unemployed and looking for a job was relatively high, standing at 49.55%. Unemployment was more prevalent among females, while employment was high among males. The construction trades, craft trades and industrial area of specialization recorded the highest proportion of both the unemployed and those in fulltime employment. Fulltime employment was found to be high among graduates who attained the National Craft Certificate. The majority of these graduates were employed in the private sector. This could suggest that the construction trades, craft trades and industrial specialization is over subscribed because of its earlier promise in employment opportunities. But employment opportunities promise in the construction trades, craft trades and industrial specialization appears tangible if one has acquired an appropriate level of skill required by employers. It appears employers are mainly interested in graduates who have attained NCC qualification. Apart from that, the high employment rate in the construction trades, craft trades and industrial specialization could explain the high unemployment rate among female graduates who would tend to gravitate to much less physically demanding vocations such as commercial, clerical, business and business administration specialism.

4.3 Finding a job - methods searching, recruitment and associated difficulties

4.3.1 Methods used and easiness of securing employment

The methods one uses for recruiting and looking for work could be critical in linking Vocational Training Institution to available jobs. Some of the ways that graduates used in securing employment were responding to advertised positions, moving door to door and talking to potential employers or recommendations to employers by relatives and friends. Table 3 shows that predominant methods used to securing a job were media advertisements (39.9%), contacts through friends and door to door (job hunting) (22.7%) and recommendation by friends (21.2%).

Table 3: Methods used to identify a job

How did you know about your job?	Frequency	Percent
Friends	59	21.2
Media advertisements	111	39.9
Door to door (job hunting)	63	22.7
Other	43	15.5
Total	278	100

In this study, the graduates were also asked to state the number of contacts they made before their first employment and the general difficulties in finding a job. Knowing the number of contacts graduates make before securing employment is important in alerting would-be graduates to start contacts with employers before graduation or to start applying for jobs after graduation (Ama et al. 2007). Figure 15 shows the distribution of the number of contacts made by graduates with prospective employers before first employment. The majority of graduates (64.34%) made between 0-5 contacts before securing a job. This shows that where jobs are available, it did not take a large amount of effort to secure a job for the majority of those employed. However, a significant proportion of graduates (20.59%) made at least 11 contacts before securing a job. This shows securing a job for vocational training graduates required some significant effort for some of them. This is further supported by that when graduates were asked to pass an opinion on the statement 'It is easy for me to get a job' as reflected on Table 4, the majority of them 32.4% and 16.3% disagreed and strongly disagreed respectively with the statement.

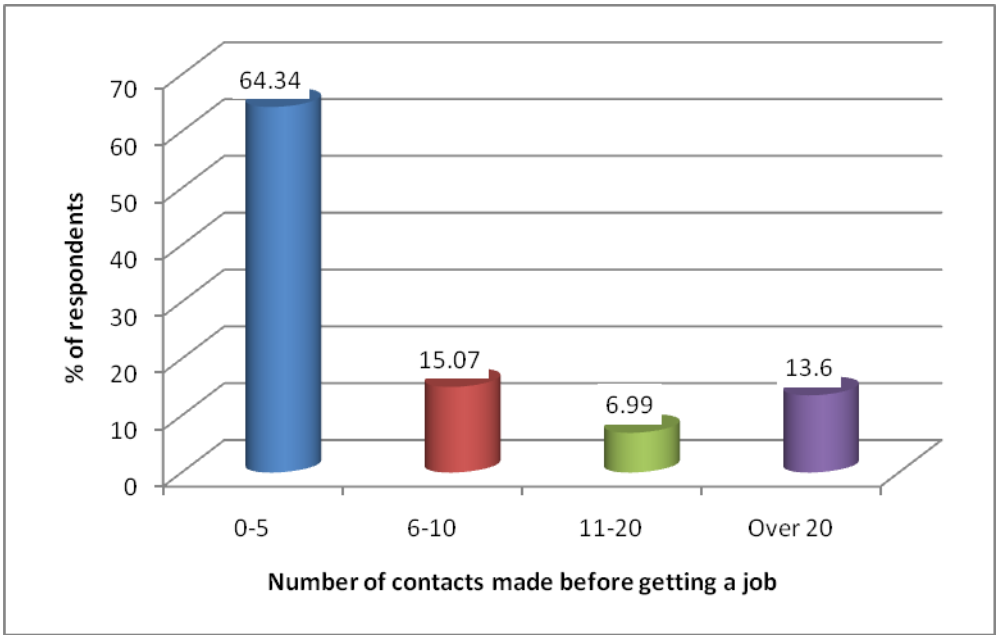

Figure 15: Number of contacts made before getting job

Table 4: Easiness of getting a job

It is easy for me to get a job.	Frequency	Percent
Strongly disagree	91	16.3
Disagree	181	32.4
Not applicable	71	12.7
Agree	160	28.6
Strongly agree	56	10.0
Total	559	100.0

With regard to difficulties in finding a job, the reasons presented in Figure 16 were noted. Figure 16 shows that the majority of respondents, 32.57% indicated that there were limited opportunities in their geographical area, while 20.76% considered lack of experience as their greatest challenge. The high proportion of graduates who indicated that there is limited job opportunities in their geographical area could indicate the inability of graduates to move from one geographical area to the other looking for employment, probably as a result of fear to move away from the family support network.

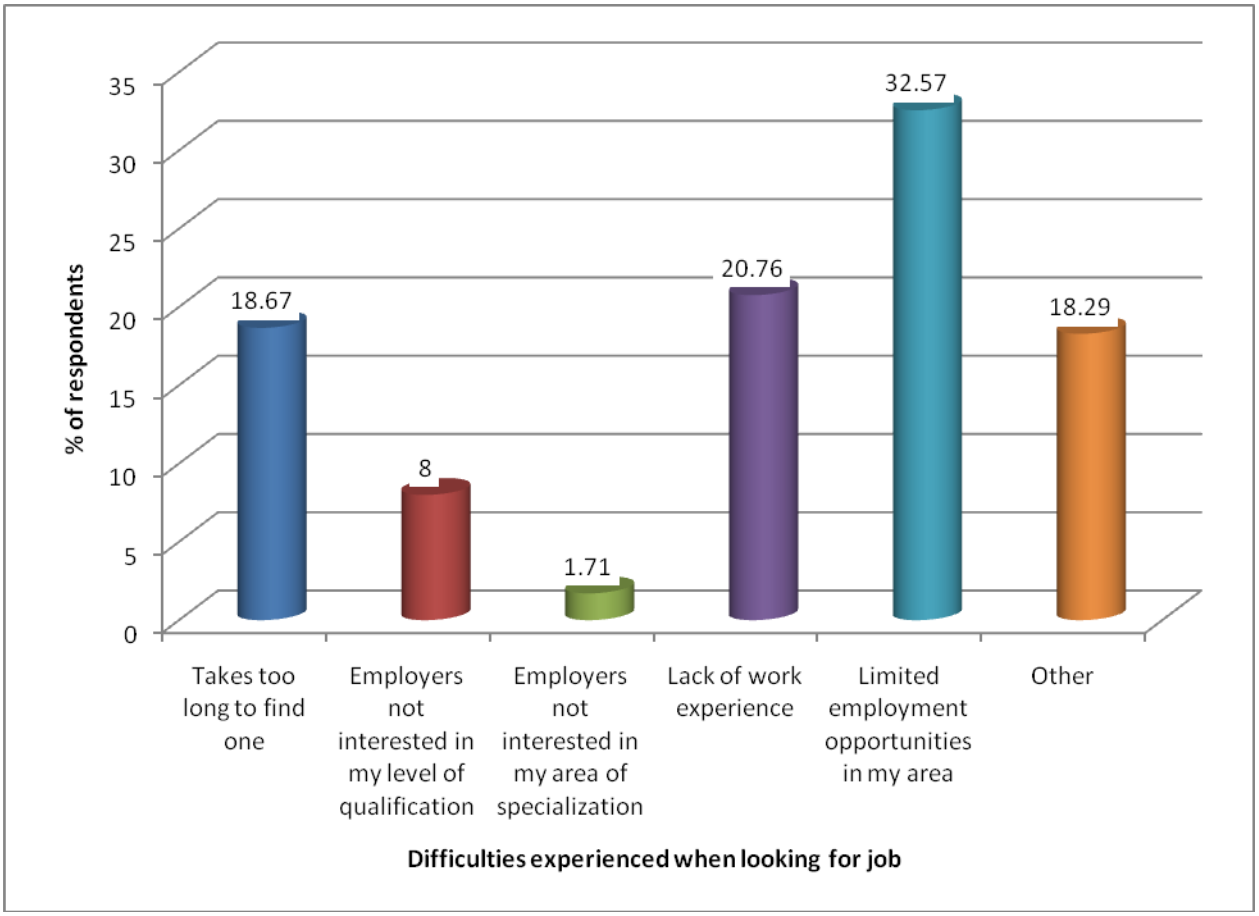

Figure 16: Difficulties experienced in looking for a job

4.3.2 Time lag between graduation and securing employment

The lag time between graduation and employment, can also be informative with regard to the easiness and/or difficulties by graduates in finding employment after graduation. Graduates were asked to state the length of time they have been looking for jobs after graduation. The results are summarised in Table 5. Table 5 shows that it took 45.8% of the graduates at most 6 months to get their first employment while 20.2% took between 6-12 months. Overall, 66% of graduates got their first job within 12 months after graduation. This further supported by that only 18.67% of graduates identified the length of time it takes to get a job as the main difficulty

they experienced when job hunting. This could indicate that where jobs are available, the lag time between graduation and employment could be at most a year.

If we consider the lag time between graduation and employment by area of specialization as shown in Table 6, both the lowest and highest waiting times were in the construction trades, craft trades and industrial specialization. This is not surprising because this specialization is the one that produces both the highest unemployment and fulltime employment rates (see Figure 10).

Table 5: Period taken to secure a job after graduation

How long did it take to get a job after graduation?	Frequency	Percent
Less than 6 months	120	45.8
6-12 months	53	20.2
13-24 months	38	14.5
25-36 months	15	5.7
Over 3 years	36	13.7
Total	262	100.0

Table 6: Time it took to get a job by area of specialization

Time it took to get job after training		Area of specialization in the current job					
		Construction trades, craft, trade and industrial	Commercial, clerical business and public administration	Agriculture, forestry and fisheries	Health and health related	ICT	Hospitality and tourism
Less than 6 months	Count	79	31	0	2	1	2
	% within Time it took to get job after training	68.1%	26.7%	.0%	1.7%	.9%	1.7%
6-12 months	Count	34	14	0	0	4	0
	% within Time it took to get job after training	65.4%	26.9%	.0%	.0%	7.7%	.0%
13-24 months	Count	27	7	0	0	2	0
	% within Time it took to get job after training	75.0%	19.4%	.0%	.0%	5.6%	.0%
25-36 months	Count	8	4	0	1	2	0
	% within Time it took to get job after training	53.3%	26.7%	.0%	6.7%	13.3%	.0%
Over 3 years	Count	21	9	2	1	0	1
	% within Time it took to get job after training	60.0%	25.7%	5.7%	2.9%	.0%	2.9%
Total	Count	169	65	2	4	9	3
	% within Time it took to get job after training	66.5%	25.6%	.8%	1.6%	3.5%	1.2%

However, Figure 17 shows that there is no significant difference between males and females for the time it takes one to get a job. The large majority of both males (47.5%) and females (42%) took less than 6 months in cases where jobs were available.

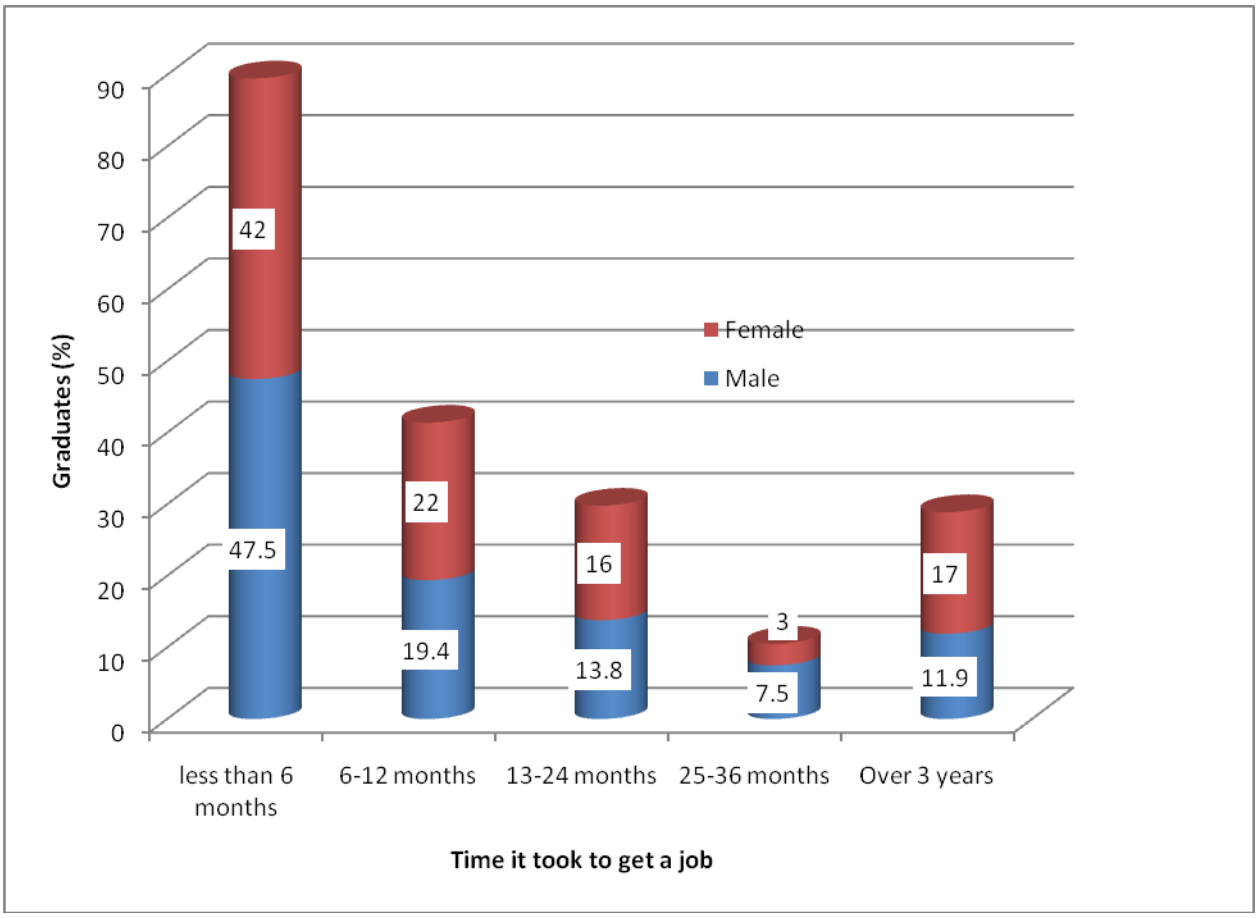

Figure 17: Time it took to get a job by gender

4.3.3 Summary

The study found that the predominant method used by graduates in finding employment was responding to media advertisements (39.9%). It was also found that it is generally difficult for graduates to get a job as reflected by the high unemployment rate, with 48.7% of the respondents indicating that they have difficulties getting a job. The main difficulty in getting a job

was identified as limited job opportunities in the geographical area where the graduate resided, which was identified by 32.57% of the respondents However, where jobs were available, it took relatively little effort to secure one, with 64.34% of the respondents making at most 5 contacts with potential employers before securing a job usually within the first year of graduation.

4.4 Employment income of graduates

The income offered by employment in vocation could determine its attractiveness. Figure 18 shows the distribution of income among vocational training graduates. The majority of graduates (31.01%) earned more than P4000/month, while 15.68% earned less than P1000/month. But overall, the earnings are not relatively bad compared to other sectors employing semi-skilled and skilled personnel. The national average earnings for all employees is P3771/month (June 2009 Stats brief report).

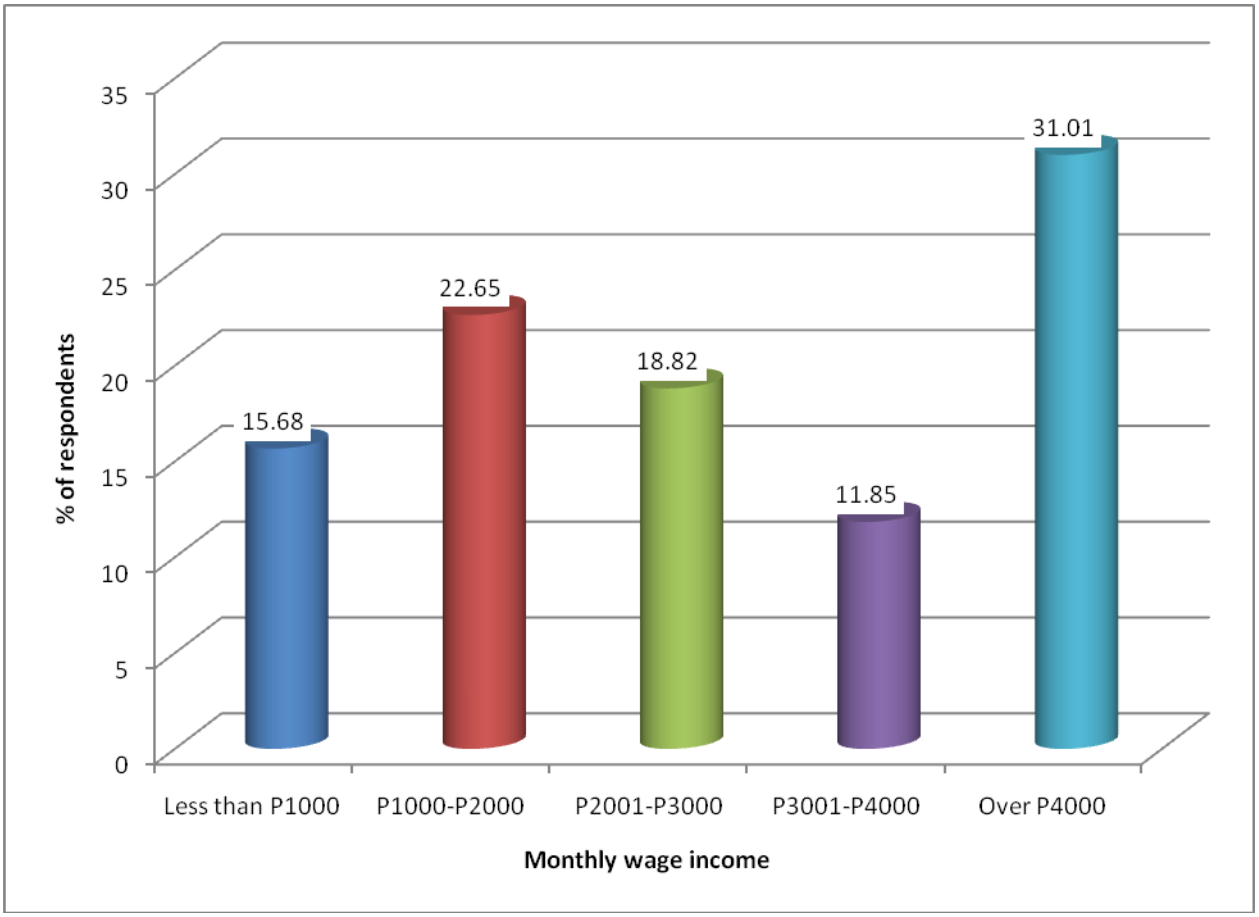

Figure 18: Income ranges of vocational training graduates

Table 7 shows the distribution of monthly income by sector of employment. Generally the public sector pays vocational training graduates between P2001 and P4000/month. Table 7 shows of the graduates who earned P2001 and P3000, 64% of them were in the public sector, 73.5% of those who earned between P3001 and P4000/month were also in the public sector. However the majority of graduates (75.0%) who earned less than P1000/month were in the private sector. The low income in the private could be attributed to that out of desperation for employment, graduates often take jobs in the private sector that are meant for unskilled labour. The private sector also had the highest proportion of graduates (46.5%) who earned over P4000/month. The large majority of graduates who were self-employed (20.5%) earned less than

P1000/month. This could be a disincentive for self-employment for vocational training graduates.

Table 8 shows the distribution of income by gender among vocational training graduates. Of those who earn less than P1000/month, the largest proportions of them (53.3%) are females, 46.7% of them are males. On the other hand, among the graduates who earn more than P4000/month a large majority of them (67.4%) are males, while 30.3% are females. This means that generally male vocational training graduates earn relatively higher incomes than their female counterparts. This could possibly be explained by that the areas of specialization that they enrol in attract a relatively higher wage in the employment market. Table 9 shows that the majority of graduates who earned more than P4000/month (76.7%) were employed in the construction trades, craft trades and industrial specialization while 31.8% of those who earned less than P1000/month were employed in the commercial, clerical, business and public administration specialization. This further buttresses the wage differential between males and females.

Table 7: Monthly income by sector of employment

			Sector of employment						Total
			Public sector (central government, councils)	Parastatal	Private sector	NGO	Self-employed	Other	
Monthly income	Less than P1000	Count	2	0	33	0	9	0	**44**
		% within Monthly income	4.5%	.0%	75.0%	.0%	20.5%	.0%	**100.0%**
	P1000-P2000	Count	13	1	39	3	9	0	**65**
		% within Monthly income	20.0%	1.5%	60.0%	4.6%	13.8%	.0%	**100.0%**
	P2001-P3000	Count	35	2	14	2	1	0	**54**
		% within Monthly income	64.8%	3.7%	25.9%	3.7%	1.9%	.0%	**100.0%**
	P3001-4000	Count	25	3	4	0	1	0	**34**
		% within Monthly income	73.5%	8.8%	11.8%	.0%	2.9%	.0%	**100.0%**
	4000+	Count	22	22	40	0	0	1	**86**
		% within Monthly income	25.6%	25.6%	46.5%	.0%	.0%	1.2%	**100.0%**
Total		**Count**	**97**	**28**	**130**	**5**	**20**	**1**	**283**
		% within Monthly income	**34.3%**	**9.9%**	**45.9%**	**1.8%**	**7.1%**	**.4%**	**100.0%**

Table 8: Monthly income by gender

			Gender		
			male	female	Total
Monthly income	Less than P1000	Count	21	24	**45**
		% within Monthly income	46.7%	53.3%	**100.0%**
	P1000-P2000	Count	39	26	**65**
		% within Monthly income	60.0%	40.0%	**100.0%**
	P2001-P3000	Count	38	16	**54**
		% within Monthly income	70.4%	29.6%	**100.0%**
	P3001-4000	Count	19	15	**34**
		% within Monthly income	55.9%	44.1%	**100.0%**
	4000+	Count	60	27	**89**
		% within Monthly income	67.4%	30.3%	**100.0%**
Total		**Count**	**177**	**108**	**287**
		% within Monthly income	**61.7%**	**37.6%**	**100.0%**

Table 9: Monthly income by area of specialization

			Area of specialization in the current job						Total
			Construction trades, craft, trade and industrial	Commercial, clerical business and public administration	Agriculture, forestry and fisheries	Health and health related	ICT	Hospitality and tourism	
Monthly income	Less than P1000	Count	22	14	2	1	2	3	**44**
		% within Monthly income	50.0%	31.8%	4.5%	2.3%	4.5%	6.8%	**100.0%**
	P1000-P2000	Count	40	16	1	2	3	0	**62**
		% within Monthly income	64.5%	25.8%	1.6%	3.2%	4.8%	.0%	**100.0%**
	P2001-P3000	Count	34	11	0	1	4	0	**52**
		% within Monthly income	65.4%	21.2%	.0%	1.9%	7.7%	.0%	**100.0%**
	P3001-4000	Count	18	12	0	0	0	2	**33**
		% within Monthly income	54.5%	36.4%	.0%	.0%	.0%	6.1%	**100.0%**
	4000+	Count	66	19	0	0	1	0	**86**
		% within Monthly income	76.7%	22.1%	.0%	.0%	1.2%	.0%	**100.0%**
Total		**Count**	**180**	**72**	**3**	**4**	**10**	**5**	**277**
		% within Monthly income	**65.0%**	**26.0%**	**1.1%**	**1.4%**	**3.6%**	**1.8%**	**100.0%**

4.4.1 Employment income by geographical location

Figure 19 shows the distribution of employment income by geographical location. The majority of respondents (50%) who earned less than P1000 were employed in rural areas, while the majority of those who earned more than P4000 were employed in urban areas (59.7%) followed by those in semi-urban areas at 35%. This shows that generally wages in rural areas are low. This could indicate the lack of job opportunities in rural areas matching the skills of graduates, hence opting for any nearest including those intended for unskilled personnel hence offering them low wages.

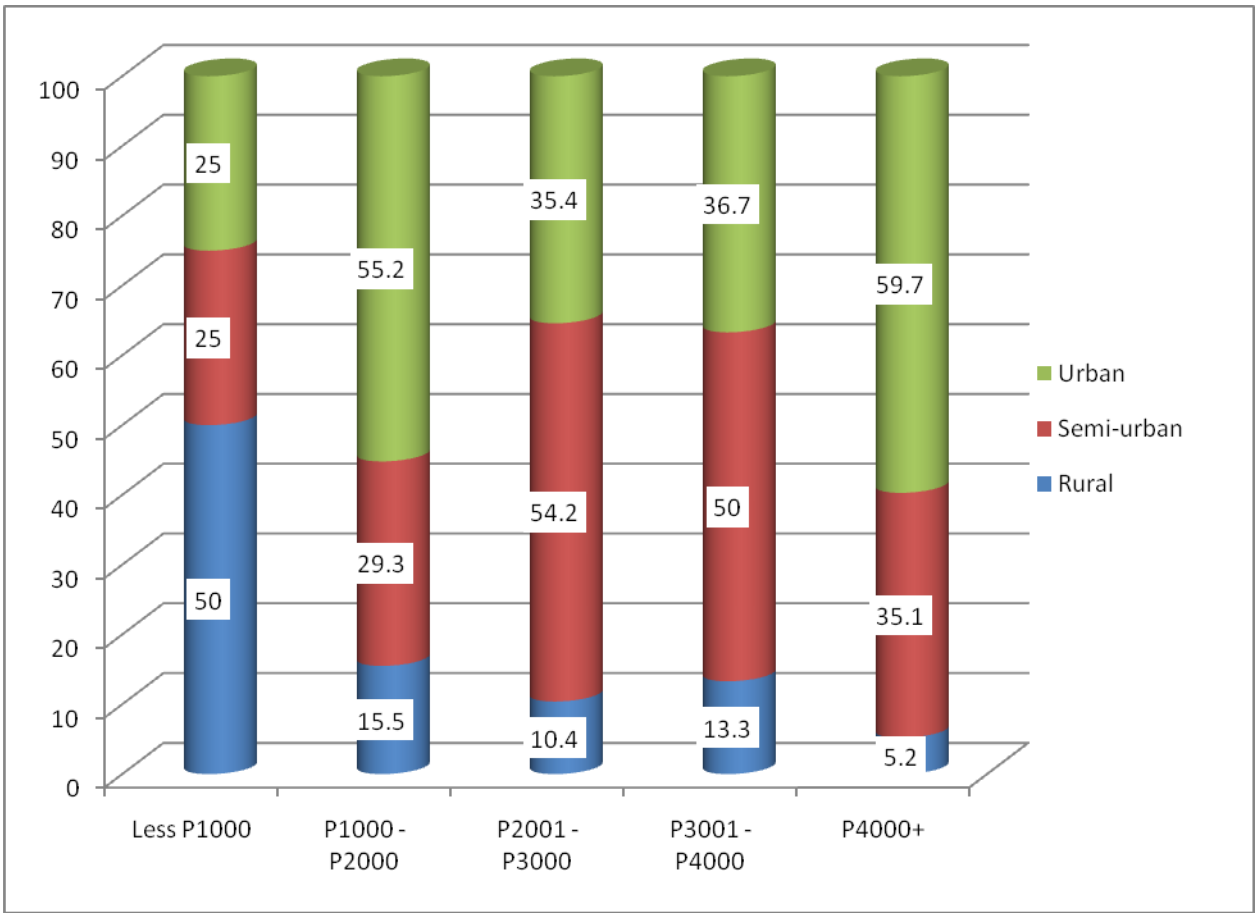

Figure 19: Employment income by geographical location

4.4.1 Summary

Employment income for VTI graduates is varied with the majority of them (31.01%) earning more than P4000/month. A large proportion (46.5%) of those who earned at least P4000/month was employed in the private sector. However, the private sector also has the highest ratio (75%) of graduates who earned less than P1000/month. This is mainly a result of those graduates who are unable to secure employment on the basis of their acquired vocational skills, usually settle for unskilled jobs in the private sector. In addition, the large majority of graduates who were self-employed earned less than P1000/month. Employment income also varied by geographical location, with rural areas offering relatively low wages compared to urban and semi-urban. In relative terms, females earned lower wages than their male counter parts. This could be primarily attributed to their predominant areas of specialization that offered low wages.

4.5 Graduates mobility

This study also intended to establish graduates mobility across area of specialisation, between jobs within the same area of specialisation and reasons for such movement. In doing so, the study established that graduates are still employed in their areas of specialisation in training. Table 10 shows percentages of a cross tabulation of area of specialisation at a Vocational Training Institute against area of specialisation at current employment. The table shows that 84.1% of graduates from the construction trades, craft trades and industrial remain employed in their area of specialisation and similarly, 83.3% of those who specialised in commercial, clerical, business and public administration are employed in their area of specialisation. This shows that there is limited mobility in employment across areas of specialization. This could indicate that the skills obtained from areas of specialization at a VTI are unique and highly specialised. However, Table 10 shows that 50% of ICT graduates were employed in the commercial, clerical, business and public administration specialization. This shows commonality of skills between the two areas of specialization.

Table 10: Area of specialization in training by area of specialization in the current job

			Area of specialization in the current job						
			Construction trades, craft, trade and industrial	Commercial, clerical business and public administration	Agriculture, forestry and fisheries	Health and health related	ICT	Hospitality and tourism	Total
Area of specialization at VTI	Construction trades, craft, trade and industrial	Count	169	15	2	2	1	2	**201**
		% within Area of specialization at VTI	84.1%	7.5%	1.0%	1.0%	.5%	1.0%	**100.0%**
	Commercial, clerical business and public administration	Count	5	40	0	0	1	0	**48**
		% within Area of specialization at VTI	10.4%	83.3%	.0%	.0%	2.1%	.0%	**100.0%**
	Agriculture, forestry and fisheries	Count	0	0	1	0	1	0	**2**
		% within Area of specialization at VTI	.0%	.0%	50.0%	.0%	50.0%	.0%	**100.0%**
	Health and health related	Count	0	0	0	2	0	0	**3**
		% within Area of specialization at VTI	.0%	.0%	.0%	66.7%	.0%	.0%	**100.0%**
	ICT	Count	1	10	0	0	7	0	**19**
		% within Area of specialization at VTI	5.3%	52.6%	.0%	.0%	36.8%	.0%	**100.0%**
	Hospitality and Tourism	Count	0	1	0	0	0	1	**2**
		% within Area of specialization at VTI	.0%	50.0%	.0%	.0%	.0%	50.0%	**100.0%**
Total		**Count**	**175**	**66**	**3**	**4**	**10**	**3**	**275**
		% within Area of specialization at VTI	**63.6%**	**24.0%**	**1.1%**	**1.5%**	**3.6%**	**1.1%**	**100.0%**

Graduate mobility was also measured by the rate at which they change employers. Figure 20 shows that a large proportion of respondents (68.6%) have changed jobs once, while 15.9% have changed employers more than 2 times. This shows graduates mobility between employers is relatively stable. This could also be related to the relative difficulty of finding a job as articulated in section 4.3.1. The reasons for changing are varied as shown in Figure 21. But the most predominant ones are sought for an improved wage (23.63%) and wanting a new challenge (18.13%).

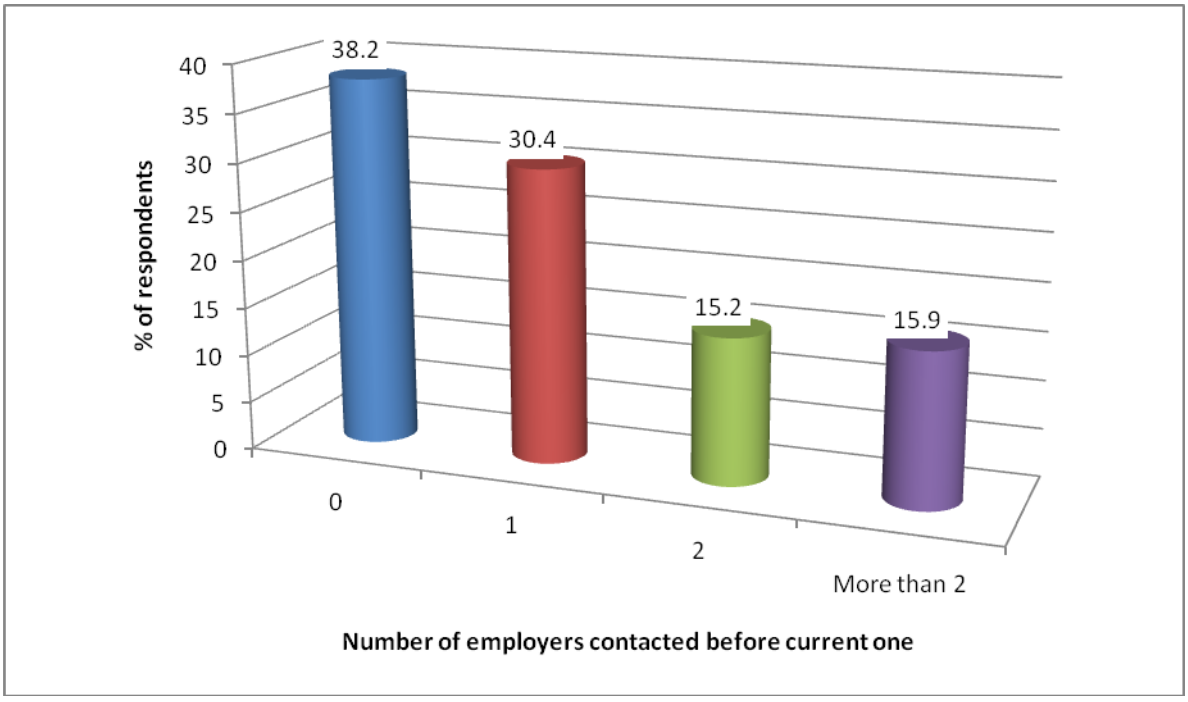

Figure 20: Proportions of number of employers contacted before current one

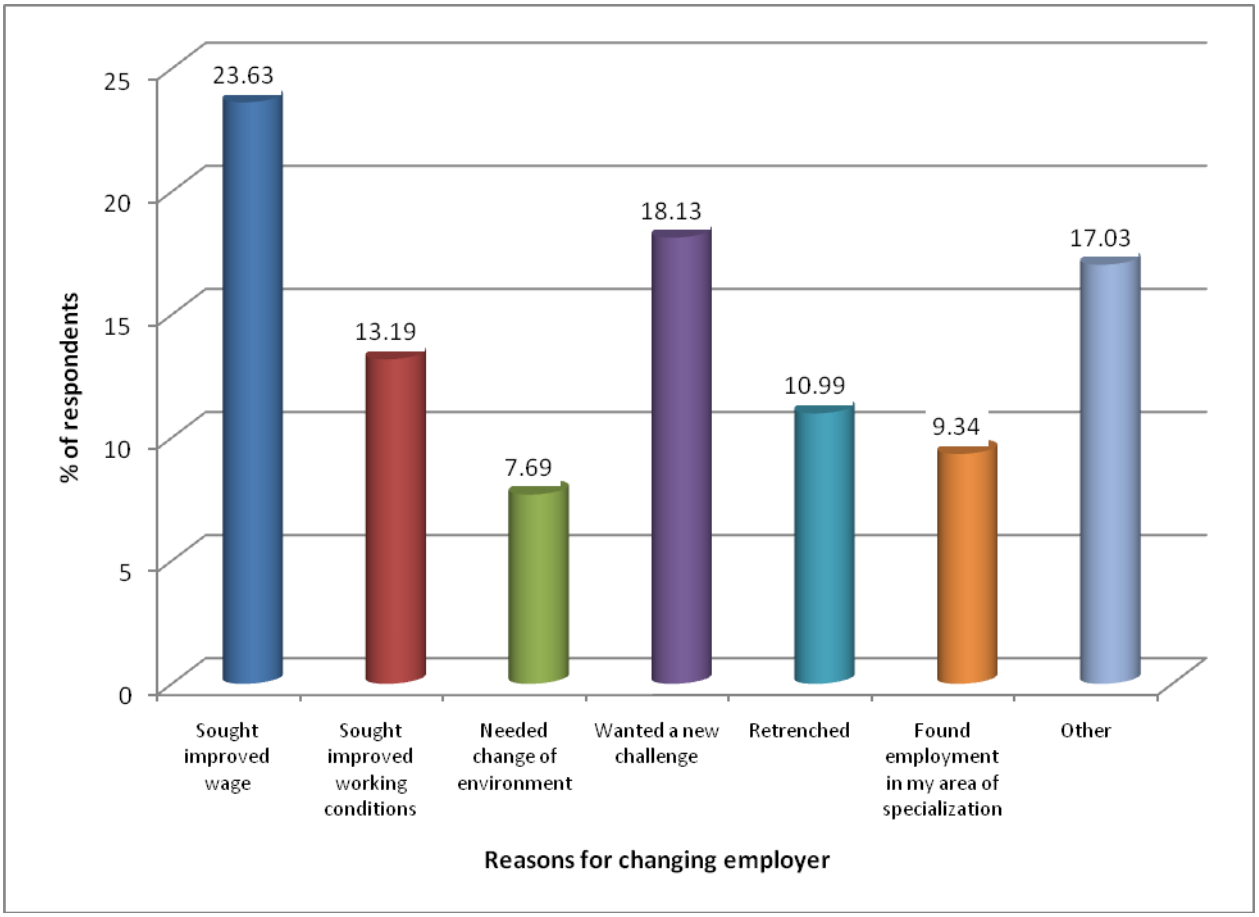

Figure 21: Reasons for changing employers

4.5.1 Summary

There is limited mobility of graduates across areas of specialization, with 84.1% and 83.3% of graduates in the construction trades, craft trades and industrial, and commercial, clerical, business and public administration specializations respectively employed in their vocations. This could indicate the uniqueness of skills acquired in each area of specialization. There is also limited mobility of graduates across employers with 68.6% of the respondents having changed jobs at most once. This could also indicate the relative difficulty of VTI graduates to find employment. Furthermore, graduates indicated that the main difficulty in securing employment was lack of opportunities in their geographical location. This also means that there is limited

spatial mobility by graduates in looking for employment, probably to avoid moving away from the family support network.

4.6 Acquired competencies at Vocational Institutions

Respondents were asked to assess the relevance and adequacy of the skills acquired at a Vocation Training Institution in enabling them to perform the tasks in their current job. Figure 22 shows an assessment of the relevance of skills acquired at a VTI and the ability of the graduates to perform tasks in their current job. The majority of respondents (69.36%) were of the view that the training they received at a VTI was very relevant; while only 14.08% said they were not relevant. This is further corroborated by that 50.18% and 26.43% of respondents agreed and strongly agreed with the statement that their training at a VTI adequately prepared them for work (see Figure 26). The majority of respondents (32.24%) and 11.29% agreed and strongly agreed that they could easily change jobs within their area of specialization (see Figure 27). This could indicate that they have acquired adequate skills that are in demand within their areas of specialization. However, the changing of jobs within their area of specialization cannot be only attributed to skills acquired at VTI. There is a possibility that some skills that were acquired on the job have improved the competency of graduates.

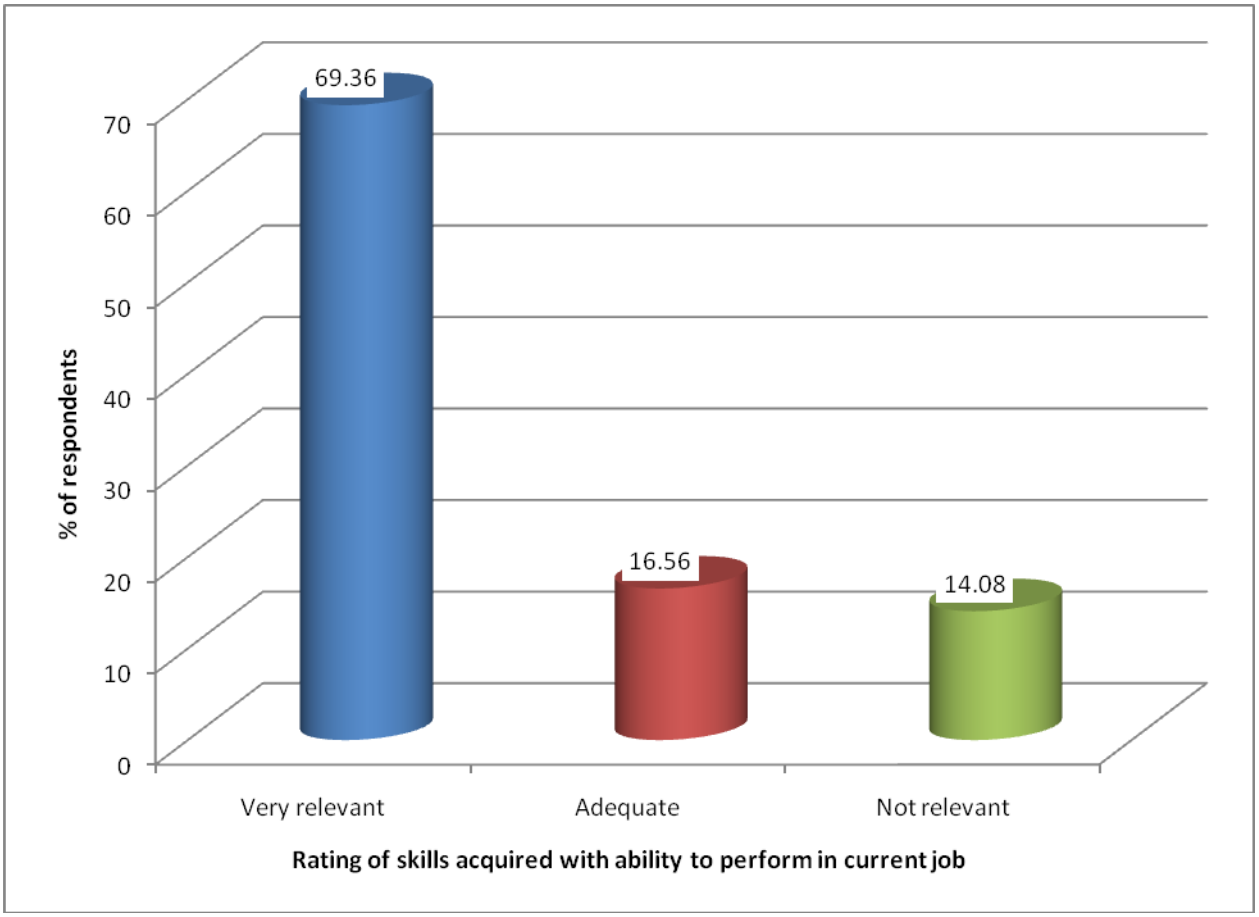

Figure 22: Rating of skills acquired at VTI

The adequacy of skills as articulated by graduates was compared to those perceived by employers. Employers indicated that they employ graduates from vocational institutions to work as skilled and semi-skilled personnel and labourers. The majority of respondents (57.1%) as shown in Figure 23 indicated that they employ skilled personnel. When employers were asked to rate the level of competency of VTI graduates, 65.4% of respondents as shown in Figure 24, rated it as fair. To further buttress the satisfaction with graduate skills and competency, 29.96% and 63% of employers indicated that they strongly agree and agree respectively with the statement that "as employers, they are satisfied with performance of VTI graduates. The assessment with the level of competency of employers tallies with the self-assessment by graduates.

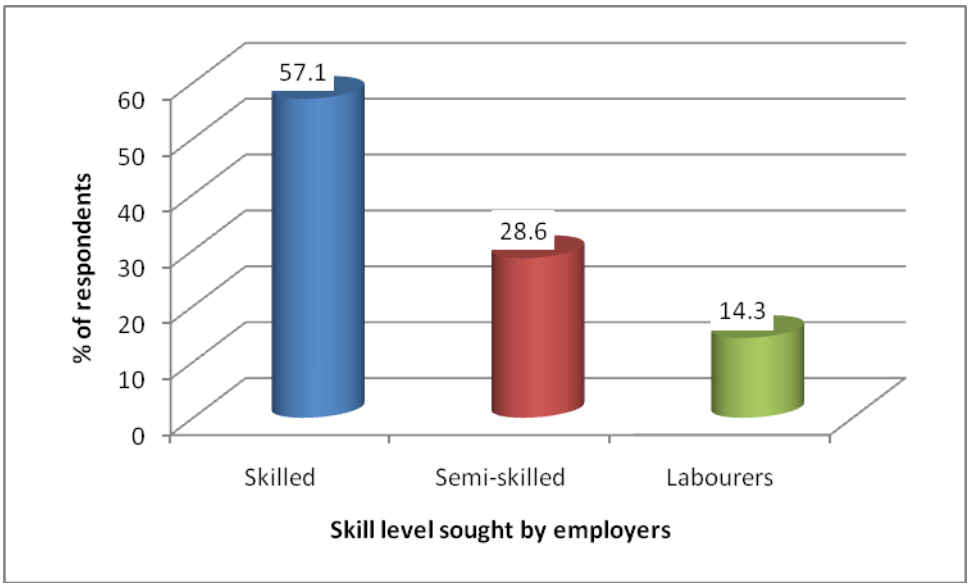

Figure 23: Skill level sought by employers

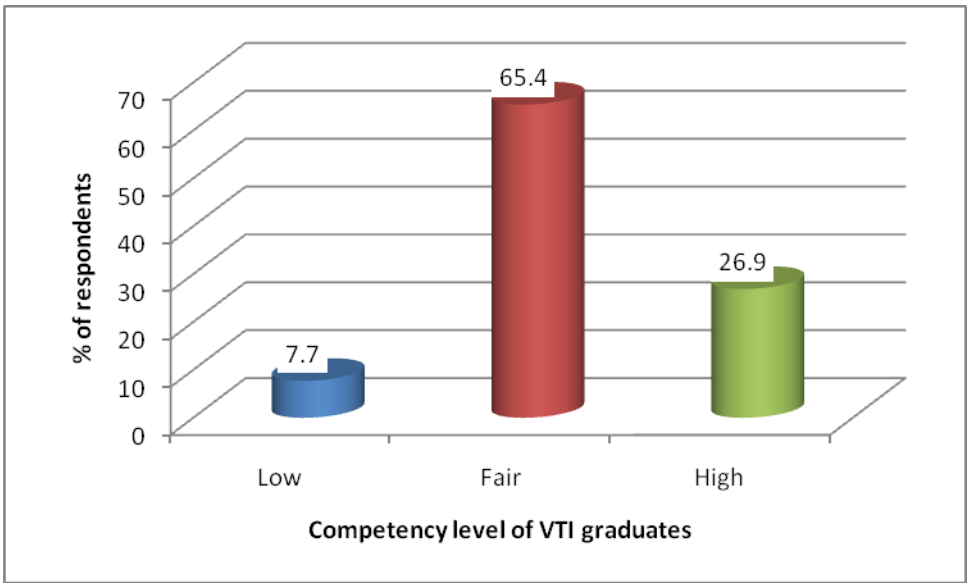

Figure 24: Assessment of competency by employers

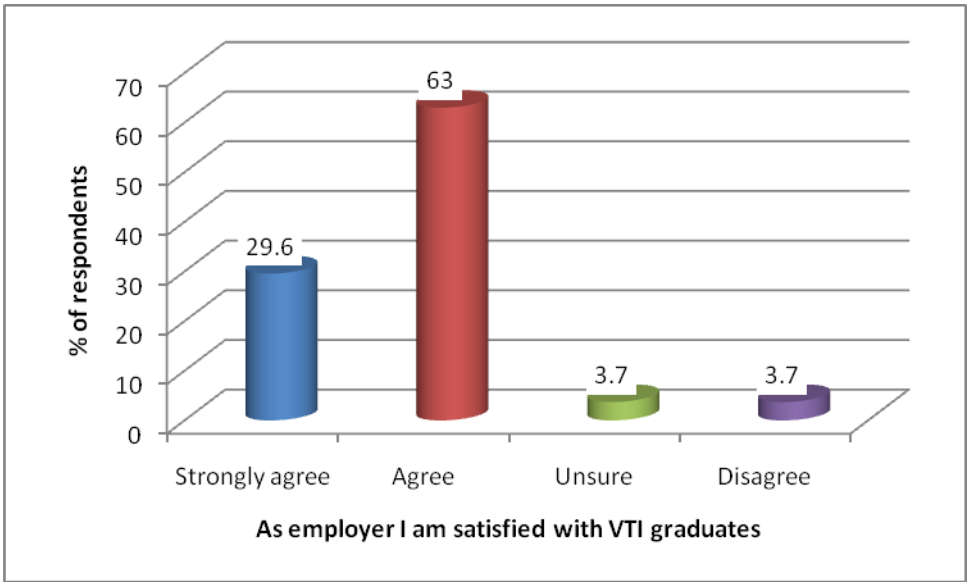

Figure 25: Employer satisfaction with VTI graduates

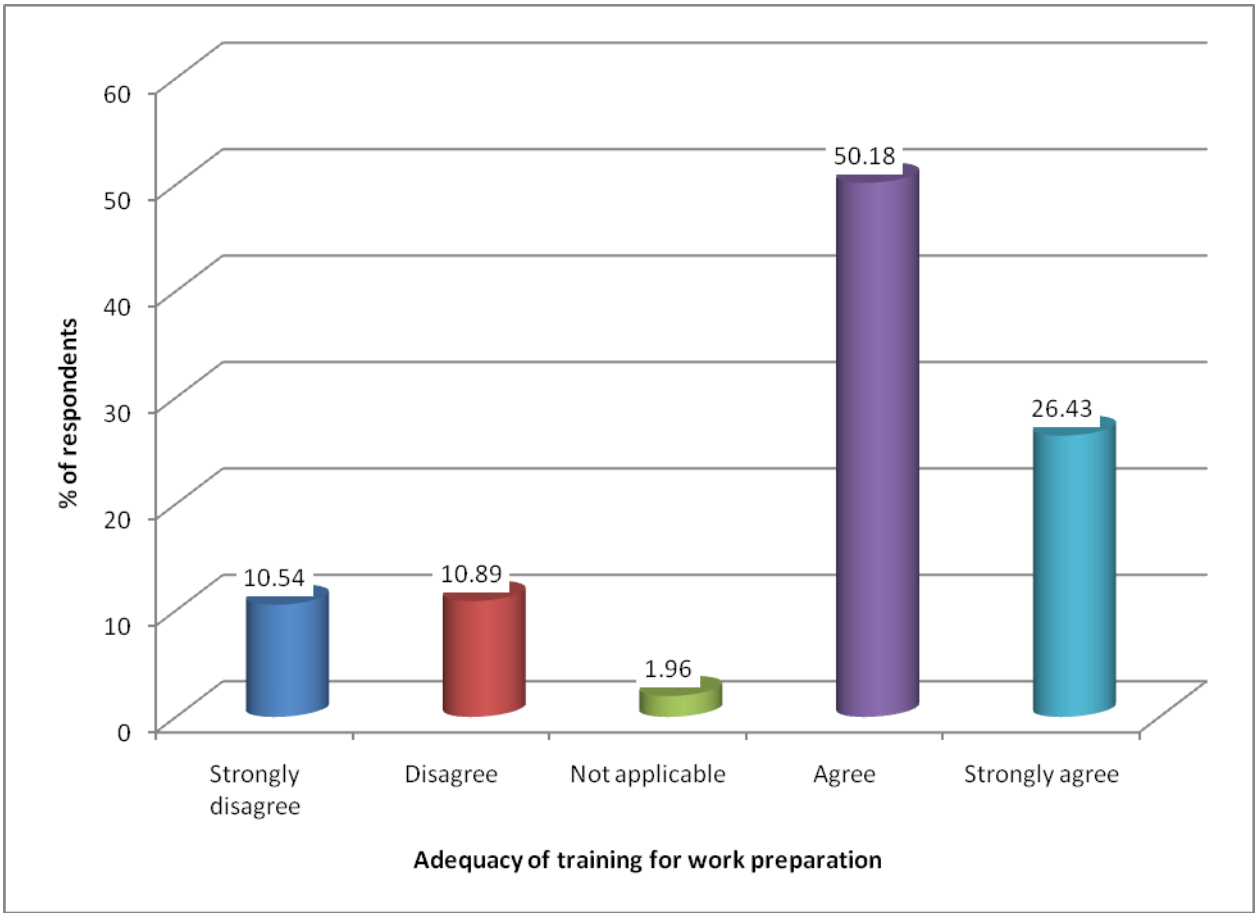

Figure 26: Adequacy of training for work preparation

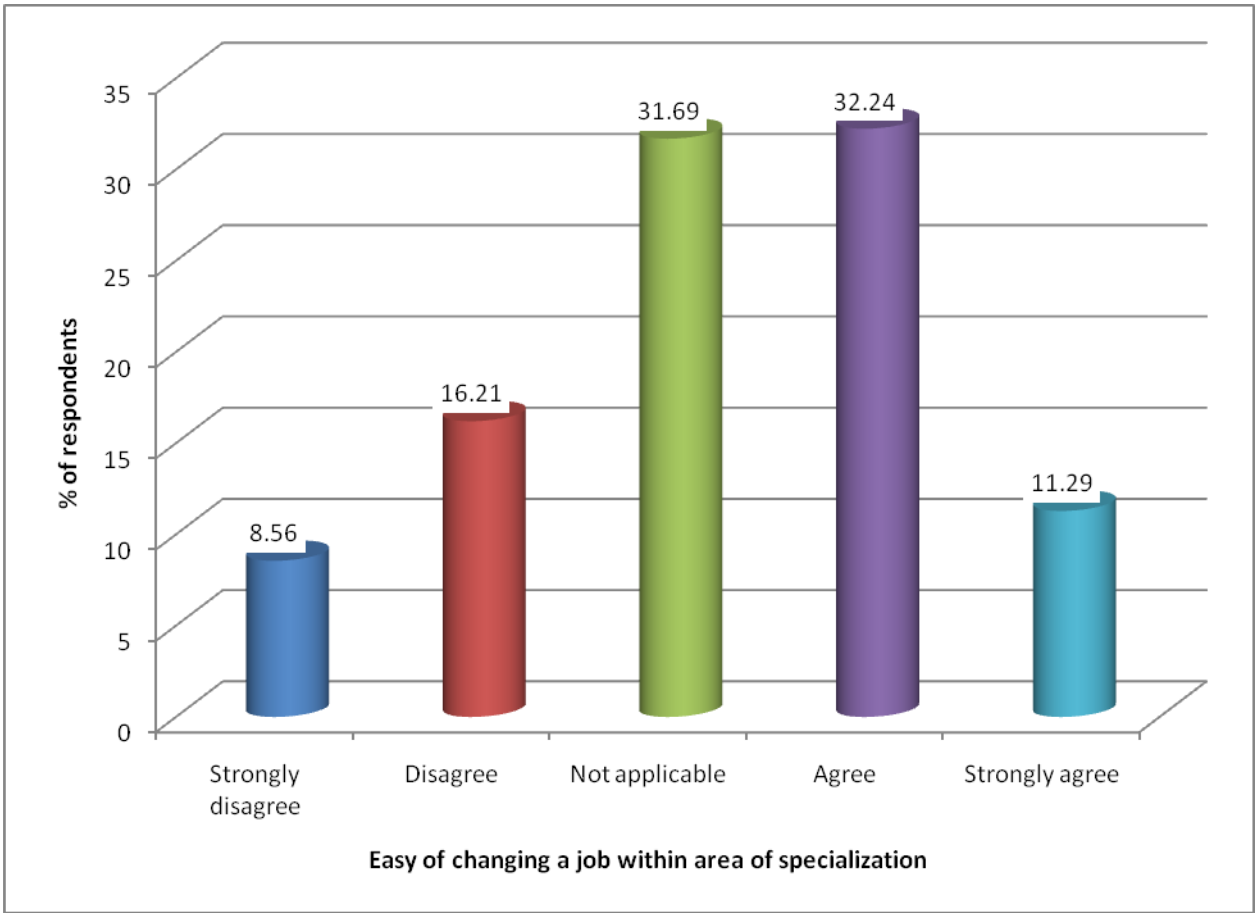

Figure 27: Graduates easiness to change jobs within specialization

Respondents also rated their ability to be trained on the job highly, with 52.5% and 39.2% agreeing and strongly agreeing with the statement that they could easily be trained on the job as shown in Table 11. This shows the value that graduates place on the quality of skills they acquired at Vocational Training Institutions. Respondents were largely of the view that their employers were satisfied with their level of knowledge and skill, with 40.8% and 28.2% agreeing and strongly agreeing respectively that their employers are satisfied with their level of knowledge and skill.

Table 11: Easiness to be trained on the job

I can be easily trained on the job to improve my skill level.		Frequency	Percent
	Strongly disagree	10	1.8
	Disagree	17	3.0
	Not applicable	18	3.2
	Agree	293	52.5
	Strongly agree	219	39.2
	Total	558	100.0

Table 12: Employer satisfaction

My employer is satisfied with my level of knowledge and skill		Frequency	Percent
	Strongly disagree	9	1.6
	Disagree	29	5.2
	Not applicable	157	28.2
	Agree	227	40.8
	Strongly agree	134	24.1
	Total	556	100.0

4.6.1 Summary

Respondents rated the skills they acquired from vocational skills highly. They are generally of the view that the skills acquired at VTIs are adequate to enable them to perform the tasks in their work adequately to the satisfaction of their employers. Graduates are also of the view that they could easily be trained in the job, as further testimony to the adequacy of the level of knowledge and skill they attained at Vocational Training Institutions. The views of graduate respondents were in tandem with those of employers who rated the skills of graduates as fair.

4.7 Respondents' critique and proposals concerning vocational training instruction

The quality of an educational programme and the value of skills acquired from such a programme could be assessed by its graduates rating it highly to an extent that they would recommend it to a friend or family member. Respondents were asked to appraise the programme they went through at Vocational Training Institutions in terms of content, instructional quality, duration and resources. Suggestions for improvement were evenly distributed across programme content, practical component, theory component, resources (laboratory manuals, books, and equipment), instruction quality and programme duration as shown in Appendix 4. However, at least a quarter of the respondents wanted 100% improvement in laboratories and textbooks. This shows that the graduates were generally satisfied with the different constituents of their training including programme content. This supports the findings in section 4.6 that the graduates rated the skills they acquired from Vocational Institutions highly. When graduates were asked if they would recommend the programme they went through to a friend or family member, an overwhelming majority (89.41%) said they would (see Figure 28). Even those who were not employed would strongly recommend the programme they went through to their contemporaries, with 87.4% of them indicating that they will recommend the programme they went through to others. This further show the high premium graduates placed on the programmes they went through.

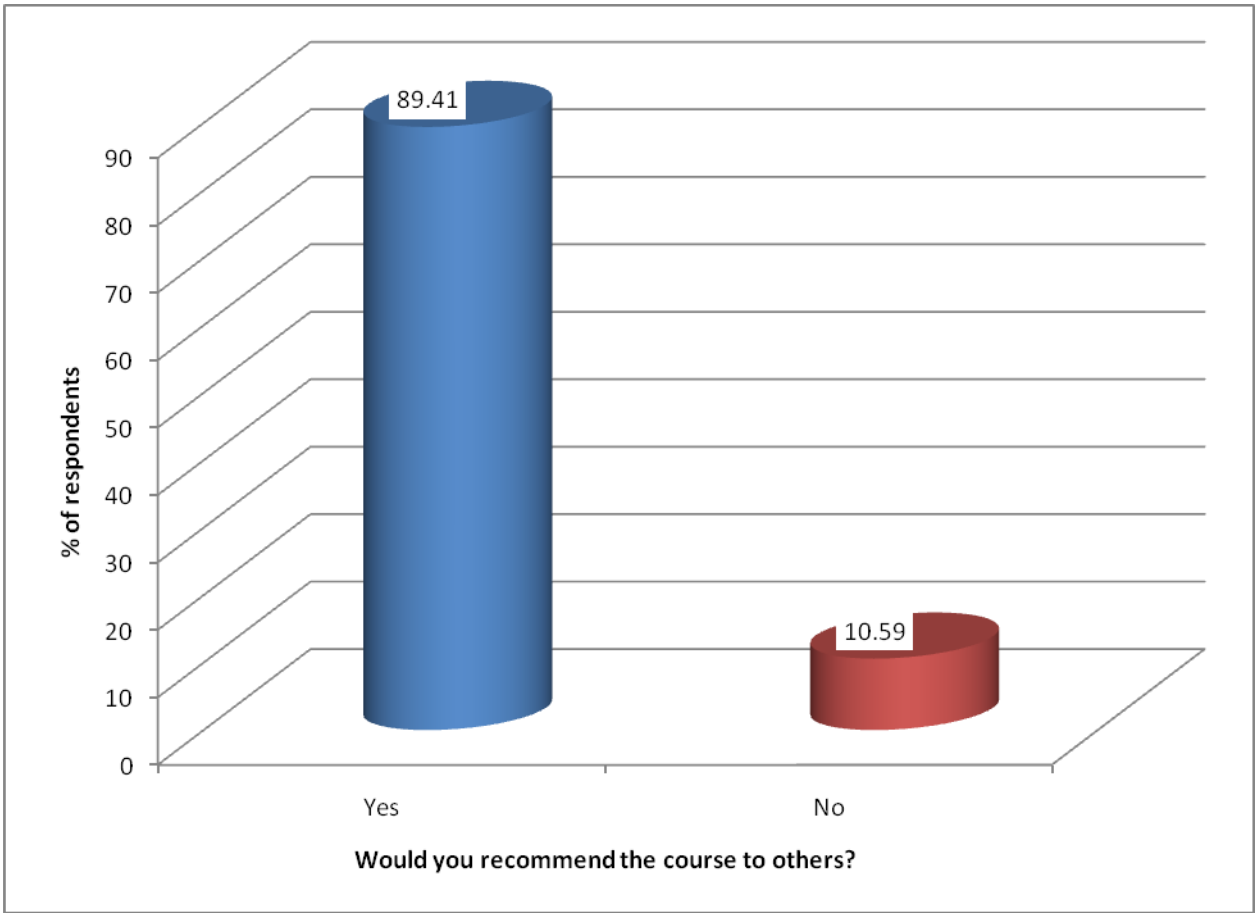

Figure 28: Recommendation of vocational training programme to others

4.7.1 Summary

Graduates rated the programmes they were through highly in terms of content and instructional quality. They only suggest minimal improvements. The overwhelming majority of the respondents (89.41%) indicated that they would recommend the programmes they went through to others.

4.8 Perceptions of vocational skills acquisition from trainers

Key informant interviews with Vocational Institutions tutors were mainly intended to triangulate information obtained from graduate respondents. In particular, the interviews sought to establish the perceptions of tutors on employability of graduates, skill level of graduates and quality of vocational training. When tutors were asked "if graduates from vocational institutions got employment on graduation", the majority of them, 73.27% of respondents as shown in Figure 29 answered in the affirmative. However, this is not supported by employment status of graduates. This suggests that there is a knowledge gap on employment outcomes of graduates by their trainers. This knowledge gap may constraint the necessary improvement in vocation education, and may necessitate development of the necessary linkages for feedback between institutions and graduates.

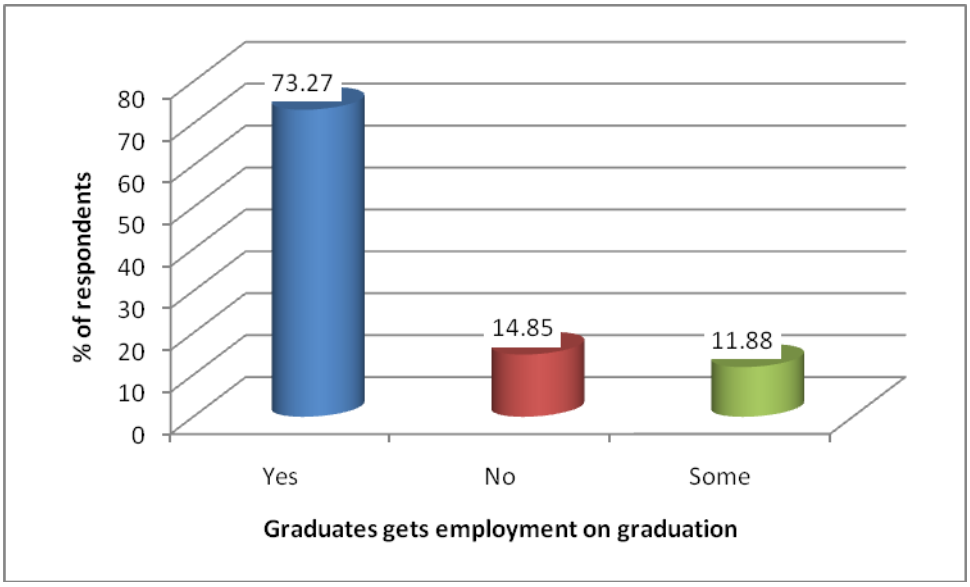

Figure 29: Tutors' perceptions on graduate employment on completion

Tutors rated the skills acquired at vocational institutions highly. When tutors were asked "whether would employ graduates from their institutions if they were employers", an overwhelming majority of them, 94.6% responded positively, as shown in Figure 30. Among these, 83.70% of them attributed their positive response to the competitive quality of practical

skills acquired by VTI graduates. Furthermore, tutors were of the view that employers are satisfied with the level of skill of VTI graduates, with 88.24% of them supporting this view as shown in Figure 31. This supports the adequacy of skills acquired at VTI as suggested by graduates.

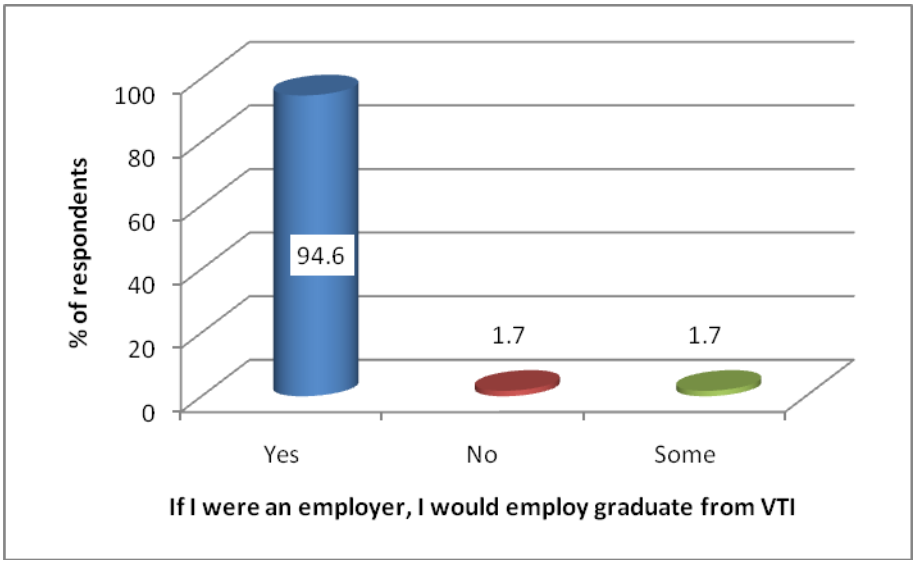

Figure 30: Employability of graduates from VTIs

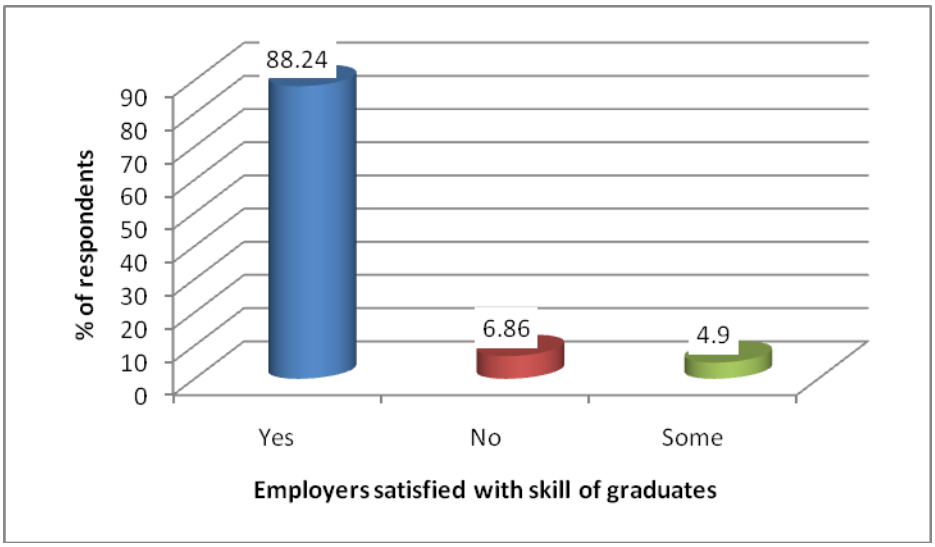

Figure 31: Perceptions of graduate skill by tutors

Tutors also felt strongly that vocational training at their institutions adequately equipped graduates with the skills to perform in the work environment, with 79.63% supporting this view as shown in Figures 32. Even though they expressed satisfaction with the skill level, they suggested improvements in field attachments, modernization of curriculum and improvement of teaching resources. Suggestion for improvement of field attachments could indicate that there is either not enough collaborative effort between institutions and employers or there is simply not enough employers to provide internship to learners while still training, hence pointing to skills mismatch. To improve this, it would require a stronger collaborative effort between employers, institutions, employer associations and vocational training coordinators.

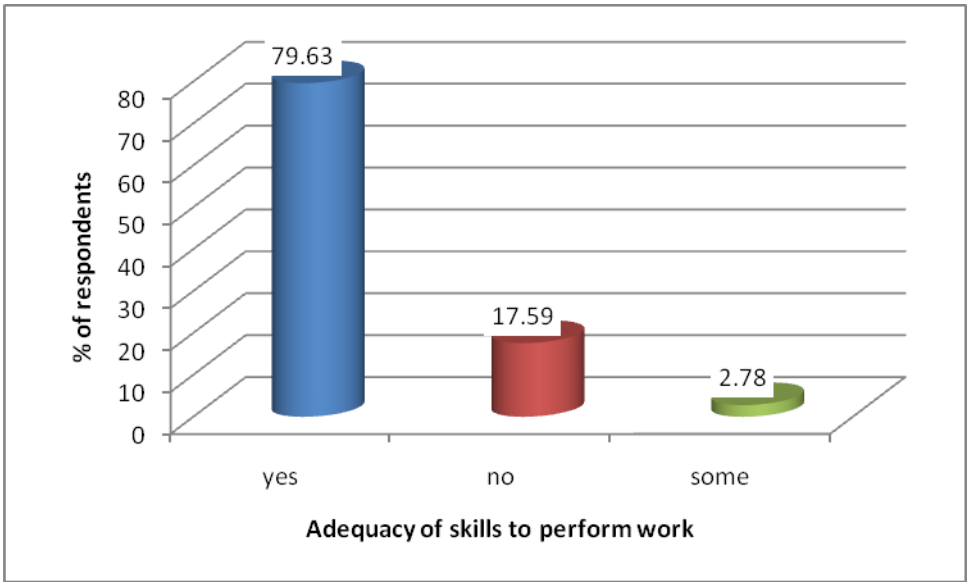

Figure 32: Perception of tutors on the adequacy of graduate skills

SUMMARY OF KEY FINDINGS AND RECOMMENDATIONS

5.0 SUMMARY OF KEY FINDINGS AND RECOMMENDATIONS

The key findings are presented as per the main study objectives as detailed below:

5.1 Methodological Issues

5.1.1 Key findings

i) Some institutions did not keep databases for their graduates. In cases where databases existed, they were not up to date. It was also established that databases kept by District Labour offices were more up to date.

ii) This study was preceded by other tracer studies of BOTA accredited institutions of CITF and DVET, that targeted the same category of respondents, hence some signs of interview fatigue and low response rate

5.1.2 Recommendations

i) It is recommended that institutions should keep databases of their graduation on completion and work to establish alumni associations that could assist in updating the database. In updating databases, BOTA should liaise with District Labour offices. Section 7 deals with data capture in more detail.

ii) In order to minimize possibilities of interview fatigue in future tracer studies, it is recommended that BOTA accredited institutions which conduct tracer studies should cooperate and share output of such studies with BOTA.

5.2 Employment outcomes and occupation of VT graduates

5.2.1 Key findings

i) The employment rate among respondents was 50.45%. The majority of these graduates (36.87%) were employed fulltime and the rest were employed on a temporary basis or part-time. The proportion of graduates respondents unemployed and looking for a job was relatively high, standing at 49.55%. Unemployment was more prevalent among females, while employment was high among males. The construction trades, craft trades and industrial area of specialization recorded the highest proportion of

both the unemployed and those in fulltime employment. Fulltime employment was found to be high among graduates who attained the National Craft Certificate. The majority of these graduates were employed in the private sector. This could suggest that the construction trades, craft trades and industrial specialization are over-subscribed because of their earlier promise in employment opportunities. But employment opportunities promise in the construction trades, craft trades and industrial specialization appears tangible if one has acquired an appropriate level of skill required by employers. It appears employers are mainly interested in graduates who have attained NCC qualification. Apart from that, the high employment rate in the construction trades, craft trades and industrial specialization could explain the high unemployment rate among female graduates who would tend to gravitate to much less physically demanding vocations such as commercial, clerical, business and business administration specialism.

ii) Employment income for VTI graduates is varied with the majority of them (31.01%) earning more than P4000/month. A large proportion (46.5%) of those who earned at least P4000/month was employed in the private sector. However, the private sector also has the highest ratio (75%) of graduates who earned less than P1000/month. This is mainly a result of that those graduates who are unable to secure employment on the basis of their acquired vocational skills, usually settle for unskilled jobs in the private sector. In addition, the large majority of graduates who were self-employed earned less than P1000/month. In relative terms, females earned lower wages than their male counter parts. This could be primarily attributed to their predominant areas of specialization that offered low wages.

iii) It was found that of the total 535 graduates who indicated their employment status by area of specialization the majority of them (56%) who were unemployed and looking for employment specialized in the construction trades, craft trades and industrial area. Similarly, the majority of respondents who were employed fulltime (71.9%), graduated in the construction trades, craft trades and industrial specialization. The same pattern of unemployment and employment status is reflected in the commercial, clerical, business and public administration specialization. This could be indicative of that at some point in the development of vocational training; these areas of specialisation

were attractive because of the available job opportunities. However, the areas of specialisation have since because oversubscribed.

5.2.2 Recommendations

i) The high rate of unemployment could be a pointer to skills mismatch with the vocational sector. It is highly recommended that there should be an audit of skills required by the employment sector and VTI programmes and enrolment rates be tailored to match the required skills.

ii) The recently launched labour market observatory will assist in collecting information and forecasting the employment situation for vocational training graduates.

iii) Wages are related to supply and demand of a certain skill. A fair wage, could probably be achieved by balance of supply and demand of skills, hence a further need for a skills audit.

5.3 Occupational mobility of the VT graduates and the means by which graduates acquire employment

5.3.1 Key findings

i) There is limited mobility of graduates across areas of specialization, with 84.1% and 83.3% of graduates in the construction trades, craft trades and industrial, and commercial, clerical, business and public administration specializations respectively employed in their vocations. This could indicate the uniqueness of skills acquired in each area of specialization. There is also limited mobility of graduates across employers with 68.6% of the respondents having changed jobs at most once. This could also indicate the relative difficulty of VTI graduates to finding employment. Furthermore, graduates indicated that the main difficulty in securing employment was lack of opportunities in their geographical location. This also means that there is limited spatial mobility by graduates in looking for employment, probably to avoid moving away from the family support network.

ii) The study found that the predominant method used by graduates in finding employment was responding to media advertisements (39.9%). It was also found that it is generally difficult for graduates to get a job as reflected by the high unemployment rate, with 48.7% of the respondents indicating that they have difficulties getting a job. The main difficulty in getting a job was identified as limited job opportunities in the geographical area where the graduate resided, which was identified by 32.57% of the respondents However, where jobs were available, it took relatively little effort to secure one, with 64.34% of the respondents making at most 5 contacts with potential employers before securing a job usually within the first year of graduation.

5.3.2 Recommendations

i) There is limited mobility of graduates across areas of specialization. This could be indicative of that the programmes are highly specialized. There may be a need to offer programmes to equip graduates with multiple skills.

ii) To further enhance graduate employment, employers and employer organization should form linkages with VTI institutions that are intended to recruit graduates upon completion of their studies.

iii) Institutions should also conduct career fairs where they could sensitize the employers of the skills offered by their graduates

5.4 The relevance and effectiveness of learning in VT in relation to employability (Skills Mismatch)

5.4.1 Key findings

i) The employment rate among respondents was 50.45%. The majority of these graduates (36.87%) were employed fulltime and the rest were employed on a temporary basis or part-time. The proportion of graduates respondents unemployed and looking for a job was relatively high, standing at 49.55%. It was found that of the total 535 graduates who indicated their employment status by area of specialization the majority of them (56%) who were unemployed and looking for employment

specialized in the construction trades, craft trades and industrial area. Similarly, the majority of respondents who were employed fulltime (71.9%), graduated in the construction trades, craft trades and industrial specialization. This could be indicative of skills mismatch between training and industry requirements.

ii) Respondents rated the skills they acquired from vocational skills highly. They are generally of the view that the skills acquired at VTIs are adequate to enable them to perform the tasks in their work adequately to the satisfaction of their employers. Graduates are also of the view that they could easily be trained in the job, as further testimony to the adequacy of the level of knowledge and skill they attained at Vocational Training Institutions. The views of graduate respondents were in tandem with those of employers who rated the skills of graduates as fair.

iii) Graduates rated the programmes they went through highly in terms of content and instructional quality. They only suggest minimal improvements. The overwhelming majority of the respondents (89.41%) indicated that they would recommend the programmes they went through to others.

5.4.2 Recommendations

i) It is highly recommended that there should be an audit of skills required by the employment sector and VTI programmes and enrolment rates be tailored to match the required skills.

ii) The recently launched labour market observatory will assist in collecting information and forecasting the employment situation for vocational training graduates.

iii) The level of the VT programmes appears to be adequate in terms of the skills they provide. Employer, Trainers and Graduates are satisfied with the levels of skills acquired. The scope of the VT programmes should be expanded to expose the graduates to more skills but maintaining the standards.

5.5 Recommendations for further research

i) This study established that female graduates are the most hard hit by unemployment, primarily because there appears to be limited employment opportunities in their chosen areas of specialization. However, it also appears in areas of specialization where they competed fairly in school with their male counterparts such as in the construction trades, crafts trades and industrial specialization, they still relatively have difficulties in finding employment. This scenario needs to be interrogated further by additional research.

ii) Furthermore, females are traditionally the disadvantaged members of Botswana society, further research is needed to establish how other disadvantaged members of society such as the disabled graduates fair in the job market.

GRADUATES DATABASE

7.0 GRADUATE DATABASE

7.1 Framework for graduate database

Databases for graduates are vital for providing the linkages between vocational training and skills required by the industry. Figure 33 provides a framework and basis for data capture for gradates of vocational institutions and its possible use.

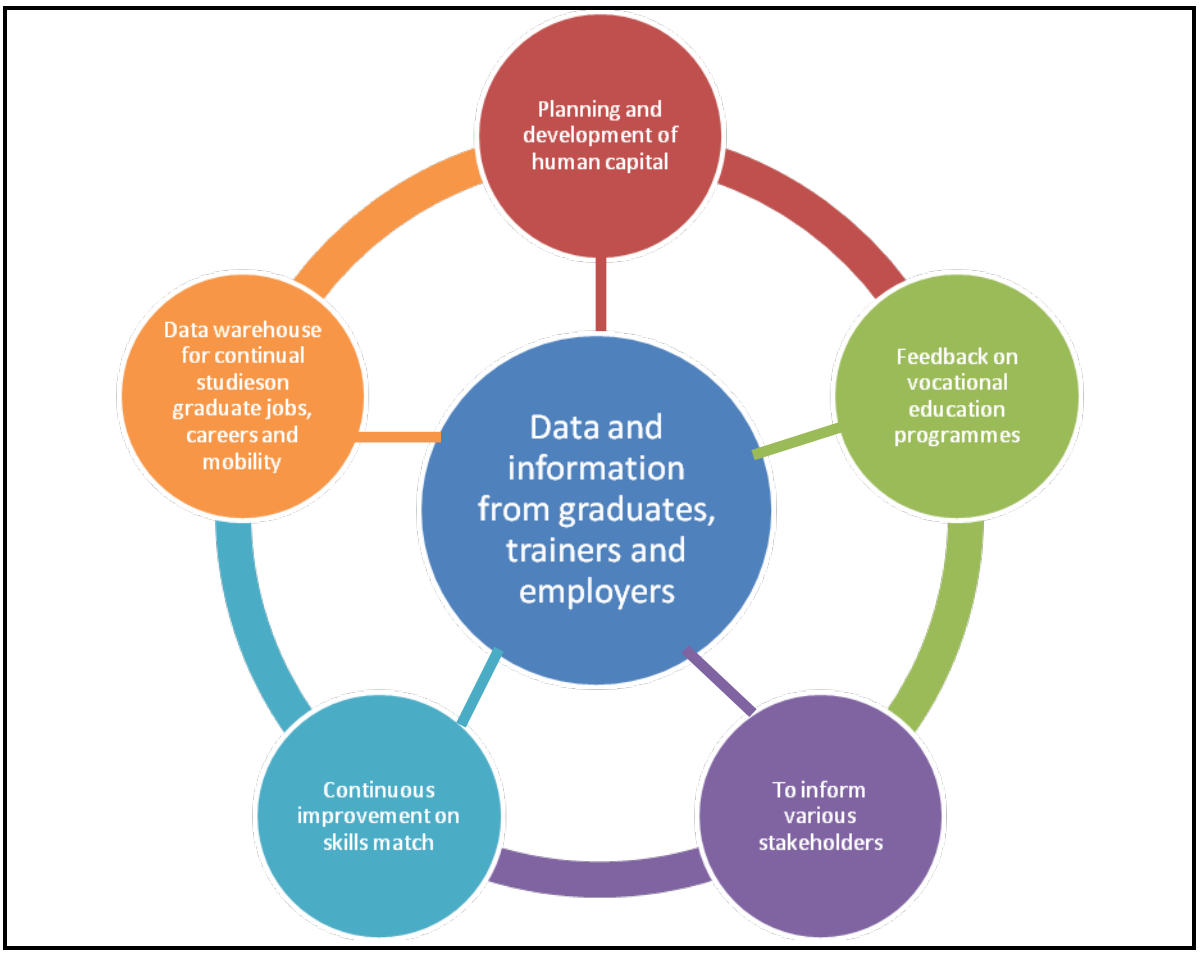

Figure 33: Data capture framework adapted from Abu Bakar et al (2009)

7.2 Purpose and users of the database

The purpose and users of the database determine software requirements and the capacity of the host to maintain it. In this case the data base will be used for:

- Recording personal details of graduates and employment status;
- Retrieval for analysis and generating reports for planning and information for various stakeholders;
- Tracing graduates and assess the impact of training;
- Serving as a point of contact between graduates and employers.

The database should have an administrator who will maintain and manipulate it as and when is required.

7.3 Data acquisition

The main data source for graduates input into the database should be vocational institutions. All institutions training should submit graduates names and contacts of graduates to a central repository at BOTA. BOTA should also flight on a bi-annual basis a data capture instrument on their website and on print media that would collect information on VTI alumni to update the graduate database.

7.4 Database options and suggestions

A Database Management System is a software program that enables the creation and management of databases. Generally, these databases will be more complex than the text file/spreadsheet. In fact, most of today's database systems are referred to as a Relational Database Management System, because of their ability to store related data across multiple tables.

There are two types of databases namely Desktop Databases and Server Databases. Desktop Databases earn their name by virtue of the fact that they are designed to run on desktop computer. They offer an inexpensive, simple solution to many less complex data storage and manipulation requirements. Examples of Desktop databases are Microsoft Access, Filemaker

Pro, etc. The desktop databases are not suitable for BOTA database requirements. Server databases, offer organization the ability to manage large amounts of data efficiently and in a manner that enables many users to access and update the data simultaneously. The benefits offered by server databases are flexibility, powerful performance and scalability. Examples of Server databases are Microsoft SQL Server, Oracle and IBM DB2. Server databases are suitable for BOTA database requirement.

The most commonly used Server databases are Microsoft SQL Server 2000 and Oracle. The hardware requirements for these databases are compared below in Table 13. Microsoft SQL Server 2000 is generally accepted as easier to install and manage, but can only support up to 50 simultaneous access at a time. For more than 50 simultaneous accesses, there is high degradation in performance. Oracle 9i can handle more simultaneous accesses and has support for extended database features. It is the market leader in large-scale database applications.

Table 13: Hardware requirements of Oracle 9i and Microsoft SQL Server 2000

Hardware requirements	Oracle 9i	Microsoft SQL Server 2008
	Intel or compatible platforms	***Intel or compatible platforms***
Processor	Pentium 166 MHz processor or higher	Pentium 166 GHz processor or higher
RAM	256 MB	128 MB
Hard Drive	140 MB (System Drive) plus 4.5 GB (FAT) or 2.8 GB (NTFS)	270 MB (Full Installation)
	Unix Systems	
RAM	512 MB	
Hard Drive	4.5 GB	
Platform	Supports all known platforms	Only Windows-based

		platforms
Maximum Simultaneous Access	More 50	Up 50

From the comparison on Table 14 it is clear that Oracle 9i performs better than Microsoft SQL server 2000. Taking into consideration that BOTA would require a substantial number of students to access the database to update their profiles every six months, a large number of simultaneous accesses would be required. It is from the superiority of Oracle 9i and the BOTA requirements that Oracle 9i Database Management System is strongly recommended.

Table 14: Comparison between Oracle 9i and Microsoft SQL server 2000

	Oracle 9i	Microsoft SQL server 2000
Technical	✓	✓
Economic		✓
Operational	✓	
Performance	✓	
Availability	✓	✓
Security	✓	

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APPENDICES

APPENDIX 1: CLUSTERS OF AREAS OF SPECIALISATION AND PROGRAMS

Specialisation *	**Programs**	**% of learners in specialisation**
Construction trades, Craft, trade and industrial	• Welding and fabrication • Fitting and machinery • Heavy plant • Auto mechanic • Plumbing • Bricklaying and plastering • Electrical Installations • Carpentry and joinery • Dress making	48
Commercial, clerical, business and public administration	• Marketing • Law • Human resource management • Bookkeeping • Receptionist • Secretarial studies • Public relations • Office management	21
Agricultures, forestry and fisheries	• Agriculture • Livestock farming • Horticulture • Forestry	5

	• Fisheries	
Health and Health related	• Beautician • Hair dressing • First aid • Life support	8
ICT	• Database management • Information technology • Data entry • Archives Administration and records • Network technology	11
Hospitality and Tourism	• Tourism • Wildlife management and conservation • Hospitality • Professional guide • Lodge management • Chef	7
TOTAL		**100**

*Adapted from BOTA (2006)

APPENDIX 2: ENROLMENT OF LEARNERS BY DISTRICT

District	Enrolled learners in 2005 (%)
Gaborone	49
Francistown	4
Central	12
Boteti	1
Southern	9
South East	4
Selebi Phikwe	4
North East	5
North West	2
Lobatse	2
Kweneng	4
Kgatleng	1
Kgalagadi	1
Jwaneng	1
Ghanzi	1
TOTAL	**100**

Source: BOTA (2006)

APPENDIX 3: TARGET SAMPLE SIZE BY AREA OF SPECIALISATION AND GEOGRAPHICAL LOCATION

District	Areas of specialisation	Sample size**	Offering institutions
Gaborone	Construction trades, Craft, trade and industrial	0.48x0.49x1080 =**254**	CITF, Auto Trades, Madirelo, Roads Training, Tshwaragano Brigade, Gaborone Technical College
	Commercial, clerical, business and public administration	0.21x0.49x1080 =**112**	Damelin, Self-Cash, GIPS, Ba-Isago, ABM, Realic, IDM, Decatic, Gaborone Universal School of Law
	Agricultures, forestry and fisheries	0.05x0.49x1080 =**26**	Tshwaragano Brigade
	Health and Health related	0.08x0.49x1080 =**42**	Boitekanelo Training Institute, IDM, Rescue One, Bontle le Botsogo
	ICT	0.11x049x1080 =**58**	Gaborone Technical College, Ba-Isago, NIIT, Auto Trades
	Hospitality and Tourism	0.07x0.49x1080 =**37**	Gaborone Technical College, ABM, Gaborone Universal College of Law
Francistown	Construction trades, Craft, trade and industrial	0.48x0.04x1080 = **21**	-
	Commercial, clerical, business and public administration	0.21x0.04x1080 =**9**	Ba-Isago
	Agricultures, forestry and fisheries	0.05x0.04x1080 =**2**	-
	Health and Health related	0.08x0.04x1080 =**3**	-
	ICT	0.11x0.04x1080 =**5**	NIIT, Ba-Isago

	Hospitality and Tourism	0.07x0.04x1080 =**3**	-
Central	Construction trades, Craft, trade and industrial	0.48x0.12x1080 = **62**	Palapye Technical College, Palapye Development trust, Madiba Brigade, Serowe Brigade, Bobonong Brigade
	Commercial, clerical, business and public administration	0.21x0.12x1080 =**27**	Royal Professional College (Palapye), Palapye Technical College, Palapye Development Trust
	Agricultures, forestry and fisheries	0.05x0.12x1080 =**6**	Palapye Development Trust, Serowe Brigade
	Health and Health related	0.08x0.12x1080 =**10**	Madiba Brigade
	ICT	0.11x0.12x1080 =**14**	Royal Professional College, Palapye Development Trust
	Hospitality and Tourism	0.07x0.12x1080 =**9**	-
Boteti	Construction trades, Craft, trade and industrial	0.48x0.01x1080 =**5**	Boteti Brigade, Orapa Technical College
	Commercial, clerical, business and public administration	0.21x0.01x1080 =**2**	-
	Agricultures, forestry and fisheries	0.05x0.01x1080 =**1**	-
	Health and Health related	0.08x0.01x1080 =**1**	-
	ICT	0.11x0.01x1080 =**1**	-
	Hospitality and Tourism	0.07x0.01x1080 =**1**	-
Southern	Construction trades, Craft, trade and industrial	0.48x0.09x1080 =**47**	Barolong Vocational Training Centre, Kanye Brigade, Moshupa Brigade
	Commercial, clerical, business and public administration	0.21x0.09x1080 =**20**	Moshupa Brigade
	Agricultures, forestry and fisheries	0.05x0.09x1080 =**5**	Ramatea Vocational School, Kanye Brigade, Barolong Vocational Training Centre

	Health and Health related	0.08x0.09x1080 =**8**	-
	ICT	0.11x0.09x1080 =**11**	-
	Hospitality and Tourism	0.07x0.09x1080 =**7**	-
South East	Construction trades, Craft, trade and industrial	0.48x0.04x1080 =**21**	Tswelelopele Brigade, Tlokweng Rural Development Centre
	Commercial, clerical, business and public administration	0.21x0.04x1080 =**9**	Tswelelopele Brigade, Tlokweng Rural Development Centre
	Agricultures, forestry and fisheries	0.05x0.04x1080 =**2**	-
	Health and Health related	0.08x0.04x1080 =**3**	Tswelelopele Brigade
	ICT	0.11x0.04x1080 =**5**	Tlokweng Rural Development Centre
	Hospitality and Tourism	0.07x0.04x1080 =**3**	-
Selebi Phikwe	Construction trades, Craft, trade and industrial	0.48x0.04x1080 =**21**	Selibe Phikwe Technical College
	Commercial, clerical, business and public administration	0.21x0.04x1080 =**9**	Selibe Phikwe Technical College
	Agricultures, forestry and fisheries	0.05x0.04x1080 =**2**	-
	Health and Health related	0.08x0.04x1080 =**3**	-
	ICT	0.11x0.04x1080 =**5**	Selibe Phikwe Technical College
	Hospitality and Tourism	0.07x0.04x1080 =**3**	-
North East	Construction trades, Craft, trade and industrial	0.48x0.05x1080 =**26**	Zwenshambe Brigade, Senyawe Brigade
	Commercial, clerical, business and public administration	0.21x0.05x1080 =**11**	Zwenshambe Brigade
	Agricultures, forestry and fisheries	0.05x0.05x1080 =**3**	-

	Health and Health related	0.08x0.05x1080 =**4**	-
	ICT	0.11x0.05x1080 =**6**	-
	Hospitality and Tourism	0.07x0.05x1080 =**4**	-
North West	Construction trades, Craft, trade and industrial	0.48x0.02x1080 = **10**	Maun Brigade, Maun Technical College
	Commercial, clerical, business and public administration	0.21x0.02x1080 =**5**	Maun Technical College
	Agricultures, forestry and fisheries	0.05x0.02x1080 =**1**	-
	Health and Health related	0.08x0.02x1080 =**2**	-
	ICT	0.11x0.02x1080 =**2**	Maun Brigade
	Hospitality and Tourism	0.07x0.02x1080 =**2**	Botswana Wildlife training institute, Maun Technical College
Lobatse	Construction trades, Craft, trade and industrial	0.48x0.02x1080 = **10**	Lobatse Brigade
	Commercial, clerical, business and public administration	0.21x0.02x1080 =**5**	Lobatse Brigade
	Agricultures, forestry and fisheries	0.05x0.02x1080 =**1**	-
	Health and Health related	0.08x0.02x1080 =**2**	-
	ICT	0.11x0.02x1080 =**2**	-
	Hospitality and Tourism	0.07x0.02x1080 =**2**	-
Kweneng	Construction trades, Craft, trade and industrial	0.48x0.04x1080 =**21**	Kweneng Rural Development Association
	Commercial, clerical, business and public administration	0.21x0.04x1080 =**9**	-
	Agricultures, forestry and fisheries	0.05x0.04x1080 =**2**	-

	Health and Health related	0.08x0.04x1080 =**3**	-
	ICT	0.11x0.04x1080 =**5**	Kweneng Rural Development Association
	Hospitality and Tourism	0.07x0.04x1080 =**3**	Kweneng Rural Development Association
Kgatleng	Construction trades, Craft, trade and industrial	0.48x0.01x1080 =**5**	Kgatleng Brigade
	Commercial, clerical, business and public administration	0.21x0.01x1080 =**2**	Kgatleng Brigade
	Agricultures, forestry and fisheries	0.05x0.01x1080 =**1**	Kgatleng Brigade
	Health and Health related	0.08x0.01x1080 =**1**	-
	ICT	0.11x0.01x1080 =**1**	-
	Hospitality and Tourism	0.07x0.01x1080 =**1**	-
Kgalagadi	Construction trades, Craft, trade and industrial	0.48x0.01x1080 =**5**	Matsheng Brigade, Kang Brigade
	Commercial, clerical, business and public administration	0.21x0.01x1080 =**2**	Matsheng Brigade
	Agricultures, forestry and fisheries	0.05x0.01x1080 =**1**	-
	Health and Health related	0.08x0.01x1080 =**1**	-
	ICT	0.11x0.01x1080 =**1**	Kang Brigade
	Hospitality and Tourism	0.07x0.01x1080 =**1**	-
Jwaneng	Construction trades, Craft, trade and industrial	0.48x0.01x1080 =**5**	Jwaneng technical College
	Commercial, clerical, business and public administration	0.21x0.01x1080 =**2**	Jwaneng Technical College
	Agricultures, forestry and fisheries	0.05x0.01x1080 =**1**	-

	Health and Health related	0.08x0.01x1080 =**1**	-
	ICT	0.11x0.01x1080 =**1**	Jwaneng Technical College
	Hospitality and Tourism	0.07x0.01x1080 =**1**	-
Ghanzi	Construction trades, Craft, trade and industrial	0.48x0.01x1080 =**5**	Ghanzi Brigade
	Commercial, clerical, business and public administration	0.21x0.01x1080 =**2**	Ghanzi Brigade
	Agricultures, forestry and fisheries	0.05x0.01x1080 =**1**	-
	Health and Health related	0.08x0.01x1080 =**1**	-
	ICT	0.11x0.01x1080 =**1**	-
	Hospitality and Tourism	0.07x0.01x1080 =**1**	-
	TOTAL	**1080**	

**Computed by: %learners in specialisation x % enrolment in district x overall sample size (1080)

APPENDIX 4: REQUIRED IMPROVEMENTS IN VOCATIONAL TRAINING

Vocational training should improve practical skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	100%	100	17.3	17.8	17.8
	75%	110	19.1	19.5	37.3
	50%	131	22.7	23.3	60.6
	25%	122	21.1	21.7	82.2
	0%	100	17.3	17.8	100.0
	Total	563	97.6	100.0	
Missing	No response	14	2.4		
	Total	577	100.0		

Vocational training should improve course content

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	100%	67	11.6	12.9	13.1
	75%	102	17.7	19.6	32.7
	50%	159	27.6	30.6	63.3
	25%	100	17.3	19.2	82.5
	0%	91	15.8	17.5	100.0
	Total	520	90.1	100.0	
Missing	No response	57	9.9		
	Total	577	100.0		

Vocational training should improve instructional manuals

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	100%	119	20.6	23.6	24.8
	75%	131	22.7	25.9	50.7
	50%	105	18.2	20.8	71.5
	25%	79	13.7	15.6	87.1
	0%	65	11.3	12.9	100.0
	Total	505	87.5	100.0	
Missing	No response	72	12.5		
	Total	577	100.0		

Vocational training should improve textbooks

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	100%	138	23.9	25.5	25.5
	75%	123	21.3	22.7	48.2
	50%	109	18.9	20.1	68.4
	25%	83	14.4	15.3	83.7
	0%	88	15.3	16.3	100.0

	Total	541	93.8	100.0	
Missing	No response	36	6.2		
	Total	577	100.0		

Vocational training should improve workshop equipment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	100%	109	18.9	25.6	25.8
	75%	76	13.2	17.8	43.7
	50%	95	16.5	22.3	66.0
	25%	75	13.0	17.6	83.6
	0%	70	12.1	16.4	100.0
	Total	426	73.8	100.0	
Missing	No response	151	26.2		
	Total	577	100.0		

Vocational training should improve theory

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	100%	70	12.1	12.5	12.5
	75%	115	19.9	20.5	33.0
	50%	118	20.5	21.0	54.0
	25%	124	21.5	22.1	76.1
	0%	134	23.2	23.9	100.0
	Total	561	97.2	100.0	
Missing	No response	16	2.8		
	Total	577	100.0		

Vocational training should improve laboratory work

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	100%	89	15.4	24.2	24.5
	75%	74	12.8	20.1	44.6
	50%	104	18.0	28.3	72.8
	25%	60	10.4	16.3	89.1
	0%	40	6.9	10.9	100.0
	Total	368	63.8	100.0	
Missing	No response	209	36.2		
	Total	577	100.0		

Vocational training should improve teaching and delivery methods

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	100%	87	15.1	15.9	15.9
	75%	112	19.4	20.5	36.4
	50%	139	24.1	25.4	61.8
	25%	115	19.9	21.0	82.8
	0%	94	16.3	17.2	100.0

	Total	547	94.8	100.0	
Missing	No response	30	5.2		
	Total	577	100.0		

Vocational training should improve instructor's knowledge of theory

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	100%	79	13.7	14.3	14.3
	75%	105	18.2	19.0	33.3
	50%	130	22.5	23.5	56.8
	25%	136	23.6	24.6	81.4
	44	1	.2	.2	81.6
	0%	102	17.7	18.4	100.0
	Total	553	95.8	100.0	
Missing	No response	24	4.2		
	Total	577	100.0		

Vocational training should improve instructor's practical skills

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	100%	88	15.3	16.1	16.4
	75%	95	16.5	17.3	33.8
	50%	104	18.0	19.0	52.7
	25%	139	24.1	25.4	78.1
	0%	120	20.8	21.9	100.0
	Total	548	95.0	100.0	
Missing	No response	29	5.0		
	Total	577	100.0		

Vocational training should increase duration of study

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	100%	55	9.5	10.1	10.5
	75%	47	8.1	8.6	19.1
	50%	92	15.9	16.9	36.0
	25%	73	12.7	13.4	49.4
	0%	276	47.8	50.6	100.0
	Total	545	94.5	100.0	
Missing	No response	32	5.5		
	Total	577	100.0		

APPENDIX 5: TERMS OF REFERENCE

DETAILED TERMS OF REFERENCE

4.1 Conducting of the Tracer Study

The purpose of the study is to track down VT graduates and establish the impact of employment opportunities for graduates in the VT sector and whether the qualifications obtained meet the current needs of the industry. It is therefore important to carry out this study to inform planning and quality assurance efforts of the VT system.

This would require careful methodologies not only to ensure the correct data collection, and analysis, but also that valuable lessons are fed back into the VT system to enable adaptation and innovation. The methodologies should also ensure that valuable information is sought to establish the effectiveness and relevance of vocational Education and training

Key research questions are:

1. The employment situation of VT graduates in the formal and informal sectors (BOTA registered institutions) in terms of availability of opportunities and the ability of VT graduates to compete for those opportunities and the added value that VT offer in relation to seeking employment. Consider also the dimensions of BOTA accreditation and employability.

2. Determine the overall VT employment rate both in the formal and informal sectors. That is, determine the number of graduates that enter employment including the private and public sectors and self employment. The type of employment found and the occupational mobility (i.e. permanency of employment)

3. Determine the overall VT employment rate both in the formal and informal sectors in terms of gender, disability and geographical location.

4. Review the relevance and effectiveness of learning in Vocational Training in relation to employability (Skills Mismatch). Review relevant project literature, Vocational Training Documents, studies and reports.

5. Give attention to waiting times for first employment and reasons for this. Establish the difficulties encountered by those graduates that have not been able to find relevant employment.

6. Give attention to the level of employer satisfaction with regard to Vocational Training graduate employee's skills and performance levels.

7. Identify possible networking between industries and training institutions so that training provided is in line with skills needs.

8. Advise on database and data collection instruments that would enable BOTA to bi-annually make follow ups on graduates on their occupational movements in the labour market.

4.2 SCOPE OF WORK

It is for the consultants to propose an appropriate methodology to establish employment opportunities and employment rates of VT graduates and provide comprehensive information on labour market outcome of the graduates

Project resource and time constraints suggest that the methodology should derive plausible results within a time scale of some 4 months from beginning of November 2009

An outline of the proposed methodology should be included in the bid document, together with a proposed time line suggesting approximate dates for field visits, their duration, and team members.

Bids should be sufficient to cover a number of field visits in Botswana, including the use of consultants and survey staff. The consultancy should commence with a field visit by the end of November 2009, and be completed well before the project's scheduled mid-term review in or around January 2009. Specific outputs will be agreed for each field visit, but BOTA recognises that a panel survey approach may need to be included through a number of consecutive visits so as to reach robust conclusions on VT graduate employment

APPENDIX 6: GRADUATE QUESTIONNARE

Survey Questionnaire for Tracer Study on the Employment Outcomes of the Vocational Training Graduates (GRADUATES)

Town/Village_____ Year of Graduation_____

Dear Sir/Madam

You are kindly requested to spare some few minutes to help complete a survey regarding employment outcomes of vocational training graduates. The data obtained will assist BOTA to effectively formulate and implement training plans and labour market strategies. All information obtained with utmost confidentiality.

(*Note: Get the personal information only if the interviewee is willing to provide it*)

*Name of interviewee*_____ *Telephone*_____

Use a tick (√) to indicate your response where appropriate)

SECTION A: PERSONAL INFORMATION

1. Age
   a) 16-24
   b) 25-34
   c) 35-49
   d) 50-64
   e) 65+
2. Gender

a) Male b) Female

3. What level of training did you complete at a Vocational Training Institution?
   a) Bachelors degree
   b) Higher Diploma
   c) Diploma
   d) Certificate
   e) National Craft Certificate
   f) Trade Test (A,B,C) Certificate
   g) Certificate in Education
   h) Other (Please specify)_____
4. What is your area of specialisation?
   a) Construction trades, craft, trade and industrial
   b) Commercial, clerical business and public administration
   c) Agriculture, forestry and fisheries
   d) Health and health related
   e) ICT
   f) Hospitality and tourism
5. Name of school attanded _____

SECTION B: EMPLOYMENT AND EMPLOYMENT HISTORY

6. State your current employment status
   a) Employed fulltime
   b) Employed part-time
   c) Employed temporarily
   d) Unemployed and looking for employment (Go to 20)
7. Name of employer _____

8. Place of Employment _____

9. Monthly Income

    a) Less than P1000

    b) P1000 – P2000

    c) P2001 - 3000

    d) P3001 - 4000

    e) P4000+

10. ***(If employed)***, in what area of specialisation is your job?

    a) Construction trades, craft, trade and industrial

    b) Commercial, clerical business and public administration

    c) Agriculture, forestry and fisheries

    d) Health and health related

    e) ICT

    f) Hospitality and tourism

11. How long did it take you to get a job after completing your training?

    a) Less than 6 months

    b) 6 – 12 months

    c) 13-24 months

    d) 25-36 months

    e) Over 3 years

12. How did you get to know about your job?

    a) Friends

    b) Media Advertisements (Please Specify)_____

    c) Door to door (job hunting)

    d) Other (Please specify)_____

13. How many employers did you contact before getting your current job?

a) 0 - 5

b) 6 - 10

c) 11 - 20

d) Over 20

14. Specify your type of employer?

a) Public sector (central government, councils)

b) Parastatal

c) Private sector

d) NGO

e) Self-employed

f) Other (please specify)_____

15. How long have you been working for your current employer?

a) Less than 6 months

b) 6 – 12 months

c) 13-24 months

d) 25-36 months

e) Over 5 years

16. How many employers did you work for before the current one?

a) 0 (Go to 20)

b) 1

c) 2

d) More than 2

17. ***(If your current employer is not your first one)***, why did you leave your previous employment?

a) Sought improved wage

b) Sought improved working conditions

c) Needed to change environment

d) Wanted a new challenge

e) Retrenched

f) Found employment in my area of specialisation.

g) Other (please specify)_____

18. Are you still employed in your area of training?

a) Yes b) No

19. **(*If No to question 18*)**, why did you change your career?

a) Lack of career progression

b) Poor remuneration

c) Poor working conditions

d) Lack of job satisfaction

e) Other (please specify)_____

20. What are the difficulties you encountered in looking for a job?

a) Takes too long to find one

b) Employers not interested in my level qualifications

c) Employers not interested in my area of specialisation

d) Lack of work experience

e) Limited employment opportunities in my area

f) Other (Please specify)_____

21. How long have you been looking for a job after training?

a) Less than 6 months

b) 6 – 12 months

c) 13-24 months

d) 25-36 months

e) Over 3 years

SECTION C: SKILLS ACQUISITION, QUALITY OF TRAINING AND EMPLOYER SATISFACTION

22. **(*Compare the skills you acquired from your training and your ability to perform on your current or previous job*)**, would you say your training was:

    a) Very relevant (Di a tsamaelana)

    b) Adequate (Di lekanetse)

    c) Not relevant (Ga di tsamaelane)

23. Can you recommend the course you went through to a friend, colleagues or relative?

    a) Yes b) No

Using the percentages (%) indicated, rate the extent to which the following components of Vocational Training should be improved to prepare graduates for the job market. Use a tick (√)

Training component	**100% improvement**	**75% Improvement**	**50% Improvement**	**25% Improvement**	**0% Improvement**
24. Knowledge (Theory)					
25. Training in practical skills					
26. Industrial attachments					
27. Course content					
28. Instructional manuals					
29. Textbooks					
30. Workshop equipment					
31. Laboratory work					
32. Teaching and delivery methods					
33. Instructor's knowledge of theory					
34. Instructor's practical skills					
35. Increase duration of training					

What is your opinion with regard to the following statements of the adequacy of vocational training, graduates employability and their ability to perform their jobs?

***SDA** = strongly disagree; **DS** = disagree; **NA** = not applicable; **A** = agree; **SA** = strongly agree. Use a tick (√)*

Statements	**SDA**	**DS**	**NA**	**A**	**SA**
36. My training adequately prepared me for work					
37. My employer/former employer is/was satisfied with my level of knowledge and skill					
38. It is easy for me to get a job					
39. I can easily be trained to improve my level of skill					
40. I find myself to be very effective in my current/previous job					
41. I can easily change employers within my area of specialisation					

Survey Questionnaire for Tracer Study on the Employment Outcomes of the Vocational Training Graduates (EMPLOYERS)

Town/Village_____

Dear Sir/Madam

You are kindly requested to spare some few minutes to help complete a survey regarding employment outcomes of vocational training graduates. The data obtained will assist BOTA to effectively formulate and implement training plans and labour market strategies. All information obtained with utmost confidentiality.

(*Note: Get the personal information only if the interviewee is willing to provide it*)

*Name of interviewee*_____ *Telephone*_____

Use a tick (√) to indicate your response where appropriate)

1. Do you employ Vocational Training Graduates?

   a) Yes b) No (Go to 17)

2. ***(If yes)***, how many Vocational Training graduates have you employed?

   a) 0 – 5

   b) 6 – 10

   c) 11 – 15

   d) 16 – 20

   e) 20+

3. How do you recruit Vocational Trained Graduates?

   a) Media Advertisements

   b) Networking

   c) Recruitment Agencies

d) Other (please specify)_____

4. At what level do you employ these Vocational Training graduates?

   a) Skilled level

   b) Semi – skilled level

   c) Labourers

   d) Assistant Trainees

   e) Other (please specify)

5. In what areas of specialisation do you employ Vocational Training Institution Graduates?

   a) Construction trades, craft, trade and industrial

   b) Commercial, clerical business and public administration

   c) Agriculture, forestry and fisheries

   d) Health and health related

   e) ICT

   f) Hospitality and tourism

6. Would you employ graduates trained in a different field other than the primary business of your company/institution?

   a) Yes 2. No (Go to 8)

7. ***(If yes)***, What level of employment would you often employ such graduates?

   a) Skilled level

   b) Semi – skilled level

   c) Labourers

   d) Assistant Trainees

   e) Other (please specify)

8. (***If No to question 6***), why?

   a) We need people with relevant skills only

   b) We don't want to waste time in training them in the required skills

   c) Other (Please specify)_____

9. How would you rate the level of competence of Vocational Training Graduates in performing their assigned responsibilities?

    a) High

    b) Fair

    c) Low

    d) Poor

10. Most of my employees graduated from programmes accredited by Botswana Training Authority (BOTA).

    a) Very much so

    b) Unsure

    c) Not at all

11. I am satisfied with my employees who graduated from Botswana Vocational Training Institutions.

    a) Strongly agree

    b) Agree

    c) Unsure

    d) Disagree

    e) Strongly disagree

12. Do you feel Vocational Training graduates are trainable and adaptable?

    a) Strongly agree

    b) Agree

    c) Unsure

    d) Disagree

    e) Strongly disagree

13. How often do you have to send your vocationally trained employees for further training to improve their skill level?

    _____

    _____

14. Do you employ graduates of vocational institutions from outside Botswana?

    a) Yes b) No

15. ***(If yes)***, how does their level of competency compare with those trained in Botswana?

    _____
    _____

16. Do you have any suggestions of how Vocational Training can be improved?

    _____
    _____

17. Do you provide any on-job training for Vocational Training graduates, ***if so why***?

    _____
    _____

18. Did you employ Vocational Training Graduates in the past?

    b) Yes b) No

19. ***(If Yes)*** How many Vocational Training graduates did you employ?

    f) 0 – 5

    g) 6 – 10

    h) 11 – 15

    i) 16 – 20

    j) 20+

20. Why are you no longer employing them?

    a) We don't require their services

    b) Poor skill level

    c) Other (Please specify)_____

21. Any other comments?

    _____
    _____
    _____

Survey Questionnaire for Tracer Study on the Employment Outcomes of the Vocational Training Graduates (TRAINERS)

Town/Village_____

Dear Sir/Madam

You are kindly requested to spare some few minutes to help complete a survey regarding employment outcomes of vocational training graduates. The data obtained will assist BOTA to effectively formulate and implement training plans and labour market strategies. All information obtained with utmost confidentiality

(*Note: Get the personal information only if the interviewee is willing to provide it*)

Name of interviewee _____ *Telephone*_____.

Use a tick (√) to indicate your response where appropriate)

1. Name of Institution_____
2. What areas of specialisation are offered by your institution?
   a) Construction trades, craft, trade and industrial
   b) Commercial, clerical business and public administration
   c) Agriculture, forestry and fisheries
   d) Health and health related
   e) ICT
   f) Hospitality and tourism
3. How many people graduate from your institution annually by programme of specialisation?
   a) Construction trades, craft, trade and industrial_____
   b) Commercial, clerical business and public administration_____
   c) Agriculture, forestry and fisheries_____

d) Health and health related_____

e) ICT_____

f) Hospitality and tourism_____

4. Which employment sector often employs your graduates upon completion?

   a) Public sector (central government, councils)

   b) Private sector

   c) Often self employed

   d) Unsure

   e) Other (please specify)_____

5. Are employers satisfied with the skills acquired by your graduates?

   a) Yes

   b) No

6. ***(If NO to question 5),*** What areas do they think could be improved?

   _____
   _____
   _____

7. Do you feel Vocational Training Programmes adequately prepares graduates for the World of Work?

   a) Yes b) No

8. ***(If no to question 7)***, what areas do you think need to be improved? (Please give a reason for your answer)

   _____
   _____
   _____

9. If you were an employer, would you employ graduates from your institution? Please elaborate.

   _____
   _____
   _____

10. Do your graduates get employment on completion?

a) Yes b) No

11. How long do your graduates wait before they get employment?

_____
_____

12. How do programmes that you offer prepare trainees for Botswana job market?

_____
_____
_____

13. Do you have any programmes that introduce trainees to the workplace/work environment? (i.e. Internship, apprenticeship, fieldwork etc)

_____
_____

APPENDIX 7: KEY RECOMMENDATIONS

i) It is recommended that institutions should keep databases of their graduates on completion and work to establishing alumni associations that could assist in updating the database.
ii) It is recommended that BOTA accredited institutions that conduct tracer studies should corporate and share output of such studies with BOTA.
iii) It is highly recommended that there should be an audit of skills required by the employment sector and VTI programmes and enrolment rates should be tailored to match the required skills.
iv) The recently launched labour market observatory should be utilized to assist in collecting information and forecasting the employment situation for vocational training graduates.
v) There should be consideration for offering programmes to equip graduates with multiple skills.
vi) To further enhance graduate employment, employers and employer organization should form linkages with VTI institutions that are intended to recruit graduates upon completion of their studies.
vii) Institutions should also conduct career fairs where they could sensitize the employers of the skills offered by their graduates
viii) The scope of the VT programmes should be expanded to expose the graduates to more skills but maintaining the standards.