



Department of Technical Education  
Ministry of Labour and Human Resources



## Tracer Study

Report for 2020 Graduates



TVET Graduates (TTIs, IZC & CZC) Study of  
Bhutan - 2021





# **TVET Graduates (TTIs/IZC/CZC) Study of Bhutan**

## **Tracer Study Report for 2020 Graduates**

**Department of Technical Education (DTE)  
Ministry of Labour and Human Resources  
2021**

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## **Vision**

**To become a leader in Technical and Vocational Education and Training (TVET) in the region**

## **Mission**

**To achieve a globally competitive workforce through a holistic TVET that creates a more cohesive society and secures a stable economic future for all citizens**

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## Tracer study team

**Lham Dorji:** The Director, Department of Labour led the first tracer team and launched the first ever multi-cohort online tracer study for TVET graduates covering the graduates from 2013-2018. Besides leading the online survey, he was responsible for data analysis, report writing, and design. Similarly In the second tracer project also, the director led the team and provided training to all data focal of TTIs/IZC/CZC under MoLHR on how to conduct an online tracer, data cleaning, data analysis, and report writing. Aside from that, the director conducted the final edition and revision of the tracer report. Lham Dorji joined the Department of Technical Education in March 2018 as a chief program officer, and was later promoted to Director, department of labour, MoLHR in 2021.

**Yeshey Wangchuk:** Program Officer, TISD, DTE contributed to the questionnaire design and finalization, survey administration, data validation and other survey logistics. He joined TISD in 2019. He worked as a labour officer in MoLHR's Regional Office, Phuntsholing.

**Kinzang Dorji:** Assistant Program Officer, TISD, DTE joined the ministry in 2021. He contributed by conducting and monitoring the institute-based tracer study for all TTIs/IZC/CZC under MoLHR. Moreover, he was tasked with the finalization of the tracer questionnaire, the training of data focal on the conduction of the institute-based tracer, compilation of all Institute-based tracer study reports, data validation and cleaning, data analysis, report design, and report writing.

### Data focal person of TTIs/IZC/CZC

This study was institute-based, and the data focal persons of all TTIs/IZC/CZC were tasked with conducting the institute-based tracer study for the 2020 graduates. They carried out their respective institute's tracer study, data cleaning and validation, and report writing.

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ལམ་གཤོག་ལྷན་ཁག་། དཔལ་ལྷན་འབྲུག་གཞུང་།  
**Ministry of Labour and Human Resources**  
Royal Government of Bhutan



## Minister's Forward

After the successful launching of the first-ever multi-cohort TVET tracer study last year, DTE strived to maintain the tracer study as an annual event. The second tracer study covering Technical Training Institute (TTI) and Institute for Zorig Chusum (IZC) graduates of 2020 was rolled out in June 2021. TTIs and IZCs carried out the online tracer survey with support from DTE. The institute-based tracer study is aimed at providing timely information on TVET quality and relevance, and the link between the training delivery and labour market outcomes.

Though the individual technical institute carried out the online survey, the Technical Institute Support Division, DTE merged and analyze the data of eight online surveys and prepared the report.

The study's findings are expected to inform various TVET reforms and plan initiatives, reinforce the monitoring and evaluation of the TVET system, facilitate demand-supply mapping of TVET programmes and generate the data for research in TVET. I am confident that the report will be useful especially to MoLHR, TTIs/IZC/CZC and other key national TVET players and donors.

The study demonstrates our consistent effort to adopt the data-driven approach in TVET governance, strategic management and training delivery. It represents our aspiration to make TVET more resilient and responsive to human resource and labour market needs.

I am happy that our program officers carried out this study. They have completed the TVET tracer study as per the international framework and standard. I convey my appreciation to DTE Director Norbu Wangchuk for maintaining the continuity of the tracer study. I appreciate the role played by Lham Dorji (DOL Director) in completing the second tracer study. All the focal persons of TTIs and IZCs who actually carried out the online surveys deserve special appreciation.

I take further opportunity to thank all the TTIS and IZCs Graduates of 2020 who had taken part in the online tracer survey.

Through such participation, they had demonstrated their willingness to contribute towards the growth and development of our TVET system. I hope they will continue to play their key roles in promoting the TVET image and its significance by meaningfully applying their training and competencies in their respective professions.



Karma Dorji  
Minister  
Ministry of Labour and Human Resources  
Thimphu Bhutan

## Acknowledgement

This report is the result of a collaborative effort. The tracer team would like to thank Norbu Wangchuk, Director, Department of Technical Education and Lham Dorji, Director, Department of Labour for their constant supervision and assistance.

The entire initiative was co-funded by the Royal Government of Bhutan, Helvetas office Bhutan, and the Asian Development Bank-Project management unit. Helvetas, office Bhutan, funded the training on data focal persons for conducting tracer studies as well as the fund for printing the tracer report. The fee for a one-year subscription to the SurveyMonkey system was supported by ADB, PMU. This online system (Survey Monkey) was used to conduct the institute-based tracer study for all eight TTIs/IZC/CZC under MoLHR. We appreciate the financial assistance provided by the organizations.

We would like to thank all the TTIs, IZC and CZC principals and the data focal persons for conducting their respective institute-based tracer studies. Without their institute-based tracer data, this national report would not have been possible. Your help and coloration are greatly appreciated.

We hope this report will provide the data and information crucial for various reform initiatives in the public TVET system.

## Acronyms and Abbreviations

ADB-PMU	Asian Development Bank-Project Management Unit
BVQF	Bhutan Vocational Qualification Framework
DTE	Department of Technical Education
EPE	Entrepreneurship Education
OJT	On-the-job-training
TTI	Technical Training Institute
IZC	Institute of Zorig Chusum
CZC	College of Zorig Chusum





## Section I

### General Introduction

The Institution-Based/Single-cohort tracer studies was designed to trace the graduates of a single year who had finished their training in one particular time, a course or from one particular institution. The online survey overall covered TVET graduates of 2020 from the eight Public TTIs and IZCs. The survey was conducted using the SurveyMonkey App. Although the survey covered only the graduates of 2020, the pretest report was based on the responses/data of the representative sample of 80 TTI and IZC graduates of the year 2021. These graduates were employed, self-employed and unemployed at the time of the survey. The survey datasets of other graduates need to be analyzed separately.

The online survey was administered using the standardized questionnaire with ten sections, fourteen pages and 76 questions. The questionnaire covered several inter-related themes: the socio-biographic background of graduates, their academic qualifications, TVET programmes, competencies, learning experiences, skills acquisition, the transition to labour market, utilization of competencies, employment and career paths, qualification up-gradation and finally their feedback.

The study tried to assess the relevance of various TVET programmes and the labour market outcomes for TVET graduates, including their progress in profession and career. It further covered the retrospective and subjective assessment of the quality of training programmes and other services. The study's findings and recommendations are expected to contribute towards developing various plan initiatives for reinforcing the public TVET programmes mainly in six TTIs and two IZCs under MoLHR's management. Two IZCs are known as NIZC (National Institute of Zorig Chusum and CZC (College of Zorig Chusum).

### Background

In a dynamic and complex labour market system, a tracer study is indispensable to link skills training to employment outcomes and assess the TVET's contribution to the country's workforce. The TVET sector in Bhutan not only faces the problems in training delivery but also the issues of skills mismatch (demand-supply imbalance), fluid labour market situation and low employability of graduates.





The TVET system in Bhutan is being critiqued by various sections of the society and economy for its failure to meet the growing demand for the skilled workforce. This purported failure cannot be singly attributed to TVET supply or training components. One must understand that the success of TVET depends on achieving a reasonable equilibrium between demand and supply, the matching of which is neither going to be perfect nor necessary. The best that any TVET system can do is to minimize the gap between TVET demand and supply through close coordination and effective partnerships between the TVET institutions, TVET players, employers and graduates.

In this context, a comprehensive Labour Market Information (LMI) is crucial to inform policies and strategies aimed at closing the gap between TVET demand and supply. A tracer study is one most commonly accepted method to generate LMI. Accordingly, the TVET Institutes Support Division (TISD) under DTE initiated the first ever multi-cohort tracer study without the involvement of any external expert.

This issue will be the institution-based single cohort tracer study covering the graduates of 2020 from the eight public TTIs and IZCs. The motivation for this study was derived from the fact that the lack of reliable information on TVET graduates and their labour market situation is constraining TVET reforms and strategic development.

### Study Questions

The main decision problem of the study was the issues related to TVET delivery, quality and relevance and labour market outcomes. Based on this decision problem, the study sought to address the thirteen key questions:

1. What are the demographic and socio- economic characteristics of TTI and IZC graduates?
2. What were the actual reasons/factors that motivated them to take up TVET?
3. Did they take up the courses of their choices? If not, what were their preferred courses?
4. How did graduates retrospectively rate different training components of TTIs and IZCs?
5. What happened to graduates after leaving the education/training institutions?



## *Introduction*

6. Did graduates get meaningful/gainful employment within the acceptable timeframe?
7. Are TTI and IZC graduates able to use their knowledge, skills and skill competencies through employment or other means? If not, what are the reasons?
8. Which are the economic and non- economic sectors under which graduates are working and in what occupations?
9. Are graduates happy and satisfied with their jobs?
10. Have they changed their jobs and if so, what were the reasons?
11. What are the educational aspirations of TTI and IZC graduates?
12. What are the fields of study/training in which graduates desire to upgrade their qualifications?
13. What needs to be done to improve TVET delivery, quality, relevance and employability of TTI and IZC graduates?

### **Aims and Objectives**

The primary purposes of the study were to understand the labour market situation of TTIs and IZCs graduates of 2020 and retrospectively assess the delivery of TVET programmes in respect to their quality and relevance. These primary goals led to the following objectives:

1. Collect socio-biographic information of TTI and IZC graduates;
2. Understand the training-work transition of the TTI and IZC graduates;
3. Measure the employability of TTI and IZC graduates;
4. Provide insights into the labour market situation (for TTI and IZC graduates) to support better matching of training and jobs;
5. Understand the qualification aspirations of TTI and IZC graduates;
6. Collect the retrospective rating and feedback on the conditions and effectiveness of TTIs and IZCs and their programmes;
7. Use as an instrument for monitoring and evaluation of TVET programmes in TTIs and IZCs;



## *Introduction*

8. Provide inputs for the assessment and further development of TVET programmes;
9. Integrate the tracer survey data into the TVET database;
10. Establish a database of addresses that can facilitate broader contacts with TTI and IZC graduates for research and other purposes;
11. Make recommendations for the improvement of TVET quality, relevance, governance and strategic management of TVET institutions and their programmes and labour market outcomes.

In summary, the objectives of the study were to (i) profile TTI and IZC graduates, (ii) measure their employability (labour market information) and (iii) collect graduates' feedback to improve the study/training programmes (retrospective evaluation).

### **Methodology**

The research design was a 'survey-based method' of enquiry with the combination of explorative, descriptive and explanatory approaches. The online questionnaire survey was administered on the TTI and IZC graduates of 2020.

The 'universal target' approach was used for the data collection. This approach stressed on getting the 'maximum number of respondents. The sampling design was assumed to be randomized, as every TVET graduate had an equal chance of being selected for the survey.

The dominant form of a survey in the country remains the enumerator-administered survey. Such (physical) survey requires a huge logistic arrangement and is costly.

The present tracer survey was carried out using the online premium Survey Monkey program. Furthermore, the tracer research for the graduates of 2020 was institute-based, with a uniform questionnaire and study design for all institutes, in order to obtain more precise and concise data. There are three main reasons for conducting the survey online and though institute-based: (i) Because TVET graduates are dispersed across the country (some of whom are constantly changing their locations), physically tracking them would be time-consuming, difficult, and expensive; (ii) because an increasing number of Bhutanese people spend their time on phones/internet, it would be easier to collect responses online; and (iii) the low cost of the online survey.



The online survey had several advantages among which were the ease of administering questionnaires, wider coverage and the cost-competitiveness.

There were limitations too, such as the issues of both the over-selection and under-selection and the technical issues related to slow internet in some areas.

The questionnaires were delivered to graduates with their mobile phone numbers via SMS. The social media forum and email facilities were the other means of the survey delivery, especially to those whose mobile phone numbers were not accessible. The lists of graduates were collected from the training providers. The survey data was analyzed using Stata program. Being the explorative study, the analysis did not go beyond the description of the data.

### Definitions

**TVET graduate:** A TVET graduate is a person who has completed TVET course/programme through the institute-based learning or the Recognition of Prior-Learning (RPL) certification issued by the Department of Occupational Standards (DOS), MoLHR.

**Tracer study:** A study or graduate survey is a standardized survey (in written or oral form) of graduates from education/training institutions, which takes place sometimes after graduation or at the end of the training (Cedefop, 2008).

**Employability:** The combination of factors which enable individuals to progress towards or get into employment, to stay in employment and to progress during a career (Cedefop, 2008).

**Labour Market Information (LMI):** Any information concerning the size and composition of the labour market or any part of the labour market, the way it or any part of it functions, its problems, the opportunities which may be available to it, and the employment-related intentions or aspirations of those who are part of it (Mangozho, 2003).

**Recognition of Prior Learning (RPL):** The skilled workers who have gained competencies through work experiences or other modes (informal) and are assessed through RPL and certified without having to go for formal training (BVQF, 2013).

**Sampled Graduates (SGs):** It refers to graduates of TTIs and IZCs taken as the sample for the present study.



## Target Audience

Although the data in this report may not meet the demands of all stakeholders, this institute-based/single-cohort tracer study will meet the needs of particular institutions in terms of improving the management, programs, and the TVET system as a whole. The following stakeholders are expected to benefit from this study:

1. MoLHR, TVET project offices, policymakers, key TVET donors and other national TVET stakeholders.
2. TTIs and IZCs (institutions) mainly based on a review of the institution and its programs.
3. For career guidance and counselling, which would normally necessitate information on the whereabouts of previous graduates and other LMI.
4. Information on employment-work transition and job status of previous TVET graduates may be valuable to present and future trainees.
5. For TVET advocacy programs, as the information may reveal who influenced the graduates and how they decided to pursue TVET.

## Scope and Limitations

The flexibility of a tracer study lies in its ability to cover topics relevant to individual training institutes. The current study, which was done only for the eight public training institutes, did not tailor the questions to any other private TVET institutions and training programs. Though the survey data can be used for a variety of inferential analyses, the current study did not go beyond simple descriptive statistics.

The analysis and comparison at the course and mode of delivery (Levels) must be done with caution due to the lack of control over the field of training (course) and mode of delivery (level).

Some tracer studies collect only simple descriptive data about the job situation, while others study the link between training and employment using sophisticated inferential analysis. The current study simply summarizes the reasons for unemployment as reported by unemployed graduates, rather than undertaking any more inferential analysis.



## **Report Structure**

The report is divided into nine sections: General introduction (section I), Methodology (section II), Socio-demographic profiles of graduates (section III), Technical and Vocational Education and Training (section IV), Retrospective evaluation of institutions and programs (section V), Workplace-based training—OJT, transition to work and employment (section VI), Qualifications up-gradation and aspirations of graduates (section VII), key conclusions (section IX).





## Section II

### Methodology

#### Introduction

This section details the study method: sampling design (sampling scheme and sample size), design and pretesting of the questionnaire, data collection, data validity and credibility, analytical framework, data analysis and research ethics.

#### Research Design

The cross-sectional survey design and the descriptive research design was used for this study to answer the question of *what, where, when and how*, but not *why*. The survey was self-administered by the graduates. The survey gathered information about their socioeconomic characteristics, experiences, beliefs, and opinions. Rather than controlling and manipulating the variables, the study simply observed and measured the variables (Descriptive analytics).

#### Sampling Design: Sampling Scheme and Size:

The sampling design takes into account the sampling scheme (how participants are chosen) and sample size to ensure that the results are generalizable. The stratified sampling technique was used to classify graduates into their respective training institutions.

Since, the study was carried out institute-based, the survey questionnaires were sent to all the 2020 TVET Graduates of eight TTIs/IZC/CZC under MoLHR based on the availability of the listed respondents' phone numbers. The sample size was not determined, instead the institutes had sent the survey to all the graduates of 2020.

The sample size was small when doing the study in institute-based. Therefore, all the institutes were asked to maintain the response rate above 50% for generalizability. The list of 2020 TVET Graduates from TVET Institution under MoLHR with mobile phone numbers was used as the sampling frame.





## Target Population

In a single-cohort tracer study, the survey respondents would have similar educational experiences and conditions of their transition to the labour market. One crucial facet of a tracer study is the time of the survey after graduation. There is no standard time frame. Some prefer to conduct a tracer survey a few months after graduation for the reason that graduates are easily traceable. Others prefer the lapse of some years so that the graduates would have transited to works and gained some experiences.

Regarding this single-cohort institute-based tracer study, the survey targeted and studied the TVET graduates of 2020 from the eight public technical training institutes, the institute of Zorig Chusum, and the college of Zorig Chusum under the Ministry of Labour and Human Resources.

## Questionnaires and Pre-testing

The Multi-Cohort Online Tracer Survey Report of TTI and IZC Graduates (2013-2018) was used as the reference materials especially for designing the self-administered questionnaire for this institute-based tracer study. Based on the specified reference, a five days' workshop was conducted at Haa including the data focal persons from the four institutes to review and finalize the questionnaire. Accordingly, the questionnaire was finalized and used for all the institute-based tracer study.

The questionnaire was highly standardized—the respondents were [in most cases] required to select the answers from a list of the pre-determined responses. Some questions were kept open-ended to give the respondents the option to decide the answers on their own. The last question was the essay type to invoke or allow submission of individual graduate's feedback.

The questionnaire was divided into 10 sections with 76 questions and 14 pages. As the self-administered questionnaire, questions were asked in a simple format and in the English language. Each section of the questionnaire covered different themes and topics as discussed below:

**Section I** collected the socio-biographic information of graduates. The information included the study descriptors: gender, age, Dzongkhag of origin, present address and parental background.



**Section II** addressed learning/education experiences of graduates before taking up TVET programmes. It further covered questions related to their after-school interests and engagement.

**Section III** gathered relevant information about TVET institution (where graduates had attended the initial training programmes), graduates' motivations for choosing TVET, their course preferences, fields of training, training levels, learning competencies and year of graduation.

**Section IV (A)** covered the questions related to On-the-job-training programmes. It consisted of information regarding the OJT employer details, benefit of OJT, durations of OJT and problems of OJT. **Section IV (B)** focused on different non- professional qualifications, skills and orientations gained during the training such as soft skills and other skills that the graduates found relevant in their transition to works and for their jobs. The extent to which such non-professional skills were taught differed among TTIs and IZCs.

**Section V** emphasized on the graduates' retrospective assessment of institutions, training programmes, training condition and other provisions and services they had experienced/received during the training. This section aimed to see the 'averaged' ratings. It might not have been the case that an institute's hostel condition was too bad just because a few respondents had treated that way. On averaging, the marginal distribution of highly positive and negative ratings would have evened out. This is one of the key principles on which statistical science is based. The key focus was on comparing the negative ratings of various institutions and training components (in relative terms) on the assumption that this might indicate the possible areas of weaknesses requiring actions.

In **section VI (A)**, graduates were asked about their transition from training to work and career (outcomes). The focus was mainly on the graduates' strategies for seeking employment: source of job information, timing of job search (before or after graduation), time taken to get the first job, job satisfaction. **Section VI (B)** was designed to collect information on the graduates' employment: employment status, a number of jobs changed, reasons for changing their jobs or a reason for staying in the same job, (wage). The section also emphasized on collecting the information related to job stability (whether they changed their jobs).



Job hopping was found to be one major issue. It was known that some TVET graduates tend to change their jobs and employers depending on who pays them more. For some graduates, their jobs are never stable due to the short-term nature of projects they work with/for such as in the case of a construction project where they get laid off when the project is completed.

**Section VII** covered the questions related to unemployment and reasons for being unemployed. The same question was applied to graduates who were once employed but had become unemployed at the time of the survey.

**Section VIII** focused on graduates who were self-employed or own-account workers, mainly those graduates in businesses. The information on business type, income, and business challenges was gathered.

**Section IX** contained questions designed to capture the information on whether they have upgraded their qualification or not.

**Section X** covered questions regarding their educational aspirations, choice of professional education, level and willingness to finance their qualification up-gradation programmes, whether they faced gender discrimination or not. The section concluded with a provision (essay-type question) for providing suggestion/ feedback on TVET programmes and labour market.

### Data Quality and Reliability

Since the interviewers/enumerators were not involved in the implementation of the questionnaire, it was necessary to develop it based on the respondents' capacity to complete it. The questionnaire was written in a language that TVET graduates with class X or XII academic qualifications could understand.

Second, it was critical to ensure that the design allowed for responses without requiring any additional explanation. Every effort was made to ensure that all data collection tools (questionnaires and surveys) were designed in collaboration with other stakeholders and experts and then pretested.

The Institutes had no control over the survey's actual administration because it was self-administered (internal validity). The institutes could simply remind the respondents of the importance of the survey and the follow up for completion of all the questions.



This was accomplished through online forums and phone calls. The respondents were reminded not to skip any questions and to complete the survey honestly. They were assured of 'no harm' and 'confidentiality of the information.'

### Data Collection

The online SurveyMonkey App enabled the survey to be completed using smartphones, laptops, iPads, and computers. The online data collection method was chosen due to its ease of implementation, low costs, lack of post-survey data entry requirements, and alignment with the media and technological preferences of the younger generation. However, the online survey method had a few drawbacks. Technical difficulties with internet access may have discouraged some respondents and influenced how some graduates' responses.

The survey invitations could be delivered in a variety of ways, including SMS, e-mail, and social media groups (WeChat and Facebook groups). Several strategies were used to publicize the tracer study prior to sending out survey invitations. The institutes mostly adopted the SMS strategy to send the link and collect the responses. Some TTI and IZC staff assisted in informing graduates (with whom they had contacts) about the survey and its significance.

This entailed requesting graduates who had already completed the survey (and had their phone numbers updated as a result of the survey) to either share the phone numbers of their classmates or to share/distribute the survey links.

### Response Rate

According to the SMS backup record, 566 survey URLs were sent to the graduates via SMS and achieved the response rate of 82.8 percent. The response rate for each institution is summarized in Table 2.1. With a response rate of 98 percent, Technical Training Institute Khuruthang has the highest response rate.

The reasonable response rate could be attributed to aggressive advocacy through various mediums and a number of reminder actions. Another factor could have been the respondents' interest in the tracer study. Many graduates saw the survey as proof that TVET graduates were not being overlooked by the government and other stakeholders. Furthermore, the institute-based approach of the survey could also be one possible reason for high response rate.



The data focal persons at the respective institutes re-contacted the incomplete and partially completed responses (via phone calls) and asked them to complete.

Table 2.1: Response rate as per the institutes

Technical Training Institutions	Total Population	Completed	Response Rate(%)
National Institute of Zorig Chusum - Thimphu	56	49	87
Technical Training Institute - Khuruthang	52	51	98
Technical Training Institute - Thimphu	33	27	82
Technical Training Institute - Samthang	87	46	53
Technical Training Institute - Rangjung	74	57	77
Technical Training Institute - Chumey	88	82	93
College of Zorig Chusum- Tashi Yangtse	72	59	82
Jigme Wangchuck Power Training Institute-Gelephu	104	98	94
Total	566	469	83

### Data Validation and Coding

Since the study was conducted institute-based, the data focal persons in the respective institutes validated and cleaned the data. The data validation and cleaning process entailed going through each response and then contacting respondents who had partially completed the survey or had left the survey incomplete.

Inconsistent and dubious responses were noted, and respondents were contacted for clarification. The data was validated and edited online using the Survey Monkey system. The graduates were asked to provide additional information to fill in the missing data.

Then the whole tracer data of eight institutes were merged together for the national report. The entire dataset was downloaded in excel and Stata formats. The excel file was cleaned of data. The data coding and cleaning was done using Microsoft excel-2016 and Stata 17.



## Data Analysis

The descriptive analysis method was used for this study. It is a statistical procedure that summarizes or reduces data into a more understandable format. It is usually done before the inferential analysis.

This is not to say that inferential analysis is better than descriptive analysis. Each analysis serves a distinct purpose. The responses were divided into three categories: nominal, ordinal, and scale measurements. The majority of the information was categorical, nominal, or ordinal.

The data was analyzed using STATA-17 and Microsoft excel. This is a well-known and well-documented statistical data analysis program. STATA generated statistics for both valid and missing variable categories, as well as cumulative percentages. Because the majority of the responses were nominal or ordinal, the univariate analysis took the form of simple description (frequency and percentages). The bivariate analyses were limited to cross-tabulations. Tables and figures/graphs are used to present the findings.

The inferential interpretation of the data was possible, but it was purposefully left out because it was beyond the scope of this report. The current findings may help to inform decisions, but it is always best to conduct thorough investigations of the data and supplement with other studies for more practical implications and actions.

## Research Ethics

The study of TTIs/IZC/CZC graduates did not necessitate much sensitivity. Participation was entirely voluntary. Sufficient advocacy was done by each institute to encourage and persuade graduates to participate in the survey. They were informed of the significance of their perspectives and opinions in understanding not only their employment situation but also in informing TVET policies and programs.

The respondents were assured that their participation in the survey would cause them no harm. The first page detailed how a strict code of ethics was used to ensure the anonymity and confidentiality of the respondents and information. In terms of data collection, analysis, and reporting, the tracer team did its best to adhere to the highest ethical standards possible.



## *Methodology*

Tracer reports are typically not made available to the public in many countries. The tracer team felt there was no reason to withhold the results if they were to serve the information needs of various TVET stakeholders. As a result, a limited number of copies were printed for distribution among key TVET stakeholders.

Making the survey dataset available to the general public and additional research is one precaution against mis-reporting or incorrect analysis. The tracer team is happy to provide the dataset in the form of Public User Files with anyone who wants to undertake extra analysis (PUFs).



### Section III

#### Socio-Demographic Profile of Sampled TVET Graduates

The section covered socio-biographic profile of the graduates—age, gender, academic qualifications, parental background including their spatial distribution by Dzongkhag.

#### Gender & Age

The graduates of 2020 are represented by 71.6% male and 28.4% female (Table 3.1). The representation from female cohort was much lesser than the male graduates in 2020. Among eight institutes, TTI Chumey has highest female graduates (39) while NIZC Thimphu had the lowest with only 2 graduates.

Table 3.1: Graduates by gender and institutes (2020)

TTIs/IZC/CZC	Male		Female		Total	
	n	%	n	%	n	%
JWPTI-Dekiling	69	70.41	29	29.59	98	20.9
TTI Chumey	43	52.44	39	47.56	82	17.5
CZC-Trashiyangtse	49	83.05	10	16.95	59	12.6
TTI-Rangjung	39	68.42	18	31.58	57	12.2
TTI-Khuruthang	33	64.71	18	35.29	51	10.9
NIZC-Thimphu	47	95.92	2	4.08	49	10.4
Samthang TTI	35	76.09	11	23.91	46	9.8
Thimphu TTI	21	77.78	6	22.22	27	5.8
<b>Total</b>	<b>336</b>	<b>71.64</b>	<b>133</b>	<b>28.36</b>	<b>469</b>	<b>100</b>





Among the graduates of 2020, the majority (55.65% of graduates) were between the ages of 22 and 24 with only 3.2% of graduates in the age group of 28 to 32 (Fig 3.1).

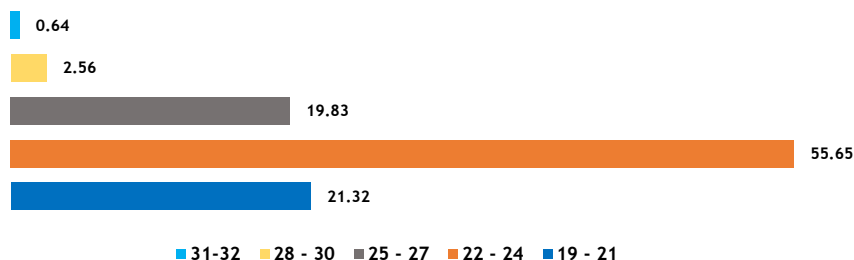


Fig 3.1: Age distribution of 2020 graduates

### Academic Qualification

According to table 3.2 the majority of graduates had completed class X (53.63%) before enrolling in TVET, followed by those who had completed class XII (45.73%).

Table3.2: Academic qualification of 2020 graduates

Academic Qualification	Female		Male		Total	
	n	%	n	%	n	%
Below class 10	1	50	1	50	2	0.43
Class 10	85	33.86	166	66.14	251	53.63
Class 12	47	21.96	167	78.04	214	45.73
Ex-monk	0	0	1	100	1	0.21
Total	133	28.42	335	71.58	468	100



### Parental Socio-Economic Background

The majority (68.66%) of graduates came from agricultural (farming) families (Table 3.3). This supports the claim that young people from farming, rural and lower socio-economic backgrounds are more likely to enroll in public TVET programs. Another reason could be the presence of a higher proportion of farming families in the Bhutanese population as a whole. The data suggests that TVET has remained more of a social policy response than a prominent part of national economic policy.

Table 3.3: Occupations of parents/guardians

Occupations of parents/guardians	Freq.	Percent
Farmer (agriculture)	322	68.66
Civil servant	53	11.3
Armed force	32	6.82
Private employee	21	4.48
Corporate employee	19	4.05
Business	11	2.35
Monastic Educational (example: gomchen)	4	0.85
<b>Other (please specify)</b>		
House wife	2	0.43
Expired	1	0.21
Artist	1	0.21
Retired arm force	1	0.21
Retired police man	1	0.21
Taxi driver	1	0.21
<b>Total</b>	<b>469</b>	<b>100</b>

The education status of graduate's parents (both father and mother) further supports the claim that most TTI and IZC graduates belong to the low socio-economic households. Tables 3.4 shows that the majority of their parents did not have any formal education.



Table 3.4: Educational Qualification of father/mother

Educational Qualification	Father		Mother	
	n	%	n	%
No education	293	62.61	390	83.33
Primary (Class I-VI)	71	15.17	38	8.12
Don't know	25	5.34	14	2.99
Lower secondary (Class VII-VIII)	23	4.91	5	1.07
Middle secondary (Class IX-X)	13	2.78	3	0.64
Monastic education	11	2.35	1	0.21
Non-formal education	8	1.71	16	3.42
Higher secondary (Class XI-XII)	8	1.71	1	0.21
Academic Diploma	4	0.85	0	0
Academic Degree	3	0.64	0	0
Master	1	0.21	0	0
Total	468	100	468	100

### Spatial Distribution of Graduates

Graduates' spatial distribution was determined using data provided by respondents, which included their present address. The present address included gewog/Thromdes and Dzongkhag. The information was compiled on a Dzongkhag level. The vast majority of graduates were concentrated in the two Dzongkhags of Thimphu and Sarpang, regardless of their work status (where they lived at the time of the survey). This highlighted the spatial disparities in the distribution of economic sectors that can hire TTI and IZC graduates.

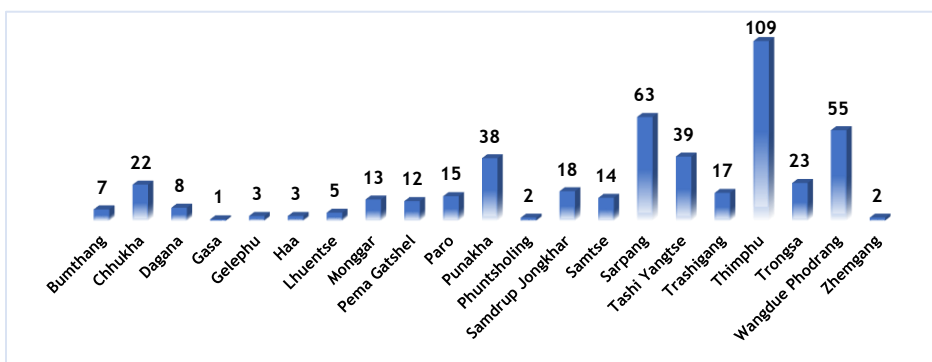


Fig 3.2: Present address of graduates



### Graduates Dzongkhag of Origin

The distribution of graduates by Dzongkhag of origin is shown in Table 3.5. In contrast to the previous scenario, where the majority of graduates lived in Thimphu Dzongkhag, the graduate's distribution by Dzongkhag of origin showed that Pema Gatshel dzongkhag had the largest number of graduates (67) followed by Samdrup Jongkhar Dzongkhag with 53 number of graduates.

Table 3.5: Dzongkhag Origin of Graduates

Dzongkhag	Male	Female	Total
Bumthang	5	1	6
Chhukha	25	12	37
Dagana	19	5	24
Gasa	1	0	1
Haa	1	1	2
Lhuentse	17	1	18
Monggar	19	15	34
Paro	6	0	6
Pema Gatshel	43	24	67
Punakha	6	9	15
Samdrup Jongkhar	40	13	53
Samtse	29	6	35
Sarpang	27	10	37
Thimphu	9	2	11
Trashigang	29	12	41
Trashi Yangtse	20	3	23
Trongsa	9	5	14
Tsirang	16	9	25
Wangdue Phodrang	7	1	8
Zhemgang	7	4	11
Total	335	133	468



### After School Aspiration and Plans of Graduates

The graduates were questioned about their after-school plans and aspirations, or what they wanted to do after completing their middle or higher secondary schooling. 46.1% of graduates aspired to join in Technical Training Institutes/Institute of Zorig Chusum to pursue TVET education, while the rest (53.9%) had other plans in mind, such as 'Search for Job' (19.5%), 'Continue Education (17.8%), 'Start a Business (6 percent), and so on.

Table 3.6: After School Aspirations and Plans of Graduates

After School Plans	Male		Female		Total	
	n	%	n	%	n	%
Join TTI/IZC	153	46	62	46.6	215	46.1
Search for a job	63	18.9	28	21.1	91	19.5
Continue education	60	18	23	17.3	83	17.8
Take up business	23	6.9	5	3.8	28	6
Go for overseas employment	13	3.9	9	6.8	22	4.7
Join Desuung	6	1.8	1	0.8	7	1.5
Attend training in private Institutes	5	1.5	2	1.5	7	1.5
Do nothing	5	1.5	1	0.8	6	1.3
Take up an agriculture	3	0.9	0	0	3	0.6
Join military	0	0	2	1.5	2	0.4
Get married and settle	1	0.3	0	0	1	0.2
Participate in Local Governance	1	0.3	0	0	1	0.2
Total	333	71.5	133	28.5	466	100



### TVET Exposures in School

Around 36% of graduates reported pursuing TVET subjects/joining the vocational club in school prior to enrolling in TVET programs at TTIs/IZCs/CZC.



**Fig 3.3: School-TVET exposures among graduates**



## Section IV

### Technical and Vocational Education and Training

This section presents the results of descriptive analyses on graduates' training institutions, as well as their reasons for choosing TVET, course preferences, level of training, and other information, such as their opinions on discontinuing the training.

#### Distribution of graduates by Gender in TTIs, IZC and CZC

The gender distribution of graduates across TTIs and IZCs is shown in Table 4.1. JWPTI-Dekiling reported the highest number of graduates, accounting for around 20.9% of all graduates, whereas Thimphu TTI recorded the lowest (5.8%) and the lack of hostel facility appears to have had an impact on enrolment. Males made up 71.6% of the graduates, while girls made up 28.4% of the graduates in 2020. Of all institutes, TTI-Chumey had the highest female representation.

Table 4.1: Distribution of graduates by institute and gender

TTIs/IZC/CZC	Male		Female		Total	
	n	%	n	%	n	%
JWPTI-Dekiling	69	70.4	29	29.6	98	20.9
TTI Chumey	43	52.4	39	47.6	82	17.5
CZC-Trashiyangtse	49	83.1	10	17	59	12.6
TTI-Rangjung	39	68.4	18	31.6	57	12.2
TTI-Khuruthang	33	64.7	18	35.3	51	10.9
NIZC-Thimphu	47	95.9	2	4.1	49	10.4
Samthang TTI	35	76.1	11	23.9	46	9.8
Thimphu TTI	21	77.8	6	22.2	27	5.8
Total	336	71.6	133	28.4	469	100



## Graduates by TVET Courses

Out of 20 courses recorded, the highest number of graduates (12.6%) have completed the course in Patra (Wood Carving) followed by courses in Electrical (12.2%), Masonry (11.1%), Plumbing (10 %) and Mechanical welding with 9.4% of total graduates (Table 4.2). The least popular courses were on Heavy Earth Mover Operation and Trezo (Gold and Silver smith).

Table 4.2: Graduates by courses

Course	Female	Male	Total	
			Freq.	Percent
Patra (Wood Carving)	10	49	59	12.6
Electrical	21	36	57	12.2
Masonry	23	29	52	11.1
Plumbing	29	18	47	10
Mechanical Welding	7	37	44	9.4
Automobile	6	28	34	7.2
Carpentry	5	15	20	4.3
Mechanical Fitting	5	15	20	4.3
Shingtsen (Traditional Painting)	1	17	18	3.8
Transmission & Distribution Lineman	4	13	17	3.6
Automobile Mechanical	10	21	17	3.6
Lhadri (Mural Painting)	1	15	16	3.4
Computer Hardware and Networking	7	6	13	2.8
Jimzo (Sculpture)	0	13	13	2.8
Furniture Making	3	8	11	2.3
Automobile Electrician	1	6	7	1.5
Heavy Vehicle Driving	0	7	7	1.5
Trezo (Gold & Silversmith)	0	2	2	0.4
Heavy Earth Mover Operation	0	1	1	0.2
Total	133	336	469	100





### TVET Courses and Level (Mode of Delivery)

All the 2020 graduates had obtained TVET certification at the National Certificate II and National Certificate III level. More than 72 percent of graduates had completed TVET certification in National Certificate II, while the remaining 28 percent of graduates had completed TVET certification in National Certificate III (Fig 4.1).

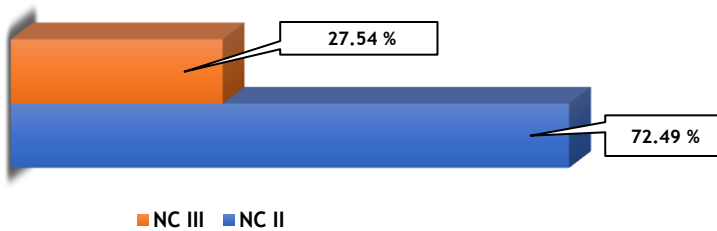


Fig: 4.1: Graduates by certification level

### Course Completion Within Required Duration

The graduates were questioned if they were able to finish their course within the required duration. About 23% of them reported that they didn't complete the course within the required duration (Fig 4.2).



Fig 4.2: Course completed or not within the required duration



### Reason for Not Completing the Course Within the Required Duration

More than 94 percent of graduates were unable to complete their courses in the time allotted because of covid 19 epidemic. 'Domestic issues,' 'Didn't qualify in the assessment,' 'Job offer during training,' 'Health issue,' and 'Institute disciplinary issue' are some of the other minor reasons cited by the graduates.

Table 4.3: Reason for not completing course on time

Reasons	Freq.	Percent
Due to the pandemic	100	94.34
Domestic issues	2	1.89
Didn't qualify in the assessment	1	0.94
Got job offer during the training	1	0.94
Health Issue	1	0.94
Institute disciplinary issue	1	0.94
<b>Total</b>	<b>106</b>	<b>100</b>

### Main Reason for Choosing TVET

Graduates were asked why they have chosen TVET and what drove them to do so. Around 29% of graduates have taken TVET because it was something they were strongly interested in. Overall, more than 27% of graduates opted for TVET believing that the TVET graduates have a better job market potential (easier to get job) and better career progression. Their parents or relatives had an impact on about 13% of them. About 6% of graduates got enrolled in TVET since there were no other options for them (Table 4.4). Other reasons are shown below.

Table 4.4: Reason given by graduates for choosing TVET

Motive behind choosing TVET	Freq.	Percent
I had a strong interest in TTI/IZC	136	29
Easy to get job after completing the TVET training	68	14.5
A better career growth for TVET graduates	63	13.43
Advice from parents/relatives	62	13.22
I had no option	31	6.61
Inspired by His Majesty's giving importance in TVET	27	5.76



Motive behind choosing TVET	Freq.	Percent
Business opportunity for TTI/IZC graduates	25	5.33
Inspired by TTI/IZC graduates	21	4.48
Free training was available	15	3.2
Affordable for my family/ guardian	11	2.35
Influenced by friends	9	1.92
Availability/quality of accommodation	1	0.21
Total	469	100

### Course Undertaken/Not Undertaken as per The Graduates Preference

The responses to the question, "Did you take up the training/course you were actually interested in?" show that 80 percent of 2020 graduates had taken courses as per their interest, while 20 percent of the graduates had taken courses that were not their first choice (figure 4.3).

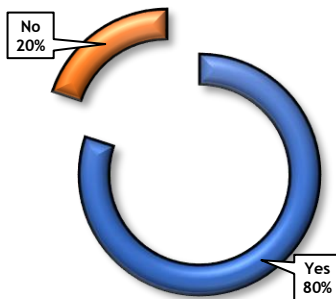


Fig 4.3: Did you take up the course you were actually interested in?

### Graduates Preferred Courses

In table 4.5, respondents who did not get to take the course of their choice, listed a total of 17 preferred courses. Electrical (36), Masonry (11), Plumbing (10) and Mechanical welding (5) were the most preferred courses among graduates. The table below shows the additional preferred courses of the respondents.



Table 4.5: Preferred courses of graduates by gender

Preferred courses	Male	Female	Total
Electrical	30	6	36
Masonry	7	4	11
Plumbing	4	6	10
Mechanical Welding	4	1	5
Computer Hardware and Networking	2	2	4
Jimzo (Sculpture)	4	0	4
Lhadri (Mural Painting)	4	0	4
Shingtsen (Traditional Painting)	3	0	3
Hydropower Mechanical	2	1	3
Auto Denting	2	0	2
Automobile (Mechanic)	2	0	2
Carpentry	1	1	2
Mechanical Fitting	2	0	2
Patra (Wood Carving)	2	0	2
Furniture-Making	0	1	1
Heavy Vehicle Driving	1	0	1
Hydropower Transmission and Distribution Linemen	1	0	1
Total	71	22	93

### Reason for Not Being Able to Take the Preferred Courses

There were four reasons reported for not being able to enroll in the courses of their choice (figure 4.4). The ‘in-take capacity,’ which is dependent on institutional capacity and resource availability, was the most often mentioned reason given by the respondents.

More than 53% of graduates were unable to enroll in the course of their initial preferences since the in-take capacity of the course was already filled. The non-availability of courses that met their initial preferences was the second most prevalent reason provided.



Surprisingly, 8.2% of graduates refused to pursue their preferred course despite the fact that it was accessible due to the institute’s location. Approximately 2.7 percent of graduates were forced to drop out of their first choice course owing to last-minute influence from others.

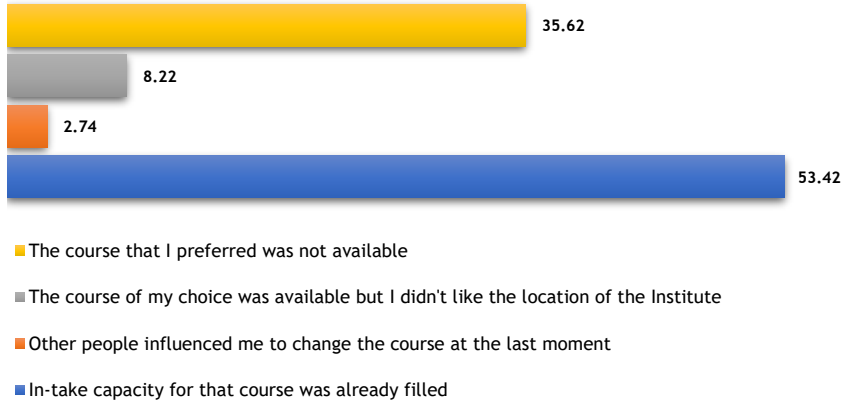


Fig 4.4: The graduate’s reason for not taking up the course of their choice

### Thought of Discontinuing the Training

Around 7.46 percent of graduates said that they considered canceling their training during the course of their training, with 82.9 percent being male and 17.1 percent being female.

Table 4.6: Considered discontinuing training

Thought of discontinuing the training	Male		Female		Total	
	n	%	n	%	n	%
Yes	29	82.9	6	17.1	35	7.46
No	307	70.7	127	29.3	434	92.5
Total	336	71.6	133	28.4	469	100



### Reason for Thinking to Quit Training

There were eleven reasons given by 7.46% of graduates who considered canceling their training. More than 34% of graduates considered canceling the training because they realized they would have a difficult time finding good jobs after the training. Similarly, more than 17% of graduates considered canceling the training after feeling that the training is physically challenging.

On the other hand, an offer of an employment (10.34%) and a bad feeling towards institute management (10.34%) factors that influenced their interest in pursuing the training. The other reasons given by graduates are listed in descending order in the figure below.

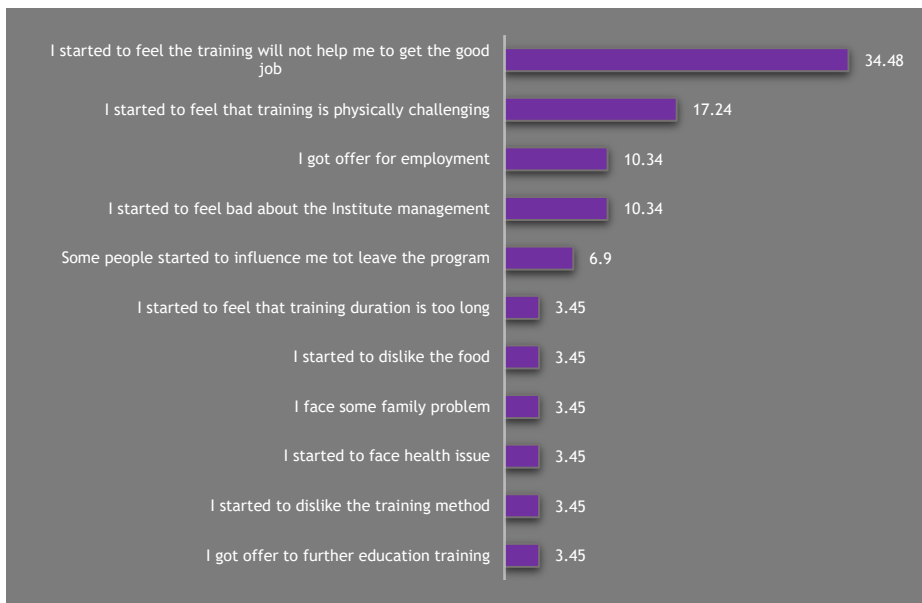


Fig: 4.5: Reason for thinking to discontinue the training



## Soft Skills Training

If TVET trainees are to be more competent in the real world of work, they must be provided with the appropriate set of soft skills in addition to the core technical skills. This is critical in light of the changing workplace environment.

According to UNESCO (IBE 2013), soft skills is defined as "A set of intangible personal qualities, traits, attributes, habits, and attitudes that can be used in many different types of jobs." The TTIs and IZCs have integrated and introduced soft skills such as English, Mathematics, Dzongkha, ICT, Entrepreneurship, value education, environmental science, and counseling into technical and vocational education. Some institutes have been able to fully implement these programs, while others are only just getting started owing to the shortage of instructors/teachers.

The graduates were asked to choose those job-relevant soft skills that they had learned during their training or on their own. They were given the option of selecting two of the most critical soft skills. Some graduates, however, chose more than two responses, resulting in a total of 1501 responses. The graduates' top five important soft skills that are relevant to job are 'Team work,' 'Self-confidence,' 'Work ethics,' 'Time management,' and 'Positive attitude,' with percentages of 12.92, 11.99, 11.79, 9.19, and 8.33, respectively (Table 4.7).

Table 4.7: Soft skills relevant to job

Soft skills	Freq	Percent
Team work	194	12.92
Self-confidence	180	11.99
Work ethics	177	11.79
Time management	138	9.19
Positive attitude	125	8.33
Communication	94	6.26
Self-motivation	81	5.40
Decision making	68	4.53
Interpersonal skills	67	4.46
Critical thinking	59	3.93
Self-management	49	3.26
Leadership	47	3.13



Soft skills	Freq	Percent
Initiative	32	2.13
Flexibility	28	1.87
Ability to network	24	1.60
Organization	23	1.53
Cultural fitness	22	1.47
Emotional awareness	20	1.33
Negotiation	20	1.33
Innovation	19	1.27
Accountability	17	1.13
Stress management	17	1.13
Total	1501	100

### Institute and Graduate Ties

Graduates were asked, "How would you like to stay in touch with your previous TVET institute?" The majority of respondents indicated a desire to do so through social media forums (52.61%) followed by Alumni group, Personal contact with staff, Through the institute's newsletter/magazine and Convocation (Table 4.8).

Table: 4.8: Graduates preferred medium to keep contact with institute

Institute-graduate ties	Freq.	Percent
Social media forums	242	52.61
Alumni group	101	21.96
Personal contacts with the staff	94	20.43
Through the institute's newsletter/magazine	18	3.91
Convocation	5	1.09
Total	460	100





## Section V

### Retrospective Assessment of Training Institutions and Programmes

This section presents the findings of a retrospective assessment of different components of Training institutions and programmes. The components are grouped under four major categories;

1. Teaching and learning conditions at TTIs/IZC/CZC.
2. Quality of food, hostel and other facilities in the institute.
3. Leadership and management in the institute.
4. Other training components.
5. Relevancy of Knowledge and skill acquired with the current job.

The retrospective assessment occurs at the end of the training or after a few years through self-assessment of various training components and institutions. Such evaluation is critical in order to (i) identify areas of training deficiency, (ii) assess training effectiveness and adequacy, and (iii) make appropriate decisions for corrective measures and improvement.

The questions generated ordinal level data because each Likert-scale question was built on a four-scale and five-scale response item (checked). Each response item was assigned a value of 1-Very Poor (VP), 2-Poor (P), 3-Good (G), and 4-Very Good (VG). Similarly, for a five-scale response, the item was assigned the values 1-Not at all relevant (NAR), 2-Not relevant (NR), 3-Somewhat relevant (SR), 4-Relevant (R), and 5-Very relevant (R) (VR).

#### Teaching and learning Conditions in the Institutes

In almost all of the teaching and learning conditions, the majority of graduates chose ratings of 'Good' and 'Very Good'. The mean for all components indicates that the graduates were satisfied with all of the learning and teaching conditions on average. However, the component '**Supply of learning materials (e.g., text books & other stationaries)**' received the highest rating of 'Poor' and 'Very Poor' (Table 5.1).



Table 5.1: Graduates assessment on teaching and learning conditions

Components	VP	P	Total VP+P	G	VG	Total VG+G	T	M
Quality of classroom learning (theory)	11	28	39	275	153	428	467	3.20
Quality of practical learning	5	22	27	265	173	438	465	3.30
Supply of learning materials (e.g., text books & other stationaries)	22	90	112	273	80	353	465	2.87
Availability of technical equipment (e.g., lab equipment, measuring instruments, computer lab)	15	70	85	278	102	380	465	3.00
Quality of training equipment	11	74	85	285	96	381	466	2.99
Teaching methods of instructor	1	9	10	236	220	456	466	3.45
Classrooms (size, light and noise condition, location)	20	50	70	249	147	396	466	3.12
Workshop (size, light and noise condition, location)	25	57	82	270	112	382	464	3.00
Quality of soft-skills learning (English, Dzongkha, ICT, etc.)	10	34	44	315	97	412	456	3.09

### Quality of Food, Hostel and Other Facilities in the Institute

The assessment on the quality of food, hostel, and other facilities in the institutes indicates that the graduates were generally satisfied with all of the services provided under this component. However, the 'Quality of food' and 'Internet accessibility' components received the highest ratings of 'Poor' and 'Very poor,' with a mean of 2.53 and 2.66 respectively (Table 5.2).

Table 5.2: Graduates assesment on quality of food and other facilities

Components	VP	P	Total VP+P	G	VG	Total VG+G	T	M
Quality of hostel facilities	13	55	68	188	76	264	332	2.98
Quality of food	29	117	146	163	23	186	332	2.53
Transportation facilities	36	73	109	288	63	351	460	2.90



Components	VP	P	Total VP+P	G	VG	Total VG+G	T	M
Recreational facilities in the campus	26	92	118	282	61	343	461	2.83
Hygiene and sanitation facilities	9	57	66	327	71	398	464	3.03
Safety conditions during practical training (helmet, goggles, etc.)	11	40	51	252	163	415	466	3.24
Internet access	57	112	169	213	83	296	465	2.66
Books in the library	9	61	70	295	100	395	465	3.03
COVID safety protocols (Signages, hand washing stations, etc.)	3	12	15	271	180	451	466	3.32

*\*The quality of hostel facilities and the quality of food components received fewer responses than other components, owing to Thimphu TTI's lack of boarding facilities, while TTI Samthang and CZC Tashi Yangtse failed to collect responses on these two services provided.*

### Institute's Leadership and Management Quality

Through the assessment of the institute's leadership and management quality, the 'trainees' involvement in the institute's decision-making' received the highest number of 'Poor' and 'Very poor' ratings, with 117 graduates in total (Table 5.3).

**Table 5.3: Assessment on institute's leadership and management quality**

Components	VP	P	Total VP+P	G	VG	Total VG+G	T	M
Institute's leadership and management quality	32	40	72	287	108	395	467	3
Trainees' involvement in the institute's decision-making	42	75	117	281	67	348	465	2.80
Institute Discipline	11	26	37	293	136	429	466	3.18
Trainees Welfare	21	44	65	323	78	401	466	2.98
Cooperation with the local community	9	39	48	320	99	419	467	3.08
Career counselling	19	49	68	306	87	393	461	2.99



## Training Components

The **OJT-on the job training** component received the highest rating of "Good" and "Very good" out of all the services and learning delivered under this component. The **Institute Support for Trainee Job Searches**, on the other hand, received the lowest rating of 'Poor and Very Poor' (Table 5.4).

Table 5.4: Graduates assessment on training components

Components	VP	P	Total VP+P	G	VG	Total VG+G	T	M
Industrial tour	29	57	86	260	111	371	457	2.99
Soft skills (English, Math, ICT & Dzongkha)	12	35	47	319	92	411	458	3.01
Entrepreneurship	13	45	58	274	70	344	402	2.95
On-the-Job-Training (OJT)	13	13	26	282	149	431	457	3.23
Institute support to trainees' employment/job searches	33	70	103	242	120	362	465	2.94

*\*Note: The 'Entrepreneurship' and 'Environment Science' has less respondent compared to other components because TTI samthang has no respondent on 'Environment Sciene while TTI rangjung has no respondent on both the components.*

### Top five training components, facilities and programmes in institutes with highest rating of 'Poor' and 'Very Poor'.

1. **Internet Access:** In all TTIs, IZCs, and CZCs, free wi-fi is available. The component, on the other hand, received the highest ratings of 'Poor' and 'Very poor.' As a result, the institute should pay special attention to enhancing internet connection in light of the growing importance of digital learning.
2. **Quality of food:** The poor food quality rating calls for an increase in the stipend to improve the food quality at the institutes.
3. **Recreational facilities in campus:** Recreational activities can help you enhance your physical health, emotional health, and cognitive performance. It also allows you to socialize with your peers. However, one of the components that received a poor assessment was the recreational amenities on campus. It could be due to a lack of enough area in a campus.



4. **Trainees’ involvement in the institutes decision making:** For proper functioning of institutes discipline and other management policies, it is important for institute to include the representative from the trainees’ in institute decision making. The poor rating is also high in this component thereby highlighting the importance trainees’ inclusion in institutes decision making.
5. **Supply of learning materials:** It is critical to have a timely supply of learning materials (textbooks, tools, and equipment) in order to make training more successful and productive. The Quality Management System (QMS) requires each TTI and IZC to meet a set of tool and standards for each course as part of the quality assurance and standard processes. However, the distribution of teaching materials may have been delayed due to a lack of funding and lengthy processes.

### Relevancy of Knowledge and Skill Acquired with the Current Job

The graduates rated 'practical learning' and 'on-the-job-training (OJT)' as the two most important relevant training components with a mean of 4.28 and 4.18 respectively. The 'Environmental Science', on the other hand, has the lowest relevancy, with a mean of 3.18. (Table 5.5).

Table 5.5: Graduates assesment on relevancy of acquired skills with the job

Components	NAR	NR	SR	R	VR	T	M
Theoretical learning	12	8	77	243	123	463	3.96
Practical learning	4	8	45	207	199	463	4.28
Industrial tour	16	37	90	206	99	448	3.72
On-the-Job-Training (OJT)	9	15	39	205	182	450	4.18
Industrial attachment	9	30	79	231	93	442	3.84
Soft skills (English, Math’s, ICT & Dzongkha)	25	49	115	192	68	449	3.51
Entrepreneurship course	15	40	88	227	79	449	3.65



Graduates were also asked to give an overall assesment on the quality of training they received. Figure 5.1 shows how 2020 graudates rated the overall quality of TVET programs.

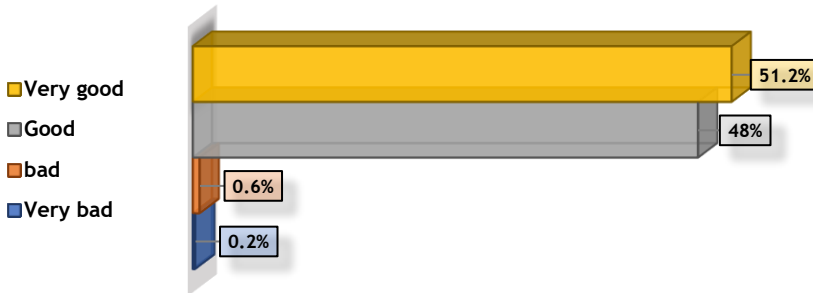


Fig: 5.1: Graduates assesment on overall quality of training

Graduates were also asked to rate the overall relevancy of their training programs to their actual work experiences. A higher percentage of graduates (54.8 and 32.6%) rated the overall relevance as "Good" and "Very good" respectively.

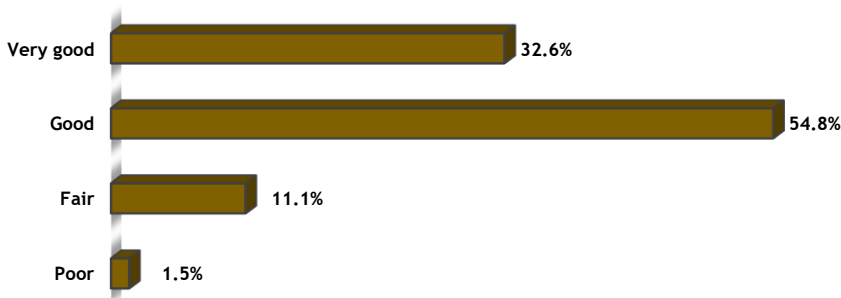


Fig 5.2: Graduates assesment on relevancy of training to the job



## Section VI

### Work Based Training-OJT (On-The-Job-Training)

Skill mismatch, which is caused by a mismatch between institute training and the actual world of work is one of the leading causes of unemployment among TVET graduates. Combining work-based training and classroom learning is an effective technique for avoiding skill mismatch. Work-based learning provides trainees with the skills and experience they need to succeed on the job.

In TTIs/IZC/CZC, the training programs are systematic teaching-learning procedures that involve specific practical lessons. On-the-Job-Training (OJT) is delivered as part of the overall training programs to enhance the institute's practical courses. OJT refers to learning phases that occur outside of the routine institutional training context.

These learning programs are considered to provide trainees with opportunities for individual learning as well as the acquisition of relevant occupational competence and personal experiences. This section contains OJT-related questions and answers about the location of OJT, the duration of OJT, the benefits of OJT, and the problems encountered during OJT.

#### On-the-job-training (OJT)

More than 96 percent of 2020 graduates have attended on-the-job training programme. The remaining graduates who stated that they did not participate in the OJT may have taken courses that did not include an OJT component.



Fig 6. 1: Whether graduates attended OJT or not



## OJT Duration

The average duration for OJT is three months. Table 6.1 displays the course-by-course evaluation of the existing three-month duration of OJT. Patra (78%), Plumbing (78.3%), and Electrical (68.8%) are the top three courses that are satisfied with the current OJT duration of three months. On the other hand, the top three courses that are not satisfied with the existing OJT duration are Masonry (44.2%), Automobile (58.8%), and Mechanical Fitting and Electrical with 15% each.

Table 6.1: Assessment on OJT duration by course

Courses	Yes	%	No	%	Total
Patra (Wood Carving)	46	78	13	22	59
Masonry	29	55.8	23	44.2	52
Electrical	33	68.8	15	31.3	48
Plumbing	36	78.3	10	21.7	46
Mechanical Welding	30	68.2	14	31.8	44
Automobile	14	41.2	20	58.8	34
Automobile Mechanic	26	83.9	5	16.1	31
Carpentry	13	65	7	35	20
Mechanical Fitting	5	25	15	75	20
Shingtsen (Traditional painting)	6	35.3	11	64.7	17
Transmission & Distribution Linemen	11	64.7	6	35.3	17
Lhadri (Mural Painting)	6	37.5	10	62.5	16
Computer Hardware and Networking	11	84.6	2	15.4	13
Jimzo (Sculpture)	3	23.1	10	76.9	13
Furniture Making	9	81.8	2	18.2	11
Automobile Electrical	2	28.6	5	71.4	7
Trezo (Gold & Silver smith)	0	0	2	100	2
Heavy Earth Mover Operation	0	0	1	100	1
Total	280	62.1	171	37.9	451





### Preferred OJT Duration

Respondents who were dissatisfied with the existing OJT duration specified the OJT duration of their choice in table 4.5. Among graduates who are dissatisfied with the OJT duration, 58.48% want to extend the OJT duration beyond the current duration of three months. The remaining 41.52% of graduates want the OJT duration to be shorter than the existing OJT duration.

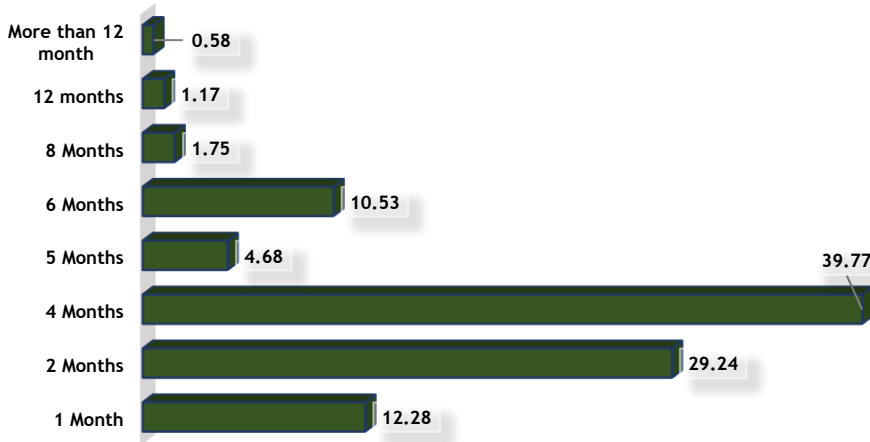


Fig 6.2: Graduates preferred OJT duration

### OJT Placement by Dzongkhag

The OJT placement of 2020 graduates is shown in Table 6.2 by dzongkhag. Sarpang dzongkhag had the highest OJT placement rate of 20.2 percent among the 17 dzongkhags, followed by Thimphu dzongkhag with 18.8 percent. Dagana, Lhuentse, Samtse, Zhemgang, and Mongar are among the dzongkhags with the lowest OJT placement.



Table 6.2: OJT placement by dzongkhag

Dzongkhag	Freq.	Percent
Bumthang	29	6.4
Chhukha	49	10.9
Dagana	2	0.4
Lhuentse	6	1.3
Mongar	8	1.8
Paro	67	14.9
Pemagatshel	21	4.7
Punakha	27	6.0
Samdrupjongkhar	10	2.2
Samtse	2	0.4
Sarpang	91	20.2
Trashiyangtse	13	2.9
Thimphu	85	18.8
Trashigang	13	2.9
Trongsa	8	1.8
Wangduephodrang	16	3.5
Zhemgang	4	0.9

### Perceived Benefits of OJT

Table 6.3 highlights the benefits of OJT. The OJT is expected to serve three major purposes: practical training for trainees, increased productivity of OJT provider firms/industries, and assisting industries in hiring future workers. Basically, OJT is intended to bridge the gap between TVET graduates' competence and job requirements.

Graduates were asked to agree or disagree with the pre-identified nine benefits of the OJT on a four-point scale (*SD: Strongly Disagree-1, D: Disagree-2, A: Agree-3, SA: Strongly Agree-4*).



The greatest benefit (highest number of ratings on 'Agree' and 'Strongly Agree') was in the form of 'Gain confidence in their work,' followed by 'Gain new skills.' The medium-rated benefits were gaining work experience, developing/refining skills, and assisting in the search for a good job. The monetary benefit 'Earned Money' was the least beneficial aspect.

The trainees also agreed on benefits such as "helped to explore good jobs," "helped to get job in same agency/company," "helped to develop contact with experts," and "handled new tools and equipment."

**Table 6.3: Reported benefits of OJT**

Benefits of OJT	SD	D	SD+D	A	SA	SA+A	T	M
Earned Money	120	144	264	126	51	177	441	2.25
Gained work experience	10	6	16	105	324	429	445	3.68
Developed and refined skills	13	3	16	170	259	429	445	3.53
Helped to explore good job	9	12	21	221	201	422	443	3.39
Helped to get job in the same agency or company	23	92	115	245	82	327	442	2.87
Helped to develop networks with the field experts	10	18	28	261	154	415	443	3.27
Helped to gain work confidence	8	3	11	187	246	433	444	3.51
Gain new skills	9	5	14	159	272	431	445	3.57
Handled new tools, equipment, and machineries	22	40	62	188	194	382	444	3.26

### Reported Problems Faced During OJT

Graduates were required to check/tick one major problem encountered during their OJT from a list of 12 pre-defined problems. The results are presented in table 6.4 and expressed in frequency and percentage. The majority of graduates cited 'Low stipend/allowance from the Institute ' as the most significant issue they encountered during their OJT with 44.67% of total. More than 22% of graduates have never faced any issues during the OJT.



Approximately 34% of graduates identified 10 problems and it is listed in descending order in table below: Poor supervision and monitoring from the company/agency, Transportation, Accommodation, no payment for overtime work, given irrelevant task, Poor monitoring mechanism from the institute, Not given free time on weekends and government holidays, given too many tasks to perform (beyond curriculum), looked down by others in the company, and lack of conducive working environment.

Table 6.4: Reported problems faced during OJT

Problems	Freq.	Percent
Low stipend/allowance from the Institute	201	44.67
No issues	99	22
Poor supervision and monitoring from the company/agency	39	8.67
Transportation	30	6.67
Accommodation	27	6
No payment for overtime work	13	2.89
Given irrelevant task	11	2.44
Poor monitoring mechanism from the institute	8	1.78
Not given free time on weekends and government holidays	8	1.78
Given too many tasks to perform (beyond curriculum)	6	1.33
looked down by others in the company	4	0.89
Lack of conducive working environment	4	0.89



## Section VII

### Transition to Work and Employment

Every TVET trainee's ultimate goal is to get a meaningful job at the end of their training. The success of TVET programs can be determined by the quality and relevance of the training, as well as the labor market situation.

The primary goal of the tracer study is to examine the employment status of TVET graduates. This section focuses on the most important aspect of the tracer study. It attempts to answer a number of important questions;

- If you are currently employed, what is your designation?
- How long did it take for you to get first job?
- What was the level of income of TTI and IZC graduates?
- How did you know about your current job?
- Are they working in the jobs they were trained for?
- To what extent are you satisfied with your current job?
- What were the reasons for [their] being unemployed?

#### Designation/Occupation

The graduates were asked to provide information such as their designation, company location (Dzongkhag), monthly income, time lag to get first job, source of information, and job satisfaction if they were employed after completing their training irrespective of their employment status during the survey. Table 7.1 displays the various job titles held by TVET graduates in the workplace. The top three occupations are technician (15.18 percent), welder (11.52 percent), and mason (10.47 percent). The remaining occupations are listed in descending order in the table below.

Table 7.1: Graduates occupation/designation in the workplace

SIN	Designation	Male	Female	Total	%
1	Technician	18	11	29	15.18
2	Welder	18	4	22	11.52
3	Mason	11	9	20	10.47
4	Plumber	5	12	17	8.9
5	Mechanic	15	1	16	8.38



## Transition to Work and Employment

SIN	Designation	Male	Female	Total	%
6	Electrician	11	2	13	6.81
7	Labour	9	1	10	5.24
8	Carpenter	5	4	9	4.71
9	Tailor	0	8	8	4.19
10	Auto mechanic	6	1	7	3.66
11	Painter	7	0	7	3.66
12	Wood Carver	4	0	4	2.09
13	Automobile	3	0	3	1.57
14	Jimzop	3	0	3	1.57
15	Supervisor	2	1	3	1.57
16	Auto electrician	1	1	2	1.05
17	Furniture maker	1	1	2	1.05
18	Helper	2	0	2	1.05
19	Mechanical fitter	2	0	2	1.05
20	Sales girl	0	2	2	1.05
21	CEO	1	0	1	0.52
22	Assistant plant operator	1	0	1	0.52
23	Civil worker	1	0	1	0.52
24	Driver	1	0	1	0.52
25	Making power house	1	0	1	0.52
26	Manager	0	1	1	0.52
27	Store In charge	0	1	1	0.52
28	Trainee	1	0	1	0.52
29	Trezo	1	0	1	0.52
30	Warden	1	0	1	0.52
	Total	131	60	191	100

### Distribution of Graduates by Major Occupation Group (ISCO-08)

The International Standard Classification of Occupations (ISCO-08) of the International Labour Organization was used to classify and organize various job positions held by TTI and IZC graduates. Jobs were classified based on their reported job titles or positions.



## Transition to Work and Employment

The major occupational group 7: Craft and Related Trades Workers had the most graduates with a total of 71.73% followed by major occupational group 3: Technicians and Associate Professionals with 16.75% (Fig 7.1). Around 1.1% of graduates are under the occupational group of ‘Manager’ and they are assumed to be operating their own business.

The classification was done with care, but it may not have been done perfectly. Certain occupations were distinct and difficult to categorize under any of the ICSSO's major groups.

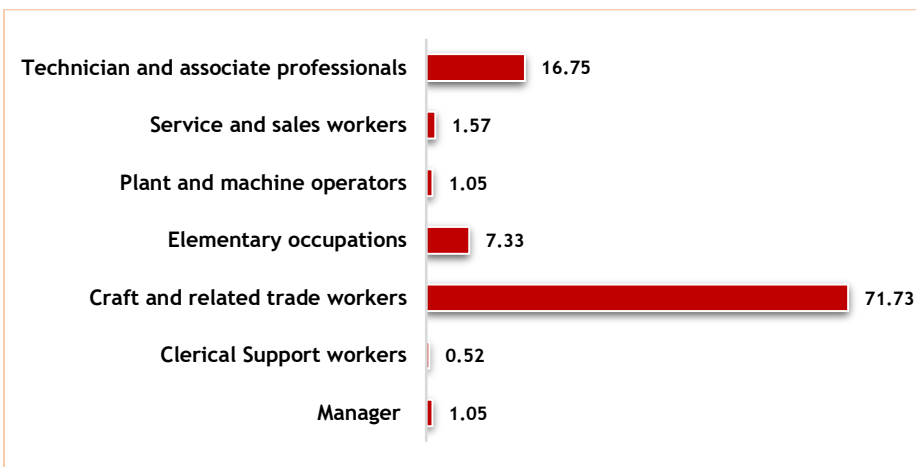


Fig 7.1: Major occupational group of graduates

Furthermore, graduate occupations were divided into sub-major occupational groups. According to Table 7.9, 95.29% of the graduates worked in sub-major occupations: 71, 72, 31, 74, 93, 75 and 73 in a descending order. **Building and Related Trades Workers (excluding Electricians)** was the most common sub-major occupation group.

Table 7.2: Distribution of occupations by sub-major occupational groups

Sub Major occupational group	Freq.	Percent
71 Building and Related Trades Workers (excluding Electricians)	54	28.27
72 Metal, Machinery and Related Trades Workers	42	21.99
31 Science and Engineering Associate Professionals	32	16.75
74 Electrical and Electronics Trades Workers	23	12.04



## Transition to Work and Employment

Sub Major occupational group	Freq.	Percent
93. Laborer in Mining, Construction, Manufacturing and Transport	13	6.81
75 Food Processing, Woodworking, Garment and Other Craft and Related Trades Workers	10	5.24
73 Handicraft and Printing Workers	8	4.19
52 Sales Workers	2	1.05
11 Chief Executives, Senior Officials and Legislators	2	1.05
43 Numerical and Material Recording Clerks	1	0.52
53 Personal Care Workers	1	0.52
81 Stationary Plant and Machine Operators	1	0.52
83 Drivers and Mobile Plant Operators	1	0.52
96 Refuse Workers and Other Elementary Workers	1	0.52
Total	191	100

The occupations were further broken down into ISCO's minor occupational group. Highest number of graduates were working under the minor occupational group '711 Building Frame and Related Trades Workers' followed by '311 Physical and Engineering Science Technicians'. The other occupations are listed in the table below.

Table 7.3: Distribution of occupation by minor occupational group

Minor occupational group	Freq.	Percent
711 Building Frame and Related Trades Workers	30	15.71
311 Physical and Engineering Science Technicians	29	15.18
721 Sheet and Structural Metal Workers, Molders and Welders and Related Workers	24	12.57
741 Electrical Equipment Installers and Repairers	23	12.04
723 Machinery Mechanics and Repairers	18	9.42
712 Building Finishers and Related Trades Workers	17	8.9
931 Mining and Construction labourer	12	6.28
731 Handicraft Workers	8	4.19
753 Garment and Related Trades Workers	8	4.19
713 Painters, Building Structure Cleaners and Related Trades Workers	7	3.66





Minor occupational group	Freq.	Percent
312 Mining, Manufacturing and Construction Supervisors	3	1.57
752 Wood Treaters, Cabinet-makers and Related Trades Workers	2	1.05
112 Managing Directors and Chief Executives	2	1.05
522 Shop Salespersons	2	1.05
432 Material Recording and Transport Clerks	1	0.52
531 Child Care Workers and Teachers' Aides	1	0.52
818 Other Stationary Plant and Machine Operators	1	0.52
833 Heavy Truck and Bus Drivers	1	0.52
932 Manufacturing labourer	1	0.52
962 Other Elementary Workers	1	0.52
Total	191	100

### Distribution of Employing Agency/Company

Table 7.4 shows the geographic distribution of the companies where graduates worked. The majority of the employing entities were based in Thimphu, Wangdue Phodrang, Punakha, Trongsa, Chukkha and Sarpang Dzongkhags.

Table 7.4: Location of company/agency by dzongkhag

Dzongkhag	Male		Female		Total	
	n	%	n	%	n	%
Bumthang	5	2.9	1	1.2	6	2.4
Chhukha	13	7.6	3	3.7	16	6.3
Gelephu	1	0.6	0	0.0	1	0.4
Lhuentse	1	0.6	1	1.2	2	0.8
Monggar	3	1.7	1	1.2	4	1.6
Paro	11	6.4	3	3.7	14	5.5
Pemagatshel	4	2.3	1	1.2	5	2.0
Punakha	12	7.0	13	15.9	25	9.8
Samdrup Jongkhar	9	5.2	3	3.7	12	4.7
Samtse	8	4.7	2	2.4	10	3.9
Sarpang	12	7.0	4	4.9	16	6.3



## Transition to Work and Employment

Dzongkhag	Male		Female		Total	
	n	%	n	%	n	%
Tashigang	5	2.9	1	1.2	6	2.4
Trashiyangtse	3	1.7	5	6.1	8	3.1
Thimphu	60	34.9	20	24.4	80	31.5
Trongsa	11	6.4	10	12.2	21	8.3
Wangdue Phodrang	13	7.6	14	17.1	27	10.6
Zhemgang	1	0.6	0	0.0	1	0.4
Total	172	100	82	100	254	100

### Time of Job Search

As illustrated in figure 7.2, the majority (72.96%) of graduates began looking for jobs only after graduation. More than 15% percent began looking for work during the time of training, and 11.85% did before graduation.

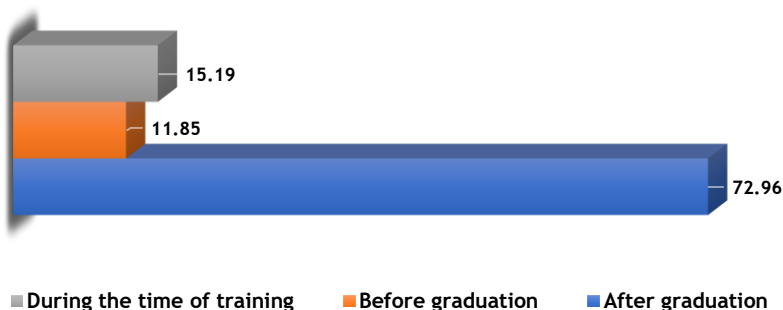


Fig 7.2: Time of job search

### Time lag to Get the Job After Graduation

If the transition to work and employment takes too long, it might result in financial difficulties, a loss of confidence, and disappointments. Furthermore, when there is a scarcity of suitable job opportunities in the private sector, the challenges become even more severe.



Many graduates tend to wait too long in anticipation of public-sector jobs. Figure 7.4 depicts data on how long it took for graduates to find work after completing the training. Around 67.8% of graduates reported getting job within three months of graduation. If a six-month gap is considered reasonable, approximately 90% of the graduates found work within six months after graduation.

Table 7.5: Time-taken to get job after graduation

Time taken	Male	Female	Total	Total (%)
Less than three months	121	58	179	67.80
Three months	15	3	18	6.82
Four months	9	7	16	6.06
Five months	3	2	5	1.89
Six months	15	6	21	7.95
More than six months and less than nine months	11	5	16	6.06
More than nine months and less than one year	2	2	4	1.52
Between one year and two years	3	1	4	1.52
More than two years	0	1	1	0.38
Total	179	85	264	100

### Monthly Income Among Graduates

Figure 7.10 shows the statistics for employed graduates based on their monthly salary level (in Nu. range). For the sake of simplicity, salary categorical ranges were used (respondent had to check the option of salary range). 22.64% of 2020 graduates who were employed reported earning a monthly salary of Nu.15,001-17000. More than 84% of employed graduates reported earning less than Nu. 19,000 per month. 0.75% of graduates were paid less than Nu. 5,000. The insignificant (0.38% of the total) earns more than Nu.55,000 per month.

Table 7.6: Distribution of graduated by monthly income earned

Monthly Income	Freq.	Percent
Under Nu. 5,000	2	0.75
Between Nu. 5001- Nu. 7,000	7	2.64
Between Nu.7,001 - Nu. 9,000	18	6.79
Between Nu. 9,001- Nu. 11,000	20	7.55



## Transition to Work and Employment

Monthly Income	Freq.	Percent
Between Nu.11,001 - Nu. 13,000	34	12.83
Between Nu. 13,001- Nu. 15,000	44	16.6
Between Nu. 15,001- Nu. 17,000	60	22.64
Between Nu. 17,001- Nu. 19,000	39	14.72
Between Nu. 19,001- Nu.21,000	26	9.81
Between Nu. 21,001- Nu. 23,000	7	2.64
Between Nu. 23,001- Nu. 25,000	1	0.38
Between Nu. 25,001- Nu. 27,000	2	0.75
Between Nu. 27,001- Nu. 30,000	2	0.75
Between Nu. 30.001- Nu. 35,000	2	0.75
Above Nu. 55,000	1	0.38

### Source of Job Information

The major sources of job information for graduates were friends and family members (42.75%). Around 13.01% of the employed graduates were approached by an employer. As stated in table 7.7, some other major sources included online advertisements, through employment service centers and Ministry of Labour and Human Resources website.

Table 7.7: Source of Job information for graduates

Source of Information	Freq.	Percent
Friends/Family members	115	42.75
Through the employment service centers	12	4.46
BBS TV advertisement	3	1.12
Print media advertisement	7	2.6
Online advertisement	32	11.9
On-Campus Recruitment	18	6.69
I was approached by an employer	35	13.01
I established contacts while working during the course of study	10	3.72
Ministry of Labour and Human resources website	27	10.04
Door-to-door job hunting	10	3.72



### Ease of Getting Relevant Jobs

The question 'Was it easy for you to find a job related to your training/course?' was intended to infer the ease of getting relevant jobs. Table 7.8 shows that more than 65.2% of graduates found the relevant jobs. Whereas the remaining 34.8% of them found it difficult to get the jobs related to their training. The results still suggest the need to improve the link between the TVET and labour market.

TTI Chumey has majority of graduates who found the relevant jobs as well the graduates who found it difficult to get the relevant jobs with 25.6% and 28.7% respectively.

Table 7.8: Ease of getting job related to training by institutes

Institutes	Yes		No		Total	
	n	%	n	%	n	%
TTI Chumey	45	25.6	27	28.7	72	26.7
JWPTI-Dekiling	28	15.9	17	18.1	45	16.7
TTI-Khuruthang	19	10.8	14	14.9	33	12.2
TTI-Rangjung	20	11.4	13	13.8	33	12.2
CZC-Trashiyangtse	24	13.6	7	7.4	31	11.5
Samthang TTI	15	8.5	9	9.6	24	8.9
Thimphu TTI	17	9.7	4	4.3	21	7.8
NIZC-Thimphu	8	4.5	3	3.2	11	4.1
Total	176	65.2	94	34.8	270	100



## Employment Status During the Survey

A question was asked to determine whether or not they were working at the time of the survey. The question was answered by a total of 428 graduates. 45.56 percent are employed, leaving 54.44 percent unemployed. The male to female employment ratio is 72.31 percent for males and 27.69 percent for women (Table 7.9).

Table 7.9: Employed/unemployed during the survey

Employment Status (during survey)	Male		Female		Total	
	n	%	n	%	n	%
Employed	141	72.31	54	27.69	195	45.56
Unemployed	171	73.39	62	26.61	233	54.44
Total	312	72.90	112	27.10	428	100
Missing	24	58.54	21	41.46	41	100

The percentage distribution of graduates by employment status (employed/unemployed) across the TTIs and IZCs is given in table 7.10. TTI Chumey has the highest employment rate with 64.41% followed by TTI Khuruthang with 62.75%. On the other hand, NIZC-Thimphu has the highest unemployment rate of 79.17%.

Table 7.10: Employed/unemployed during the survey by institutes

Institute	Employed		Unemployed		Total
	Freq.	%	Freq.	%	
CZC-Trashiyangtse	18	36	32	64	50
NIZC-Thimphu	10	20.83	38	79.17	48
TTI Chumey	38	64.41	21	35.59	59
JWPTI - Dekiling	37	40.22	55	59.78	92
TTI-Khuruthang	32	62.75	19	37.25	51
TTI-Rangjung	23	41.07	33	58.93	56
Samthang TTI	22	47.83	24	52.17	46
Thimphu TTI	15	57.69	11	42.31	26
Total	195	45.56	233	54.44	428



### Job Satisfaction of Graduates

Figure 7.11 shows that 65.56 percent of the 2020 graduates were satisfied, 15.93 percent were not, 14.07 percent were extremely satisfied, and around 4.44 percent were not satisfied at all.

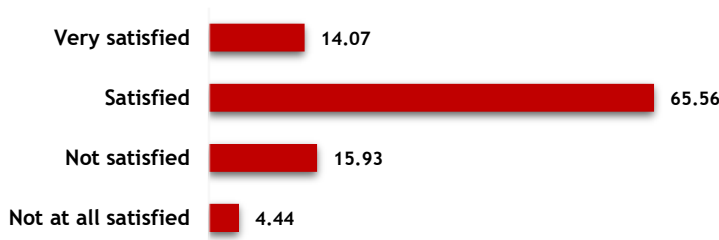


Fig 7.3: Job satisfaction among graduates

### Job Stability

The fundamental features of meaningful employment include job security, stability, and opportunities for advancement. When a person changes jobs, this is known as employment mobility. It can be interpreted in two ways: positively or negatively. Some employees may move occupations if they are unable to find stable and appealing positions or if their contract terms expire. Others may shift employment for reasons such as occupational mobility, increased earning potential, and so on.

According to figure 7.4, approximately 80% of graduates did not change careers after their first job. About 17% of them had worked in two jobs. As seen in figure 7.4, the remaining graduates had worked in three or more jobs.

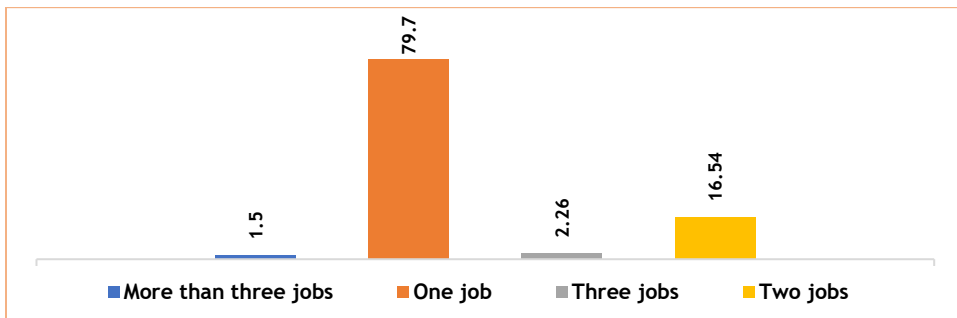


Fig 7.4: Employment mobility among the employed gradates



### Reason for Staying in Same Job

Graduates (who had not change their job) were asked to give two main reasons for their decision. There are a total of 213 reasons that have been reported. The results are shown in table 7.11. More than 35% of graduates did not change their job since the current position was related to their training. Similarly, 31.9% of graduates chose to continue in the same job because it provided them with many new learnings.

Only 9.86% of graduates stayed in the same job because of the high pay. About 1.88% of graduates said that they were compelled to stay in the same job. The remaining reasons are listed in the following table.

Table 7.11: Reason for staying in the same job

Reason for same Job	Freq	Percent
The job is relevant to the course I undertook	75	35.21
My job gives me many new things to learn	68	31.92
I can see good progress in my career	49	23
I like the job	47	22.07
I get training for re-skilling	45	21.13
High salary	21	9.86
My employer is good and supportive	21	9.86
I get free housing	18	8.45
There is the pension and provident fund provision	15	7.04
The workplace is close to my house	12	5.63
Conducive working environment	10	4.69
Family influence	8	3.76
I get good allowance	8	3.76
Friends' influence	5	2.35
Forced to stay in the same job	4	1.88
<b>Total</b>	<b>213</b>	<b>100</b>





### Reason for Changing Job

Graduates were also asked to give two main reasons for changing jobs. There was a total of 250 reasons recorded. "Low salary in my previous job" was cited as the primary reason for job switching (24%). Despite the fact that TVET graduates are typically paid more in developed countries, this is a widespread issue in the majority of poor countries. The second most common reason was a mismatch between the graduate's skill and the job he was assigned.

Other minor reasons include an unsupportive employer, a lack of housing allowance in a previous job, a domestic problem, family and friends' influence, a workplace that is too far away from home, and other employees looking down on them.

Table 7.12: Reasons for changing their job

Reason for job change	Freq	Percent
Low salary in my previous job	60	24
My skills are not related to the job	25	10
No new learning	23	9.2
I had to do all kinds of work rather than those related to my skills	23	9.2
Poor working environment	20	8
No training opportunity in my previous job	16	6.4
Not moving up on the career ladder	14	5.6
No job allowance in my previous job	13	5.2
No provision for pension and provident fund	12	4.8
The employer was not good and supportive	10	4
No housing allowance in my previous job	6	2.4
Domestic problem	6	2.4
The job was not related to the TVET programme I undertook	5	2
People looked down on me for being in that job	5	2
Family influence	5	2
The workplace was far from my house	5	2
Friends' influence	2	0.8
Total	250	100



### Business/Self-employed Among Graduates

After seeing its potential to increase the employability of TTIs/IZC/CZC trainees and graduates, the **Entrepreneurship Education** program has been introduced in the all TTIs/IZC/CZC. Figure 7.5, on the other hand, shows that only 3.6 percent of those surveyed are running self-business.

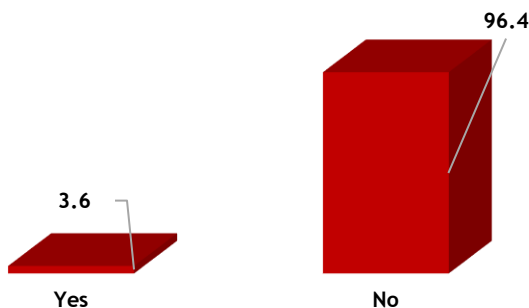


Fig 7.5: Are you doing business?

According to table 7.14, Technical Training Institute Chumey (40%) had the highest number of graduates operating their own start-up/business, followed by National Institute of Zorig Chusum (33.3%). There were no graduates from the Technical Training Institutes of Samthang and Khuruthang who had started their own business.

Table 7.14: Self operated business among graduates by institute

Institute	Yes		No		Total
	n	%	n	%	
TTI Chumey	6	40	63	15.6	69
JWPTI-Dekiling	1	6.7	67	16.6	68
TTI-Rangjung	1	6.7	56	13.9	57
CZC-Trashiyangtse	1	6.7	54	13.4	55
TTI-Khuruthang	0	0	51	12.6	51
NIZC-Thimphu	5	33.3	41	10.1	46
Samthang TTI	0	0	46	11.4	46
Thimphu TTI	1	6.7	26	6.4	27
<b>Total</b>	<b>15</b>	<b>3.6</b>	<b>404</b>	<b>96.4</b>	<b>419</b>



### Income of Graduates Doing Business

The income from the business varied among the graduates doing the business. The majority of graduates reported monthly business revenue of Nu. 15,001-17,000 and Nu. 17,001-19,000, with 26.67 of graduates doing business in both the income ranges.

Table 7.16: Business income of graduates doing business

Answer Choices	Freq.	Percent
Between Nu.11,001 - Nu. 13,000	1	6.67
Between Nu. 15,001- Nu. 17,000	4	26.67
Between Nu. 17,001- Nu. 19,000	4	26.67
Between Nu. 19,001- Nu.21,000	1	6.67
Between Nu. 21,001- Nu. 23,000	2	13.33
Between Nu. 23,001- Nu. 25,000	1	6.67
Between Nu. 27,001- Nu. 30,000	1	6.67
Between Nu. 30.001- Nu. 35,000	1	6.67
Total	15	100

### Business Start-up Challenges

Graduates who were running their own businesses were asked to choose two problems they faced when getting started. They identified 12 issues, with 'Access to Finance' being the most significant challenge for most graduates, followed by 'Shortage of skilled workers' and 'Access to technology/resources' (Table 7.15).

Table 7.15: Business start-up challenges faced by graduates

Start-up challenges	Freq.	Percent
Access to finance	9	30
Shortage of skilled worker	4	13.33
Access to technology / resources	4	13.33
Business space (ex: House/market place)	2	6.67
High tax rates	2	6.67
Purchasing equipment & raw materials	2	6.67
Business competitions	2	6.67
Lack of government's support schemes	1	3.33



## Transition to Work and Employment

Start-up challenges	Freq.	Percent
Transportation	1	3.33
Business support network	1	3.33
Market (i.e., demand for product)	1	3.33
Labour regulations	1	3.33
Total	30	100

### Operational Challenges

The graduates were also asked to select the two most challenges they encountered when running their own business. The 'Shortage of finance/budget' (39.13%) and the 'challenges in getting the raw materials' (17.39%) are the two most common problems experienced by graduates when running their businesses (Figure 7.6).

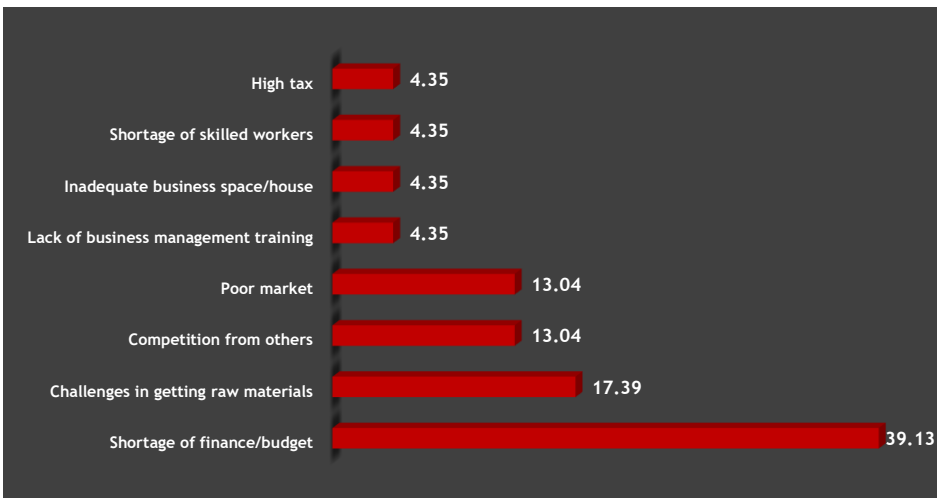


Fig 7.6: Operational challenges among graduates operating business



### Graduates' Explanations for Being currently Unemployed

The reasons given by graduates who are currently unemployed are shown in Table 7.13. The majority of them (44.4 percent) are currently unemployed because they are pursuing additional education. Approximately 14.2 percent of graduates were unable to find employment after completing their training. On the other hand, approximately 5% of them have never looked for work.

Table 7.13: Graduates' explanations for being unemployed

Reasons	Male		Female		Total	
	n	%	n	%	n	%
Undergoing further studies	83	80.6	20	19.4	103	44.4
Did not get a job after the training	21	63.6	12	36.4	33	14.2
Looking for a better opportunity	20	83.3	4	16.7	24	10.3
Got a job once, but I am unemployed now	8	42.1	11	57.9	19	8.2
Trying for further studies	11	84.6	2	15.4	13	5.6
Did not look for a job	9	69.2	4	30.8	13	5.6
Engaged Desuung program	6	66.7	3	33.3	9	3.9
Domestic problems	6	100	0	0.0	6	2.6
No demand for the job related to my skills	4	80	1	20	5	2.2
Health issues	2	50.0	2	50.0	4	1.7
On leave without pay	0	0.0	3	100	3	1.3
Total	170	73.3	62	26.7	232	100



## Section VIII

### Qualification Up-Gradation and Aspiration

This section presents the final part of the tracer study. The sections include questions about graduate educational aspirations and qualification advancement/up-gradation. There is also a question about gender discrimination and general recommendations/suggestions for improving the TVET system in the country.

#### Qualification Up-Gradation

TVET is a lifelong learning programme. TVET graduates should have clear qualification pathways, especially in the context of rapidly changing technology and labor market systems brought about by global change. The majority of current TVET courses are dead ends, which reduces the attractiveness of TVET.

According to Figure 8.1, 35% of graduates have up-graded their qualification, 13% are in the process of up-grading their qualification, and 52% did not upgrade their qualification after training.

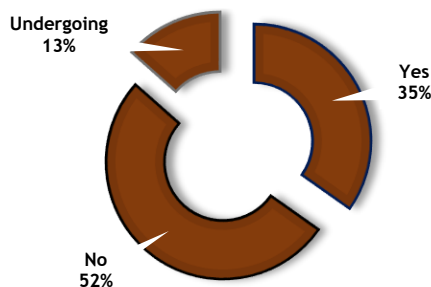


Fig 8.1: Did you upgrade your qualification after training?

The graduates reported qualification up-gradation to NC III and TVET Diploma levels. Figure 8.2 shows that majority of the graduates (93.36% of graduates) have upgraded their qualification or undergoing qualification from NC II to NCII,



## Qualification Up-gradation and Aspiration

while few of them (6.64% of graduates) had reported their upgradation in TVET Diploma.

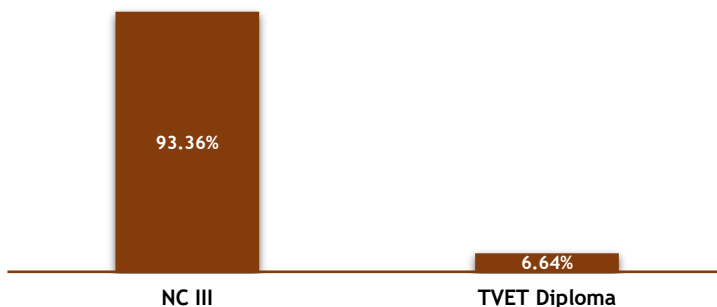


Fig 8.2: Level of qualification up-gradation

### Mode of Qualification Up-gradation

The data (table 8.1) shows that the majority of the graduates (83.78%) have undergone their qualification upgradation through ‘Sponsored courses at an institute within Bhutan’. These could have taken in TTIs and IZCs as regular NC III and NC II programmes. The second highest qualification up-gradation was done through ‘Self-financed course at an institute within Bhutan’.

There were only about 2% of graduates who upgraded their qualification through ‘Self-financed RPL. This suggest that employers rarely support RPL assessment fees for TVET graduates. About 0.9% of graduates have up-graded their qualification at an institute outside Bhutan through self-finance.

Table 8.1: Mode of qualification upgradation

How did you upgrade your qualification	Freq.	Percent
Sponsored course at an institute within Bhutan	186	83.78
Self-financed course at an institute with Bhutan	13	5.86
Sponsored RPL (RPL cost paid by government or others)	7	3.15
Self-financed RPL (you paid the cost)	5	2.25
Self-financed course at an institute outside Bhutan	2	0.90
Sponsored course at an institute outside Bhutan	1	0.45



## Qualification Up-gradation and Aspiration

How did you upgrade your qualification	Freq.	Percent
Missing	8	3.60
Total	222	100

### Qualification Up-gradation by Course

Graduates who are undergoing or have upgraded their qualification were asked to specify the course in which they have upgraded. The course with the highest qualification up-gradation was Automobile mechanic, followed by Painting, Plumbing, Electrical, Masonry, welding, and lhadri (Mural Painting). The remaining courses are detailed in the table below.

Table 8.2: Qualification up-gradation by courses

Course	Freq.	Percent
Automobile Mechanic	30	16.95
Painting	25	14.12
Plumbing	20	11.3
Electrical	19	10.73
Masonry	18	10.17
Welding	16	9.04
Lhadri (Mural Painting)	10	5.65
Jimzo (Sculpture)	8	4.52
Trezo (Gold and Silver smith)	8	4.52
Patra (Wood carving)	6	3.39
Tsemzo (Tailoring)	6	3.39
Wooden Furniture Making	4	2.26
Furniture making	3	1.69
Automobile	2	1.13
Hydropower Transmission and Distribution Linemen	1	0.56
Mechanical	1	0.56
Total	177	100





### Qualification Up-gradation Aspiration

If given the opportunity, a total of 413 respondents expressed a desire to upgrade their qualifications. The most desired TVET qualification up-gradation was from NC III to TVET Diploma, followed by qualification upgradation from NC II to NC III. Approximately 5% of graduates desired to advance their qualification to a TVET degree (Table 8.3).

Table 8.3: Qualification upgradation by certification level if given chance

Certification level	Freq.	Percent
NC III to TVET Diploma	251	60.77
NC II to NC III	114	27.6
TVET Diploma to TVET Degree	21	5.08
TVET Degree to TVET Masters	11	2.66
NC III to Academic Diploma	9	2.18
Academic Degree to Academic Masters	3	0.73
NC II to Academic Diploma	2	0.48
Academic Diploma to Academic Degree	2	0.48
Total	413	100

### TVET Trade/course in Demand for Qualification Up-gradation

Table 8.3 presents a list of TVET courses that 2020 graduates want to pursue for their qualification up-gradation. The highest demanded courses were in the field of civil and electrical (Masonry and Electrical). All of these courses are available in TTIs, IZC and CZC.

Table 8.4: Trade in demand by graduates for their qualification up-gradation

Field of upgradation	Freq.	Percent
Electrical	58	14.04
Masonry	52	12.59
Mechanical Welding	38	9.2
Plumbing	37	8.96
Automobile Mechanic	32	7.75



## Qualification Up-gradation and Aspiration

Field of upgradation	Freq.	Percent
Lhadri (Mural painting)	32	7.75
Automobile	29	7.02
Mechanical Fitting	18	4.36
Carpentry	17	4.12
Shingtsen (Traditional House Painting)	14	3.39
Transmission Distribution & Linemen	16	3.87
Computer Hardware and Networking	13	3.15
Furniture Making	10	2.42
Jimzo (Sculpture)	10	2.42
Tshemzo (Tailoring)	7	1.69
Automobile Electrical	7	1.69
Heavy Vehicle Driving	6	1.45
Trezo (Gold and Silver smith)	6	1.45
Patra (Wood carving)	5	1.21
Refrigeration and Air Conditioning	2	0.48
Heavy Earth Mover Operation (HEMO)	2	0.48
Auto Painting	1	0.24
Shazo	1	0.24
Total	413	100

About 29 numbers of graduates gave reason for their lack of interest in qualification up-gradation. The most common reasons given by the graduates are (i) Not interested (48.28%), (ii) Graduated from the Jimzo ND (13.79%), (iii) Satisfied with the current qualification (10.34%) and (iv) look for job after training (6.9%). The other reasons are presented in figure 8.2.



## Qualification Up-gradation and Aspiration



Fig 8.2: Reason for not wishing to upgrade their qualification

### RPL Under Self-finance

When the graduates are asked about their willingness to self-finance RPL (Recognition of Prior Learning), 70.5% are unwilling to self-fund RPL, while 29.5% are willing to self-finance RPL.

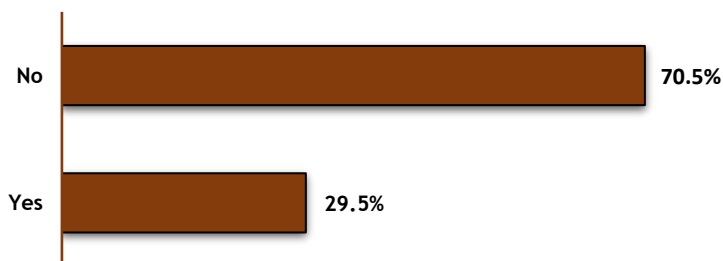


Fig 8.3: Willingness to self-finance, if they are to undergo RPL.



### Gender Discrimination

A total of 429 graduates responded to the question 'Did you experience gender discrimination at work?' Table 8.5 shows the results by institute. According to the data, 26.3% of graduates reported gender discrimination at workplace. JWPTI-Dekiling had the highest number of graduates who experienced gender discrimination.

Table 8.5: Gender discrimination by institute

Gender Discrimination	Yes		No		Total	
	n	%	n	%	n	%
JWPTI-Dekiling	46	40.7	48	15.2	94	21.9
TTI Chumey	8	7.1	58	18.4	66	15.4
CZC-Trashiyangtse	7	6.2	49	15.5	56	13.1
TTI-Khuruthang	13	11.5	38	12.0	51	11.9
NIZC-Thimphu	9	8.0	40	12.7	49	11.4
Samthang TTI	16	14.2	30	9.5	46	10.7
TTI-Rangjung	3	2.7	39	12.3	42	9.8
Thimphu TTI	11	9.7	14	4.4	25	5.8
Total	113	26.3	316	73.7	429	100

### Gender Difference in Employment Among Graduates

In earlier sections, there was some discussion about female graduates having difficulty finding work because most employers prefer male workers over female workers. When asked if they (female graduates) had faced any difficulty finding jobs in comparison to their male counterparts, 64.2 percent said yes. The institute wise comparison is presented in table 8.6.

Table 8.6: Gender difference in employment (Female graduates)

Institute	Yes		No		Total	
	n	%	n	%	n	%
TTI Chumey	18	25.7	14	35.9	32	24.1
JWPTI	20	28.6	6	15.4	26	19.5
TTI-Khuruthang	13	18.6	5	12.8	18	13.5
TTI-Rangjung	7	10.0	7	17.9	14	10.5
Samthang TTI	10	14.3	1	2.6	11	8.3



## Qualification Up-gradation and Aspiration

Institute	Yes		No		Total	
	n	%	n	%	n	%
Thimphu TTI	2	2.9	3	7.7	5	3.8
NIZC-Thimphu	0	0	2	5.1	2	1.5
CZC-Trashiyangtse	0	0	1	2.6	1	0.8
Missing	-	-	-	-	24	18.0
Total	70	64.2	39	35.8	133	100

### Graduates' Suggestion for Improving TVET

The graduates were given the opportunity to share their ideas/suggestions for strengthening the TVET sector and the employment opportunities for TVET graduates. Table 8.7 lists the suggestions in descending order. In the face of changing technology and modernization, the majority of graduates propose that modern training materials, tools, and equipment be installed. This could be one of the primary causes of the skill gap between the TVET sector and the labor market. The institutes' tools and equipment are antiquated, but industries and businesses in the labor market use contemporary tools and equipment to increase efficiency.

The second most prevalent suggestion made by graduates is to review and increase the stipend for TVET trainee. Although the stipend for RUB students has been revised, the stipend for TVET trainees has remained unchanged. As a result, the government should look into it and make appropriate decisions.

The third most common suggestions made by graduates is that the institute/government provide substantial support and aid in the job search. Despite the fact that the trainees successfully complete their course, they have trouble obtaining suitable employment. As a result, the graduates recommend that the government give adequate job-search support. The remaining suggestions are listed in the table below.



## Qualification Up-gradation and Aspiration

Table 8.7: Graduates recommendations for improving TVET sector

Suggestions/recommendations	Freq	Percent
Upgrade and install modern equipment's and tools	42	16.4
Revise and increase the stipend	30	11.7
Provide assistance in job search	29	11.3
Make provision for qualification upgradation	19	7.4
Increase the wages/payment for TVET graduates	15	5.9
Improve the food and hostel facilities	14	5.5
Provide enough training materials (tools and equipment's)	12	4.7
Provide better facilities in the institutes (Sports, classroom, workshop, etc.,)	9	3.5
Proper management rules and regulations in institute	8	3.1
Increase the duration of OJT	7	2.7
Make provision for qualification upgradation in diploma level	7	2.7
Provide more of practical training	7	2.7
Recruit more skilled and experienced teachers/instructors	6	2.3
Recruit TVET graduates as club instructor in school	5	2.0
TVET graduate should be given job in government sector	5	2.0
Increase the overall duration of training	4	1.6
Sent trainees outside Bhutan for better exposure and skilling	3	1.2
Advocacy on TVET	3	1.2
Provide more industrial tour	3	1.2
Incorporate entrepreneurship course in institute (Business idea, proposals)	2	0.8
Ensure proper maintenance of training materials	2	0.8
Club NC II and NC III together	2	0.8
Provide soft skills (work ethics, career counselling, entrepreneurship, etc.,)	2	0.8
Provide boarding facilities	2	0.8
Increase OJT Stipend	2	0.8
Incorporate TVET in school	2	0.8
Better internet facilities	2	0.8
No gender discrimination in TVET sector	2	0.8
Recruit Bhutanese Technician and instructor	1	0.4



### *Qualification Up-gradation and Aspiration*

Suggestions/recommendations	Freq	Percent
Give enough materials for assessment	1	0.4
Improve industry and institute linkages	1	0.4
Ensure fair and just assessment	1	0.4
Provide more theoretical lessons	1	0.4
Track graduates after completing the training	1	0.4
Proper reward system for high achievers	1	0.4
Enroll less trainee for better training	1	0.4
Introduce college for TVET	1	0.4
Proper monitoring on TVET sector	1	0.4
Total	256	100







## Section IX

### Key Conclusions

The first-ever tracer study has generated many useful information and has contributed considerably in the present TVET reform and plan initiatives. This second online tracer study further aims to give more information and feedback on TVET programmes as well as the job market scenario of 2020 TTIs/IZC/CZC graduates. The survey-based study design and descriptive analysis were employed in the study. The study came to a number of important conclusions.

TVET has immense potential to contribute to society's and economy's growth and advancement, but only if the TVET sector can maintain its quality, relevance, and efficiency of training delivery, and if the labor market can effectively utilize and harness the potential of TVET graduates. This research reveals that both the supply and demand sides of TVET still have a lot of space for improvement.

Up-to-date data management, tracers, and regular evaluation of TVET programmes and labor market outcomes are essential for evaluating the progress, issues, and possibilities of TVET, and for formulating, amending, and improving TVET policies, strategies, and actions. Given the continual technological and economic developments worldwide produced by globalization, it is time for the entire TVET process to become data-driven.

The team does not claim that the study findings are completely accurate because, first and foremost, the sampling design allows for a 5% margin of error. Statistical laws, on the other hand, are based on assumptions, probability, and the average. In contrast to mathematical science, which is founded on logical reasoning and conclusions, statistics measurement can be a little abstract, and results are frequently not completely certain. It's necessary to accept a certain amount of error.

As a result, the findings of studies like this one should not be taken for granted. Many more studies are needed to validate and corroborate the current findings. However, this does not mean that the findings are entirely invalid. The team believes that the findings should not be simply published and then forgotten, but should be subjected to intense discussions and diverse interpretations in order to yield new meanings and insights. Then only the purpose of the study would be served.



## Key Conclusions

The following are the major conclusions drawn from the descriptive analysis of the Tracer study of TVET graduates, which included a representative sample of 2020 TTI/IZC/CZC graduates:

1. Despite the fact that the minimum qualification required to enter TVET is class X, about 46% of trainees entering TVET have a class XII qualification. This could have implications for TTIs and IZCs' course and curriculum design, as well as their teaching-learning approach.
2. In general, TVET is regarded as primarily an opportunity for poor academic performers and school dropouts. The study confirms that TVET is generally regarded as a secondary option. The vast majority of graduates came from agricultural and low-income families with no educational background and came from the eastern and central Dzongkhags. TVET is viewed as a component of the response to ensure social equity rather than as a critical component of the country's economic policies and priorities. If TVET is to advance, it must find a place in both social and economic policy priorities.
3. Only about 29 percent of graduates chose TVET programs in TTIs/IZC/CZC due to a strong interest in TVET, while the remaining graduates would not have chosen TVET if they had other options. TVET must attract people who are genuinely interested in TVET; otherwise, the risk of investing in people who are less enthusiastic about TVET exists.
4. Parents and families were found to play an important role in persuading their children to pursue TVET. The current method of TVET promotion requires strategic improvement. A variety of awareness campaigns and activities should be implemented across the country with the participation of TVET stakeholders, TVET institutions, employers, graduates, parents, and others. There is an urgent need to synchronize various advocacy programs carried out by various stakeholders.
5. According to the study, approximately 4.5 percent of graduates are influenced to join TVET by TVET graduates (seniors). TVET advocacy and promotion activities, on the other hand, rarely target TVET graduates.



## *Key Conclusions*

There is no formal entity or division in charge of post-graduation services, such as connecting institutions, TVET stakeholders, and graduates. TVET alumni associations and programs could help to strengthen the connection between institutes, trainees, and graduates through interactive and integrative actions. As a result, a separate division or unit with the mandate to provide post-graduate services may be required.

6. More than 23% of graduates were unable to complete their training within the required duration, and almost all of them stated that the Covid-19 had caused a delay in their course completion.
7. Several TTI and IZC graduates stated that they planned to leave the training for a multiple of reasons, the most common of which were the realization that it would be difficult to find good jobs after the training, the physically demanding nature of the training, a job offer, and the institute's poor management.
8. The issue of trainees not getting the courses of their first choices due to intake capacity or non-availability of course was reported by some of the graduates. Choosing the incorrect course and gradually losing interest in the training can have serious consequences for a trainee's motivation to learn. Most trainees may select courses based on market demand, and this decision may reflect their motivations and social disposition. Thus, a proper strategic planning of TVET programs based on periodic TVET demand-supply mapping and tracers is important.
9. According to graduates, the top five soft skills relevant to the job were teamwork, self-confidence, work ethics, time management, and a positive attitude.
10. More than half of the graduates chose to keep in touch with the institute via social media forums. It clearly demonstrated the growing importance of social media and the world of digitalization.
11. In general, TTI and IZC graduates rated over 30 different aspects of the institutes' training programs and facilities.



## *Key Conclusions*

The top five training components/facilities that require attention and corrective actions are in regards to (i) internet connectivity on campus, (ii) food quality, (iii) recreational facilities on campus, (iv) trainee involvement in institute decision making, and (v) Supply of learning material.

12. The subjective assessment of eight dimensions of training relevance to work and employment revealed that the graduates rated practical training and on-the-job-training as the most relevant. Just because they rated these dimensions as relevant doesn't mean they were effective during their training. It only implies that these areas require more attention. Further research into each of these dimensions is required, using a qualitative approach such as in-depth interviews or Focus Group Discussions (FGDs).
13. The general assessment of the quality and relevance of TVET programs revealed that the overall rating of TVET quality was good, with only about 2% of graduates rating it as poor in both the aspects. This indicates that the mismatch between TVET demand and supply has narrowed since the previous report. One possible strategy for reducing this mismatch is to conduct TVET programs based on regular mapping of TVET demand and supply.
14. One of the main reasons for the high unemployment rate among TVET graduates is a mismatch in skills. The theoretical and practical lessons learned in institutes must be supported by proper practical training and attachment in the real world of work through industry attachment and on-the-job training. This is one of the most effective strategies for reducing TVET graduates' skill mismatch.
15. Over 96 percent of graduates have completed the OJT during their training. Approximately 38% of graduates are unhappy with the current OJT duration. More than half of them want the OJT to last longer than the current duration of three months. This could be attributed to effective learning in industries using modern tools and equipment. Many graduates advocated for the improvement of tools and equipment in the TTIs/IZC/CZC.



## *Key Conclusions*

16. The overall rating of OJTs was favorable. The most beneficial aspects of OJTs were the increased job confidence and the acquisition of new skills. However, certain limitations in the management of OJTs were identified: low Institute stipend/allowance, poor company supervision and monitoring, accommodation, transportation issues, and assignment of irrelevant tasks.

Companies/OJT providers currently have no incentives to train, so training may be limited to their immediate benefit (in terms of using OJT trainees to meet the temporary shortage of manpower). This necessitates the revision and improvement of OJT frameworks and protocols, including OJT provider incentives, OJT location, and OJT length.

17. During the study, 45.56% of 2020 graduates were employed. Overall, TTI/IZC/CZC graduates had lower employment rates than the country's total employment rates. In 2020, the country's total employment rate was 95 percent, while the young employment rate was 77.4 percent.
18. Of the working graduates, more than 71% were in the major occupational group of Craft and related trade workers. Further classification into sub-major occupational groups revealed that the majority of employed graduates were working under Building and Related Trades Workers (excluding Electricians). As a result, it was clear that the majority of them were employed in the relevant workplaces.
19. Around 34.8% of graduates said it was difficult to find jobs that were relevant to them. These findings show that there is improvement to be done to diversify and connect courses with the skills that employers are looking for. Strengthening the link between TVET and the labor market may necessitate efforts from both the supply and demand sides. The demand side implies that labor market conditions require some reforms, particularly in terms of making jobs more appealing, favorable, and motivating for graduates, as well as increasing employers' willingness to hire domestic TVET graduates, even if there is availability of low-cost imported labor.



## Key Conclusions

20. The current labor market for TTI and IZC graduates necessitates the formation of strong collaborations between institutions and the private sector, strategic coordination among many stakeholders, and the establishment of a dedicated unit to coordinate employment programs.
21. Job stability is a concern for TTI and IZC graduates. Approximately 20% of graduates have changed jobs following their first job. 'Poor salary' and a mismatch of skills were the most common reasons for shifting employment. Graduates are often blamed for their "lack of attitude."  
  
It's not simply their attitude that's the issue. Anyone who is under paid will always seek employment in a field with a higher income and better benefits. They undertake technical, skill-oriented work that requires a substantial degree of manual labor and other tough conditions. Graduates perceived their wages to be unappealing, giving them enough opportunity to jump from job to job or pursue jobs other than that for which they were trained.
22. The maximum number of graduates earned between Nu. 15,001 and 17,000 per month. A significant percentage of employed graduates (20.37%) were dissatisfied with their jobs and the 'Low wage' was one of the reasons given by graduates for their work dissatisfaction.
23. Entrepreneurship programs in TVET are becoming increasingly popular in a number of nations. However, only 3.6% of 2020 TTI and IZC graduates said they were self-employed or ran a business. Although the introduction of Entrepreneurship education is gaining popularity among TTIs/IZC/CZC, the number of graduates running their own business is really discouraging. Access to capital is one of the biggest problems that trainees who are running businesses have faced while beginning and operating their businesses, according to those who have done so.
24. In terms of qualification up-gradation, 35% of graduates had upgraded their TVET qualification, and 13% were in the process of doing so within the TVET at the NC III and TVET diploma levels. There were, however, no graduates who had/were having their qualifications upgraded to higher TVET levels, such as a TVET degree or TVET master's degree. Only a small percentage of graduates have progressed to the TVET diploma level.



## *Key Conclusions*

This indicates that there should be clear education pathways beside career progression for TVET to become attractive for trainees/youth. Current educational pathways are not as clear, uniform, inclusive, or diverse as they could be.

25. Despite the lack of appropriate and consistent educational pathways, over 80% of graduates reported a desire in upgrading their qualifications, primarily to higher levels such as NC III and National Diploma. Approximately 8.95% of them reported a desire to advance their education to the degree or master's level.
26. Graduates' significant willingness to upgrade their qualifications necessitates a revision of the implemented BVOF. It must be made consistent and implemented in close collaboration with various stakeholders. If the BVQF/NQF is not properly recognized, having it will only complicate the system. Already, there are a large number of TVET graduates who want to upgrade their qualifications but are unable to do so due to a lack of clear educational pathways. This also demonstrates the level of focus required by TVET trainers, who are also stuck by the same qualifications. The first people trainees encounter when learning about the dead-end nature of TVET are their instructors/TVET trainers.
27. Gender discrimination is still prevalent in TTIs/IZC/CZC, according to data. When comparing enrolment and administrative data also, the percentage of females is significantly lower than that of males. In addition, the data also shows that around 64% of female graduates have faced more difficult than males while looking for jobs. As a result, thorough research/study is essential under this section to ensure equal opportunity regardless of gender.
28. The graduates' top three recommendations for enhancing the TVET system and labor market conditions for TVET are to (i) upgrade and install modern equipment and tools, (ii) revise and increase the stipend, and (iii) provide job search support. Many graduates have suggested that the institute improve and install contemporary tools and other training materials.



## *Key Conclusions*

When compared to the tools and equipment they use in the workplace/market, the training they receive in the institutes is regarded as much more backward and outmoded. This could be a major contributor to the skills mismatch which ultimately leads to TVET graduates' inability to find work.

29. One of the major conclusions of the first-ever tracer study of TVET graduates was an insufficient stipend. Similarly, the most popular recommendations made by trainees in this tracer research were also to revise and increase the stipend for TVET trainees. Despite the fact that the department proposed to the government that the stipend for TVET trainees be increased, the recommendation has yet to be implemented. This could be one of the reasons for the suggestions made by the trainees on improving the food quality in the institutes.
30. The trainees also recommend that the government and institutions to support and aid trainees in their job search after completing their training. This demonstrates a lack of thorough research between the job market and TVET programs in TVET centers.
31. Finally, online graduate and employer surveys can give useful information for evaluating and improving TVET programs' relevance and quality. Regular program-based or institutional tracers must be conducted by TTIs/IZC/CZC using a well-tested and uniform methodology. The tracer team believes that an online survey is feasible and that it may be enhanced by offering students with a brief training on how to conduct tracer surveys prior to graduation. If trainees are informed about the tracer surveys and their value before they graduate, response rates will improve. DTE is responsible for coordinating the needs and satisfaction surveys of TVET employers on a regular basis. A trained statistician or data administrator is required for this, as well as to continue the endeavor of establishing the TVET database and releasing TVET statistics.





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## Annexes

## Total respondent by gender and institute

TTIs/IZC/CZC	Male		Female		Total
	n	%	n	%	
CZC-Trashiyangtse	49	83.05	10	16.95	59
NIZC-Thimphu	47	95.92	2	4.08	49
TTI Chumey	43	52.44	39	47.56	82
JWPTI	69	70.41	29	29.59	98
TTI-Khuruthang	33	64.71	18	35.29	51
TTI-Rangjung	39	68.42	18	31.58	57
Samthang TTI	35	76.09	11	23.91	46
Thimphu TTI	21	77.78	6	22.22	27
Total	336	71.64	133	28.36	469

## Reason for choosing TVET

Motive behind choosing TVET	Freq.	Percent
A better career growth for TVET graduates	63	13.43
Advice from parents/relatives	62	13.22
Affordable for my family/ guardian	11	2.35
Availability/quality of accommodation	1	0.21
Business opportunity for TTI/IZC graduates	25	5.33
Easy to get job after completing the TVET training	68	14.5
Free training was available	15	3.2
I had a strong interest in TTI/IZC	136	29
I had no option	31	6.61
Influenced by friends	9	1.92
Inspired by His Majesty's giving importance in TVET	27	5.76
Inspired by TTI/IZC graduates	21	4.48
Total	469	100



## Graduates by course

Course	Female	Male	Total	
			Freq.	Percent
Automobile	6	28	34	7.2
Automobile Electrician	1	6	7	1.5
Automobile Mechanical	10	21	17	3.6
Carpentry	5	15	20	4.3
Computer Hardware and Networking	7	6	13	2.8
Electrical	21	36	57	12.2
Furniture Making	3	8	11	2.3
Heavy Earth Mover Operation	0	1	1	0.2
Heavy Vehicle Driving	0	7	7	1.5
Jimzo (Sculpture)	0	13	13	2.8
Ihadri (Mural Painting)	1	15	16	3.4
Masonry	23	29	52	11.1
Mechanical Fitting	5	15	20	4.3
Mechanical Welding	7	37	44	9.4
Patra (Wood Carving)	10	49	59	12.6
Plumbing	29	18	47	10.0
Shingtsen (Traditional Painting)	1	17	18	3.8
Transmission & Distribution Lineman	4	13	17	3.6
Trezo (Gold & Silversmith)	0	2	2	0.4
Total	133	336	469	100.0

Thought of discontinuing the training	Male		Female		Total	
	n	%	n	%	n	%
Yes	29	82.9	6	17.14	35	7.46
No	307	70.7	127	29.26	434	92.54
Total	336	71.6	133	28.36	469	100

**Reason given for thinking to quit training**

Why you thought of discontinuing the training	Percent
I started to feel the training will not help me to get the good job	34.48
I started to feel that training is physically challenging	17.24
I started to feel bad about the Institute management	10.34
I got offer for employment	10.34
Some people started to influence me to leave the program	6.9
I started to feel that training duration is too long	3.45
I got offer to further education training	3.45
I started to dislike the training method	3.45
I started to face health issue	3.45
I face some family problem	3.45
I started to dislike the food	3.45
Total	100

**Benefits of OJT**

Benefits of OJT	SD	D	SD+D	A	SA	SA+A	T	M
Earned Money	120	144	264	126	51	177	441	2.25
Gained work experience	10	6	16	105	324	429	445	3.68
Developed and refined skills	13	3	16	170	259	429	445	3.53
Helped to explore good job	9	12	21	221	201	422	443	3.39
Helped to get job in the same agency or company	23	92	115	245	82	327	442	2.87
Helped to develop networks or contact with the field experts	10	18	28	261	154	415	443	3.27
Helped to gain work confidence	8	3	11	187	246	433	444	3.51
Gain new skills	9	5	14	159	272	431	445	3.57
Handled new tools, equipment, and machineries	22	40	62	188	194	382	444	3.26



## Annexes

### Graduates rating on Training programmes, /hostel and other facilities in institutes

Components	VP	P	Total (VP+P)	G	VG	Total (VG+G)	Total	M
Quality of classroom learning (theory)	11	28	39	275	153	428	467	3.20
Quality of practical learning	5	22	27	265	173	438	465	3.30
Supply of learning materials (e.g., text books, note books and other stationaries)	22	90	112	273	80	353	465	2.87
Availability of technical equipment (e.g., lab equipment, measuring instruments, computer lab)	15	70	85	278	102	380	465	3.00
Quality of training equipment	11	74	85	285	96	381	466	2.99
Teaching methods of instructors	1	9	10	236	220	456	466	3.45
Classrooms (size, light and noise condition, location)	20	50	70	249	147	396	466	3.12
Workshop (size, light and noise condition, location)	25	57	82	270	112	382	464	3.00
Quality of soft-skills learning (English, Dzongkha, Math's, ICT, etc.)	10	34	44	315	97	412	456	3.09
Quality of hostel facilities	13	55	68	188	76	264	332	2.98
Quality of food	29	117	146	163	23	186	332	2.53
Transportation facilities	36	73	109	288	63	351	460	2.90
Recreational facilities in the campus	26	92	118	282	61	343	461	2.83
Hygiene and sanitation facilities	9	57	66	327	71	398	464	3.03
Safety conditions during practical training (helmet, goggles, safety boots, ear muffs)	11	40	51	252	163	415	466	3.24
Internet access	57	112	169	213	83	296	465	2.66
Books in the library	9	61	70	295	100	395	465	3.03
COVID safety protocols (Signages, hand washing stations, etc.)	3	12	15	271	180	451	466	3.32
Institute's leadership and management quality	32	40	72	287	108	395	467	3
Trainees' involvement in the institute's decision-making	42	75	117	281	67	348	465	2.80
Institute Discipline	11	26	37	293	136	429	466	3.18
Trainees Welfare	21	44	65	323	78	401	466	2.98



## Annexes

Components	VP	P	Total (VP+P)	G	VG	Total (VG+G)	Total	M
Cooperation with the local community	9	39	48	320	99	419	467	3.08
Career counselling	19	49	68	306	87	393	461	2.99
Industrial tour	29	57	86	260	111	371	457	2.99
Soft skills (English, Math, ICT & Dzongkha)	12	35	47	319	92	411	458	3.01
Entrepreneurship	13	45	58	274	70	344	402	2.95
Environment Science (SCP)	26	84	110	213	25	238	348	2.68
On-the-Job-Training (OJT)	13	13	26	282	149	431	457	3.23
Institute support to trainees' employment/job searches	33	70	103	242	120	362	465	2.94

### Designation of employed graduates

SIN	Designation	Male	Female	Total	%
1	Assistant Plant operator	1	0	1	0.52
2	Auto Mechanic	6	1	7	3.66
3	Auto electrician	1	1	2	1.05
4	Automobile	3	0	3	1.57
5	CEO	1	0	1	0.52
6	Carpenter	5	4	9	4.71
7	Civil worker	1	0	1	0.52
8	Driver	1	0	1	0.52
9	Electrician	11	2	13	6.81
10	Furniture maker	1	1	2	1.05
11	Helper	2	0	2	1.05
12	Jimzop	3	0	3	1.57
13	Labour	9	1	10	5.24
14	Making power house	1	0	1	0.52
15	Manager	0	1	1	0.52
16	Mason	11	9	20	10.47
17	Mechanic	15	1	16	8.38
18	Mechanical Fitter	2	0	2	1.05
19	Painter	7	0	7	3.66
20	Plumber	5	12	17	8.90



## Annexes

SIN	Designation	Male	Female	Total	%
21	Sales girl	0	2	2	1.05
22	Store Incharge	0	1	1	0.52
23	Supervisor	2	1	3	1.57
24	Technician	18	11	29	15.18
25	Trainee	1	0	1	0.52
26	Trezop	1	0	1	0.52
27	Tsemzop	0	8	8	4.19
28	Warden	1	0	1	0.52
29	Welder	18	4	22	11.52
30	Wood Carver	4	0	4	2.09
	Total	131	60	191	100

### OJT employer & name of company (employing agency)

OJT employer	Name of Agency or Company where you work:
Bhutan power cooperation	Royal Bhutan Police
Toorsa Phuntsholing	Smart Building Solutions (Specialized firm)
Yeshi engineering workshop	Ministry of health
His Majesty Project in phuentsholing.	Bhutan Power corporation Limited
Furniture House	SD. Silicon
Komputer palace, Thimphu	Mangdechuu hydro-electricity project authority
Khamsa engineering workshop	AWPL
Yeshi engineering workshop	Tee Dee Auto Workshop
Toorsa HM project	RBA
Tala hydro power plant and kanglung bpc	Construction site
Komputer Palace	Thimphu Tower Service
Karma engineering workshop/	Kumputer Palace
STCBL P/Ling	Kinjung Automobile
Computer Management Institute	Sangay Thingley furniture
Tsheltrim pheljyay furniture making	4G wood work
Kinjung	Bhutan creative furniture
Karma Automobile workshop	School



## Annexes

OJT employer	Name of Agency or Company where you work:
Rabzang furniture	Druk leading furniture
Bhutan creative furniture	Sangayla furniture workshop
SAT interprise	Drangma miniral water
Lamla enterprise (Dorji Wangdi)	Tashi Nyenzer furniture unit
Bhutan Telecom	Trashigang General Hospital
Computer management institute (CMI) Phuntsholing	Tashi cell
Sat enterprise	Construction site
EST paro , Dagapela sub-station	Druck chap chab private construction
CMTD,Begana and Khangma Bpc	Vajra Builder Private Lt
Bumthang dzong	Kezang Wangmo construction
JWPTI-Dekiling	Pelden enterprise limited
Sarpang Dzong	DZONGKHANG
Dzong construction	Shangri La company
Penden enterprise	Dechen enterprise
Gelephu thromde	Gelephu Thromde
Farm Machinery Corporation Limited	Zimdra private limited
Dungsam cement corporation limited	Penden cement authority limited
Pelden enterprise limited pasakha	Da yoe steel febrication
Gyalcon construction private limited	Gyelcon infra Pvt.ltd
Bhutan Post	Bhutan forward private limit
Royal project at pangbisa	Druk Willing Resort
Thimphu thromde	Serphel electrical construction
Royal academy collage	Bauer
Penjor construction	Norbuling Rigter collage
Palden Enterprises	Neo Engineering
Yangchenma private limited	Pyelbar company
Paro AMC	BCD, AWP
Pyelbar Lokchey Private Limited	Nyurjock fabrication
Pemagatshel dzong construction	Nang Gie Aam
Chukha hyerpover	Bhutan post
Kuri chhu hydropower	Vajra builder





## Annexes

OJT employer	Name of Agency or Company where you work:
Farm machinery corporation limited	Dzong construction project sarpang
Dungsam cement copourent limits	Jaiprakash Association limited
Phuntso Wangdi Tailoring Shop	Eastern automobile workshop
College of Zorig Chusum	St construction
Threchu Goenpa Dorjicholing Manastery Bangter	Ice beverage
Phuntsho Gyeltshen	Jk automobile workshop
Jurmey Thinley	Rabten engineering workshop
Goensa Reconstruction	Chiimi Workshop
Pema Tailoring shop	Bhaps Garage
Barma Pemagatshel and Jigme Drukpa Zhamgang	SMCL Gypsum
College of Zorig Chusum	Khamsum
Dragon Curving	Khamsaa workshop
Karma Drugyel Gedu	Lhawang worksho
Radhi Lhakhang	Druk Auto Care Center
Degala	Samste in heavy vehicle workshop
Pakaling	Noryang automobile workshop
Pangkhar Lhakhang	BMML DHAMDUM
Tashiyangtse	Cheeme workshop
Rinchen construction	AS Automobile
Sonam Dorji	Druk Auto Care Center
Karma	SP Automobile Workshop
Karma Tshering Wood Carving	Chimi workshop
Ugyen Choling Lakhang Pakaling	Sompal driving training institute
Sonam Dorji	Chheme auto workshop
Ugyen Choling Lhakhang	TEEDEE AUTOMOBILE
Dorjicholing Lhangkhag	Yeshey T Denkar Pvt. Ltd
Sangay Thinley	NPPF
Jurmey Thinley Tailoring	Pelden Enterprise Pvt. Ltd
Sangay penjor	Phuentsholing Hospital
Karma Drukgyel	Druk Trading Equipment
Samphel Dendup Tailoring shop	Chhundu Automobile Agency



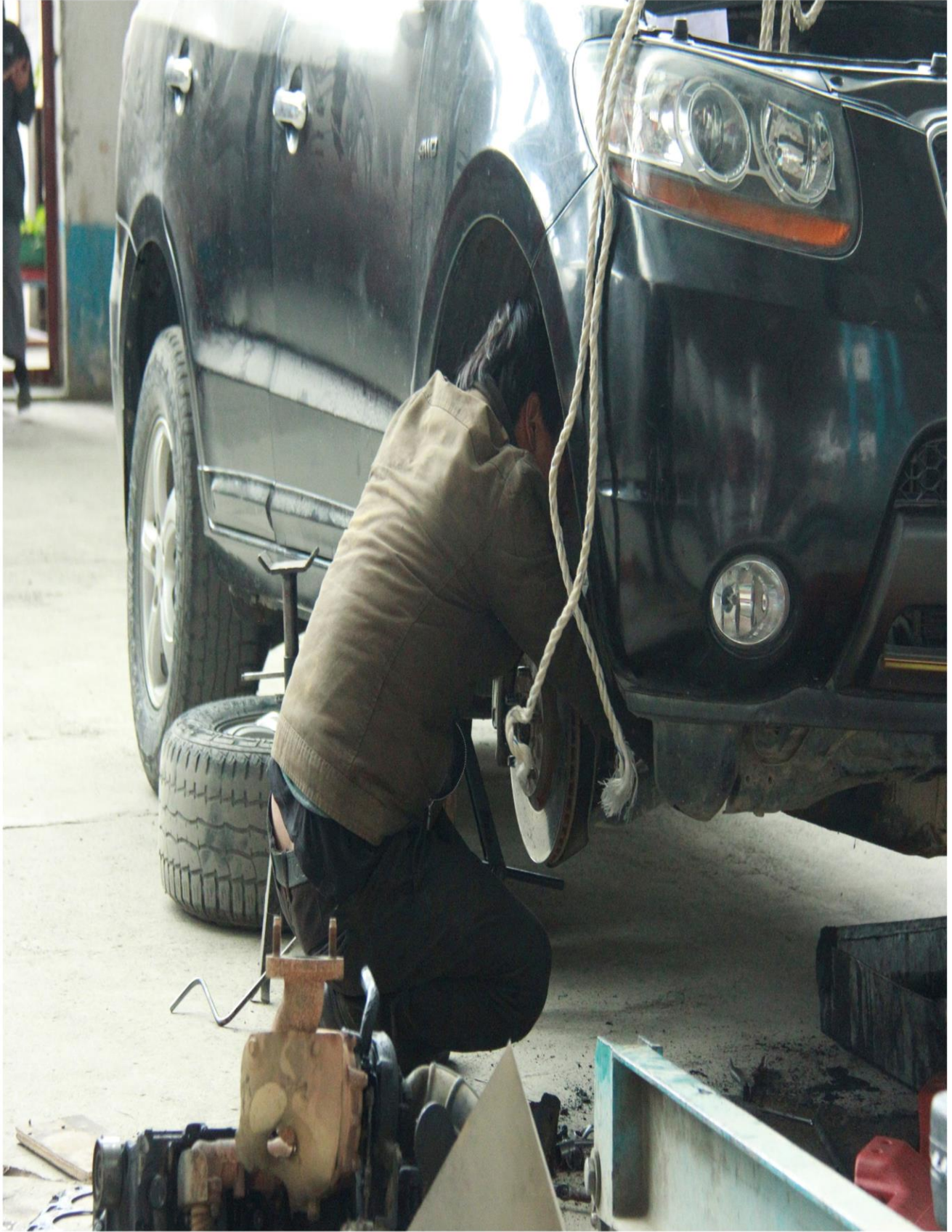
## Annexes

OJT employer	Name of Agency or Company where you work:
Kuendrup Tailoring shop	Bhutan Silicon Metal Pvt. Ltd
Under Private worker	Kuenphen Auto Workshop
Dorji Phuntsho	Hindustan Construction Company Limited
Sangay Tenzin Tailoring shop	Serphel Electrical Company
Rinchen Penjor	Thangtong Iron & Steel
Jazhung Lhakhang Martsala	Wangdue Regional Hospital
ST international Tailoring shop	Royal Centre for Disease Control
Sherubtse College Kanglung	SD Hotels & Hospitality Pvt. Ltd
Lungten Automobile Workshop	Penjor Construction Pvt. Ltd
Tashi workshops company	PHPA II
Wangchuk auto electrical workshop	Jinzai Construction & Maintenance Services
Kancha Automobile workshop	Dzongkhag Administration
Barma workshop	Sherig Yoebar Arts and crafts
Tashi engineering workshop	Lhadzong Tashigang Goenpa, The Royal project
Rabten engineering workshop	Bodhisattva Arts and Crafts
Yangki automobile workshop	ART UNITED
Lungten Automobile	Mr. Karma Tenzin
Brother Workshop	Namgay Dorji
Lungten workshop	Under lopen sangay Thinley
Kb automobile workshop	Karma Tenzin company
Kuenjung automobile	L.D engineering automobile workshop
Yangki automobile workshop	T.L Automobile workshop
Three brothers workshops/ Dagap workshops	Tobgay workshop
Dagap workshop /three brothers	Tangsibji Hydro project (HCC)
Kitab automobile workshop	Gyealsung project
Tee Dee autoworkshop	TL autoworkshop
BB auto electric	Pelbar Automobile workshop
STCBL	Pema khangzar Motor Workshop
Druk Wang Alloys Pvt. Ltd	Phatak Automobile
PHPA I	Amw motors workshop
Tashi Metal Pvt. Ltd	Pravite
Bhutan Silicon Metal Pvt. Ltd	Bhap Garage



## Annexes

OJT employer	Name of Agency or Company where you work:
Lhaki Steel	Lhawang Engineering Work
DGPC Tala Hydropower	UJ automobile
Dongkokha lhakhang	STCBL
Pedtsheling Dratsang	L.D engineering automobile workshop
Chimi lhakhang	Autga workshop
Ex-Yonten Lopen	Build Bhutan project
Shingkher lhakhang	Private sector
Sangay Arts & Crafts	Mawongpa water solution
Namgay automobiles workshop	Hindustan company construction
Phuentsholing STCBL	Labour
Tobgay Automobile	Yoenang specialized firm
zing workshop at samtse	Pelzang auto workshop and frication
Dhejung Honda	Samphel Norbu Specialised Firm
Barma Automobile workshop	Zhrndup construction
TD worksgop	Sample Norbu Specialized services
Bhutan Motor Workshop	Private contrucion of building
TEE DEE Automobile Workshop	Good cares builder
Lhawang Engineering Work	Tangsibji hydro power project at power house
UJ automobile	Jm builder construction pvt Ltd
CDCL	jigden construction
Kinley goenpa	
Pema Wangchuk	
Building construction of proprietor (chumey bumthang)	
Denchi dzong	
Ongdi timber industries	
TTI Institute bumthang	
Hindustan construction company	
kuenzang yoeselcholing goenpa	







**TVET Institute Support Division  
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