Technical Training Institutes
Institute of Zorig Chusum
College of Zorig Chusum

TVET Graduate Employer Survey Report 2022

Department of Technical Education

Ministry of Labour and Human Resources

TVET (TTIs and Zorig Chusum) GRADUATES EMPLOYER SURVEY

Graduates Employer Survey Report

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"Climb higher on the shoulders of past achievements-your task is not to fill old shoes or follow a well-trodden path, but to forge a new road leading towards a brighter future,"

-His Majesty the Fifth Druk Gyalpo

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Ministry of Labour and Human Resources
Royal Government of Bhutan

Foreword

In a dynamic and complex labour market, matching the right skills with the right jobs is becoming increasingly important. Technical and Vocational Education and Training (TVET) programs without proper assessment of labour market needs will only widen the gap between the supply and demand for skilled labour. In an effort to gather a comprehensive picture on labour market requirements, employer satisfaction surveys are conducted in a number of countries to understand the labour market needs and accordingly guide the development of quality and relevant TVET programs.

To this end, the Department of Technical Education (DTE), Ministry of Labour and Human Resources (MOLHR) is pleased to present the first ever TVET Graduate Employer Satisfaction Survey Report. The satisfaction survey was undertaken for employers who have recruited the TVET graduates from 6 Technical Training Institutes and 2 Institutes for Zorig Chusum under MOLHR. The survey was initiated with the aim to determine the relevance and responsiveness of the TVET programs and identify employers' perceptions on the competencies of the TVET graduates vis-a-vis the needs of the industry.

Such information is critical for MoLHR and the TVET institutions to improve the overall knowledge, skills and attitude of the graduates and to prepare work-ready, world-ready and future-ready TVET graduates. The study manifests MoLHR's aspirations and efforts to make TVET more resilient and responsive to the human resource and labour market needs of the country through a data-driven approach. The report provides information about the competency, quality, and relevance of TVET graduates, as well as their job attitude, workmanship, and employability of skills from the employer's perspective. It also contains data on the labour market's skill demand/requirement.

I would like to acknowledge the support from Helvetas Swiss Inter-cooperation Office, Bhutan for funding the online survey. I would also like to express our appreciation to all the employers who have taken time to participate and provide useful input in the online TVET graduate employer survey, and look forward to your continued support and cooperation.

Last but not the least, my appreciation goes to the Department of Technical Education for taking the initiative to publish the first TVET Graduate Employer Satisfaction Survey.

With Best wishes and Tashi Delek!

Tashi Wangmo
Secretary
Ministry of Labour and Human Resources

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Acknowledgement

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

The entire initiative was funded by Helvetas office, Bhutan. The department owes a deep sense of appreciation for the financial assistance provided by Helvetas office. The department equally appreciates the ADB-PMU for their financial assistance in purchasing the online survey app 'Survey Monkey', without which this survey would not have been possible.

The Department is indebted to the Department of Labour, Department of National Human Resource Development and the Establishment Survey team for providing the required information about the employers. We would also like to thank all the TTIs, IZC and CZC for sharing the information on TVET graduate employers. More importantly, the Department would like to thank all the members of the Technical Advisory Committee and Technical Working Group for their constant effort and dedication throughout the survey. Without their effort and dedication, this survey report would not have been possible. Their contributions are greatly appreciated.

We hope that this study will help in the formulation of different strategies and initiatives for the public TVET system.

Acronyms and Abbreviations

ADB-PMU	Asian Development Bank-Project Management Unit
CAB	Construction Association of Bhutan
CZC	College of Zorig Chusum
DoL	Department of Labour
DNHRD	Department of National Human Resource Development
DTE	Department of Technical Education.
EEIS	Employee Emergency Insurance Scheme
ICT	Information Communication Technology
IZC	Institute of Zorig Chusum
MoLHR	Ministry of Labour and Human Resources
NIZC	National Institute for Zorig Chusum
OHS	Occupational Health and Safety
OJT	On-The-Job-Training
SMS	Short Message Service
TAC	Technical Advisory Committee
TTIs	Technical Training Institutes
TVET	Technical and Vocational Education and Training
TWG	Technical Working Group

The Technical Working Team

The Technical Advisory Committee: The Technical Advisory Committee was in charge of providing guidance and direction to the technical workgroup, level II, for conducting the survey.

Technical Advisory Committee Member:

1. Mr. Norbu Wangchuk, Director, Department of Technical Education,
2. Mr. Lham Dorji, Director, Department of Labour,
3. Mr. Sangay Dorji, Chief Program Officer, TVET Professional Service Division,
4. Mr. Jigme Dorji, Chief Program Officer, TVET Institute Support Division,
5. Mr. Karma Dorji, Program Analyst/Project Manager, TVET Professional Service Division,
6. Mr. Karma Dorji, Dy. Chief Program Officer, TVET Professional Service Division,
7. Mr. Sangay Tshewang, Principal, Technical Training Institute Samthang,
8. Mrs. Deki Wangmo, Senior Program Officer, TVET Institute Support Division.

Technical Working Group

The technical working group was responsible for carrying out all survey activities in accordance with the directions and guidelines from the Technical Advisory Committee. The team went through a number of stages during their work. The creation of survey questionnaires was the first phase. Pilot testing, sampling, survey advocacy, online data collection (online conduction), and data validation were all part of the second phase. The final phase of the project included data analysis, report discussion, report authoring, report design, and finalization.

Sangay Tshewang: The principal of the Technical Training Institute, Samthang, led the entire survey team. In addition to his job as survey team head, he has actively contributed to the formulation of survey questionnaires and the report writing.

Kinzang Dorji: The Assistant Program Officer, TVET Institute Support Division, DTE, was actively involved in the overall survey conduct and coordination. He has contributed to the development of survey questionnaires, online survey administration, data collection and validation, data analysis, and report writing and design. In addition, he was responsible for the logistic arrangement.

Sonam Tshering: Sr. Instructor (ICT), National Institute for Zorig Chusum has contributed to the survey by developing survey questionnaires, administering online surveys, collecting data, validating data, and analyzing data.

Prakash Sarki: Assistant Lecturer (ICT), Technical Training Institute, Samthang, has contributed to the development of survey questionnaires and data analysis. He has also contributed to the design of the survey report.

Sangay Rabten: Assistant lecturer (ICT), Technical Training Institute, Chumey, was actively involved in designing the overall survey report, in addition to his contribution to data analysis and report writing.

Sangay Dema: Assistant Lecturer (Applied Mathematics), Technical Training Institute, Thimphu contributed to the survey's questionnaire design, online survey administration, data validation, and report writing.

Tashi Lhamo: Assistant Lecturer (Applied Mathematics), Technical Training Institute, Khuruthang contributed to the conduction of online surveys, data collection, data validation, and data cleaning.

Tashi Tobgay: Assistant Lecturer (Applied Mathematics), National Institute for Zorig Chusum, contributed to the conduction of online surveys, data collection, data validation, and report writing.

Yeshi Lhamo: Assistant Lecturer (Technical English), National Institute for Zorig Chusum, contributed to the survey by developing the survey questionnaire, administering the online survey, validating the data, and writing the report.


CHOKI

Section I
General Introduction

Bhutan's TVET system was established in 1965 and is expected to undergo significant changes to meet the changing needs of the youth and ensure the adequate provision of a skilled workforce that meets international standards and the local demand of the dynamic labour market. However, TVET's low social status persists as society continues to place greater emphasis on academic education and fails to recognize TVET's enormous potential and unique role in societal and economic development.

As a logical consequence of the progress made in school enrollment, significant progress in TVET is required to ensure the provision of quality and relevant knowledge and skills, job competencies, attitude and workmanship, as well as clear and appealing pathways to higher education and career to enhance their employability and entrepreneurship. Amid global and technological changes, TVET has become even more important. As a result, TVET plays a critical role in training youths and adults to succeed in the ever-changing 21st-century world while also addressing skills gap and satisfying employers' needs.

Low social recognition and public acceptance of TVET as a necessity for socio-economic development would result in youth unemployment, a labour shortage in the industry, and other social issues that would harm the country's social fabric and economic goals. Alarmed by the unemployment status of TVET graduates with 46.6% males and 53.4% females (DTE, MoLHR, 2021) and employers' difficulties in getting employees with the skills they deem necessary, the Ministry has made several attempts to address graduates' unemployment and employers' lack of skilled workforce through the implementation of Blue Print 2016–2026, TVET reforms, Build Bhutan Project (BBP) and Skill Development Plan (SDP). It is within these contexts that His Majesty the King has specially commanded the paradigm shift in TVET governance and management to modernize, redesign and revolutionise TVET commensurate with the changing technological and economic contexts.

Further, the 2020 tracer study report (DTE, MoLHR, 2021) has recommended conducting an employer's satisfaction study regularly to evaluate and improve TVET programmes relevancy and quality as well as to establish a strong TVET database.

Thus, a Technical Advisory Committee (TAC) recommended forming a Technical Working Group (TWG) for the TVET Graduate Employer's Survey to do an in-depth study on employers' satisfaction. As such, a group of nine members was instituted and worked on the development of the questionnaire and conduct of the survey.

Although the survey validated a sample of 2114 employers, only 767 employers were sent with the survey link. This report was based on the response/data of a representative sample of 420. The online survey was administered using a standardized questionnaire with five sections of 49 questions. The questionnaire covered several interrelated themes: organisational details; recruitment of TTIs/IZCs graduates; skill shortage and labour market demand; assessment of TTIs/IZCs graduates; employer satisfaction and retention. The study also tried to assess the relevance and quality of the TVET programme through the technical competence, workmanship, job attitudes, and soft skills knowledge of the graduates.

The recommendations of the study are expected to assist in the design of various plans for enhancing public TVET programmes, primarily in six TTIs and two IZCs managed by MoLHR.

Background

Technical and Vocational Education and Training (TVET) refers to initiatives that promote learning and develop skilled workers (Lauglo, 2009), laying the groundwork for economic progress (MoLHR, 2015). TVET in Bhutan dates back to its introduction in the mid-1960s, with the first technical school established in 1965 at Phuntsholing, known as Don Bosco Technical School. Later in 1974, Royal Bhutan Polytechnic established the roots of Technical Education in the country.

Presently, under the Ministry of Labour and Human Resources, with the vision of "A nation with a demand-driven and accessible TVET system as a citizen empowerment tool for a quality-assured workforce to enable sustainable livelihoods and socio-economic development of the country" (MoLHR, 2013), TEVT has embarked on its journey of producing skilled individuals to drive the socio-economic growth of the country. An efficient and successful TVET system would boost the country's production, competitiveness, and entrepreneurship (MoLHR, 2015).

In a dynamic and complicated labour market, matching the right employees and talents with the right jobs is becoming increasingly challenging. In an ever-changing labour market, policymakers must be aware of the present and the future skill needs, as well as the talents necessary for their industry. Employers' perceptions of the most critical competencies required to meet industry needs in various professions, as well as their expectations of our graduates, are collected through the employer survey (Hoh, 2022). It's one of the most common strategies for determining present and future labour market demand.

Due to the sheer importance of the survey, it is done in several developed countries. At the request of the UK Commission for Employment and Skills (UKCES), the United Kingdom conducts an annual "Employer Skills Survey" (ESS)' that provides a comprehensive picture of skills needs and training investment, including vacancies and manpower shortages, skills gaps, and recruitment of school leavers and young people. Similarly, every state in the US conducts an employer survey every two years through Workforce Development Boards. Cedefop also conducts a pan-European employer skills survey, which provides a comprehensive picture of skills demands and training investment, including openings, skill shortages, and employee skill gaps (ETF-Cedefop-ILO, 2016).

The dynamics of the labour market brought about by globalization have resulted in rapid changes in technology, higher competency levels and standards, and changes in the employment patterns and preferences of employers and workers, among others (TESDA, 2012). The employers' survey can be effective in finding out the demand and requirements of the labour market.

This Employer Survey examines organisational demographics, industry and business outlook, growth and prospects, employee attraction and retention, and skill set requirements to determine the demand for workers in a labour market. It also contains critical information about how employers view TVET graduates' knowledge, abilities, and aptitude. In the context of TVET, there is currently insufficient information accessible about employers' skill demands, difficulties in attracting and retaining talent, and training opportunities in the country. In response to these issues, this employer survey was conducted.

Aims and Objectives

The results from this survey (information on current and future skill demand) will be useful for education and training as well as employment policies.

The main objectives of employer surveys are as follows:

1. Gather information from TVET employers regarding the competency, relevancy, and quality of TVET graduates, including their job attitude, workmanship, and employability skills.
2. To obtain a clear picture of the skills required by the industries/business enterprises/employers and to determine whether technical employees possess those skills.
3. Contribute to the identification of skills gaps and labour shortages.
4. The development of the TVET empirical curriculum and education pathways.
5. Assist in the development of TVET and current labour market programs.

Since the survey covered the majority of OJT providers and employers of TVET graduates, the survey aimed to provide the necessary information from the demand side of the market to enable in providing clear policy direction, planning and interventions of TVET training programmes.

Methodology

The research was conducted using a "survey-based strategy" that included descriptive and explanatory approaches.

The employers of TTIs and IZCs graduates administered the online questionnaire survey. The universal target approach method was adopted to collect data to get the maximum number of respondents using the purposive sampling method. After the validation of the samples, only 420 respondents were considered for analysis based on the completeness of the questionnaire.

The questionnaire was pre-tested several times to increase credibility and validity. The data collected from Survey Monkey was analyzed using STATA-13 and Microsoft Excel 2016.

Target Audience

The survey's findings are expected to help improve and strengthen TVET education plans and programmes, as well as the country's TVET system as a whole.
The study may not fulfill the requirements of individual TVET stakeholders; nonetheless, the following stakeholders were expected to benefit:

1. Ministry of Labour and Human Resources;
2. Ministry of Economic and Foreign Affairs;
3. TVET project offices, policymakers, key TVET donors and other national TVET stakeholders;
4. TTIs and IZCs in the evaluation of institute-provided courses;
5. Youths pursuing TVET education mainly from the current and prospective labour market information shared by potential TVET employers.

Scope and Limitations

The goal of this survey is to find the level of employer satisfaction on the abilities and performance of employed TVET graduates in the workplace, as well as to learn about the existing and future labour market requirements.

The study would provide information on the expansion of TVET programmes and active labour market activities, as well as the development of the TVET education curriculum in the country, which may aid in addressing challenges such as youth unemployment and skills mismatch. The survey was conducted online from May 16 to May 22, 2022. The scope of the study is restricted to public TVET employers and simple descriptive figures.

The details of the employers were collected from the institute based on their in-campus recruitment, tracer study, and OJT details. Similarly, the employer's information was also sourced from Department of Labour, Department of National Human Resource Development and Construction Association of Bhutan. However, there were limited information about those employers who are currently having the TTIs and Zorig Chusum graduates as an employee, which led to biased and unequal representation of targeted population. This was further hindered by the time constraints.

Thus, this survey may not merit appropriate representation and generalization but may be used by others in exploring answers to the issues they encounter in regards to TVET graduates' competency and quality.

The data was collected using online Survey Monkey and achieved the response rate of 54.76% with cases of missing values in the survey. A few respondents were contacted and their missing data were obtained whereas, some respondents could not be contacted even after several calls. Likewise, the multiple survey conducted by the ministry and other agencies could have led to the survey fatigue which could have impacted the survey responses.

Section II
Methodology

This section presents the procedures, methods, and techniques adopted in the survey work. It details how data was gathered for the research and analyzed.

Research Design

The general strategy used to carry out the study is referred to as the research/study design. For this 'TVET Graduate Employer Survey', a quantitative research design integrating a cross-sectional and descriptive study approach was used. The research design for descriptive research is as follows: It's a theory-based design process that involves collecting, interpreting, and presenting data. This enables a researcher to explain why and how the research was conducted. The descriptive design also aids in comprehending the need for more in-depth research. Furthermore, the descriptive research design is quick and practical from a budgetary standpoint.

The employers who hired graduates from Technical Training Institutes and Zorig Chusums administered this survey. The survey gathered information from employers about the skills, competency, relevancy, and quality of TTIs and Zorig Chusum graduates, including their attitude, workmanship, and employability skills. Rather than controlling and manipulating the variables, the study simply observed and measured those variables (descriptive analytics).

Population and sampling technique

The target population for the collection of data for the study were the employers who had employed TTIs/IZCs graduates at any given time, either on a regular or on an OJT basis, which formed the sample frame for the study. Of the 2000 employers identified, only 420 employers have responded to the survey questionnaire. This sampling is a non-probability sampling method, and it occurs when "elements selected for the sample are chosen by the judgment of the researcher." Researchers often believe that they can obtain a representative sample by using sound judgment, which will result in saving time and money.

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. Aside from the tracer studies; 'Multi Cohort Online Tracer Study of Bhutan' and 'TVET Graduates (TTIs, IZC & CZC) Study of Bhutan,' there were limited information about the employers who recruited TTIs and IZC graduates.

Thus, the purposive sampling technique was used in this study, in which the researcher selects the sample based on prior knowledge about the purpose of the study, even if it is not statistically representative of the larger population at hand. When creating the sample, all a researcher has to do is reject individuals who do not fit a specific profile.

The sampling technique was chosen with the primary goal of including only those employers who currently employ our TTIs and IZC graduates. As a result, the employers from the following studies/sources were included in defining the sampling frame for this study;

1. Multi-cohort online tracer study of Bhutan (Department of Technical Education, 2020)
2. TVET Graduates (TTIs, IZC & CZC) study of Bhutan (Department of Technical Education, 2021)
3. List of OJT providers to TTIs, IZC and CZC trainees (Technical Training Institutes, Institute of Zorig Chusum and College of Zorig Chusum - MoLHR)
4. List of employers – Department of Labour, MoLHR
5. Employers with Technical employees – (Establishment Survey, Department of National Human Resource Development, 2021)
6. Construction companies – Construction Association of Bhutan (CAB).

The survey team conducted survey advocacy and identified the sampled employers for the survey based on the availability of the listed respondents' phone numbers. Instead of generating a sample size for the survey, the team took into account all the identified sampled employers for the survey.

Based on the availability of their mobile numbers, the questionnaires or survey forms were sent through SMS to all the sampled employers. In the same line, the team also distributed the survey to the sampled population via online platforms (emails, WhatsApp, Facebook, etc.).

Target Population

The target population, also known as the target audience, is a group of people who have certain characteristics that distinguish them from the rest of the population. A clear definition of your target population is important before defining your sampling frame, sampling methodology, feasibility, and sample size.

Regarding this 'TVET Graduate Employer Survey," all the employers who are having the graduates from TTIs, IZC, and CZC working with them as employees, regardless of graduation year, were considered for this survey. Furthermore, the study looked at employers who had previously hired TTIs, IZCs, and CZC graduates.

Questionnaires and Pre-testing

The Technical Working Group, comprised of six members, including TAC members, worked for a week from 21st to 26th April 2022, on the development of a self-administered survey questionnaire, based on the recommendation of the Technical Advisory Committee (TAC) and approval from the Ministry of Labour and Human Resources. The draft survey questionnaire was developed after reviewing international and national TVET documents to gain a global understanding of TVET and best practices.

The primary reference documents were the Multi-cohort Tracer Study of TVET Graduates (2013-2018), the draft TVET Policy (2013), the TVET Industry Outlook (2015), TVET Reform reports, and other international papers on an employer satisfaction survey. Based on these reference documents, the six broad sections for the questionnaire were identified. As a result, the TWG initially developed and recorded 79 survey questions divided into six broad sections.

The questions were further validated to 40 questions divided into five broad sections based on their priority and relevance to the study.

The first round of pre-testing was conducted among the technical working group members to identify technical flaws in the questions, as well as the time it took to complete the survey and other errors in the questions. Based on their feedback's certain changes and rectifications to the questionnaire were made before proceeding to the second round of pre-test.

The second round of pre-testing was conducted with construction supervisors to further identify technical flaws in the questions and to ensure that the questionnaire was understandable by the respondents. Based on the feedback from the second round of pretest, the questionnaire was reviewed and reduced to 39 questions under five broad sections for presentation to the TAC. As a result, the TWG presented the survey questionnaire to the TAC for final approval, and after thorough moderation and validation, the questionnaire was finalized with 38 questions divided into five sections.

Section 1: Organization Profile
Section 2:
- **Part I:** Recruitment of TTIs and Zorig Chusum Graduates
- **Part II:** Skill Shortages and Labour Market Demand

Section 3: Assessment on TTIs and Zorig Chusum Graduates
Section 4:
- **Part I:** Employee Retention
- **Part II:** Income and Work Conditions

Section 5: Recommendations and Suggestions

The questionnaire was highly standardized, with respondents being required to choose from a list of predetermined responses in most cases. Some questions were left open-ended so that respondents could choose their own answers. The final survey questionnaire was then created with the Survey Monkey app and distributed to employers for data collection.

Data Quality and Reliability

One of the major disadvantages of the online survey is the data quality and reliability of the survey response. Since the interviewers/enumerators were not involved in the survey questionnaire's implementation, it was necessary to design it based on the respondents' ability to complete it. The questionnaire was written in a language that employers with class X or lower academic qualifications could understand.

Second, it was critical that the design allowed for responses without additional explanation. To ensure the operation's validity (Measuring what is intended to measure), all data collection tools (questionnaires and surveys) were designed in collaboration with relevant stakeholders and TVET experts.

The survey team had no control over the survey's actual administration since it was self-administered (internal validity). The team could simply remind the respondents on the importance of the survey and follow up for the survey completion with the honest responses. 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' for the information.

Data Collection

The online survey approach was chosen for the data collection given the survey duration and budgetary constraints. Moreover, the method was chosen because of its simplicity, low cost, and lack of post-survey data entry requirements. The survey could be completed using smartphones, laptops, iPads, and computers. However, there were few drawbacks while adopting the online survey. Some respondents and their responses may have been discouraged due to technical difficulties with internet access given their location and the educational qualifications.

The survey invitations could be delivered in a variety of ways, including SMS, e-mail, and social media groups (WeChat and Facebook groups).

In addition to email correspondence, the survey team availed MoLHR's SMS blast service to send the survey link to all the sampled employers. Nonetheless, the team encountered major problems while distributing the survey link due to the respondents' invalid mobile numbers.

As a result, before sending the survey links, the team verified all the employers' phone numbers. This entailed calling individual employers to verify their phone numbers and advocate the survey and its significance.

Following the distribution of the survey link, the survey team called all the employers and reminded them to complete the survey via the provided link. They were also promised a survey incentive of Nu. 1199 data package to the five employers who completed the questionnaire via a lucky draw.

Response Rate

One of the major concerns from this survey was a low response rate given the online survey approach. In this response, the team conducted several reminders and survey advocacy to the employers besides quoting section 232 of Labour and Employment Act of Bhutan, 2007 which governs the information disclosure when required by the Ministry of Labour and Human Resources. Further the survey incentive of Nu. 1199 data package was promised to those five entries who completed the survey via lucky draw. This was done primarily to encourage the sample populations to participate in this important survey.

The survey team validated a total of 2114 employers for the survey based on the list of employers from the sampling frame. Employers from various sectors were contacted by phone calls and asked about the presence of TTIs and Zorig Chusum graduates currently working with them. Among them, 612 employers reported that they do not have TTIs or Zorig Chusum graduates despite having previously hired them. Similarly, 118 employers were closed during the survey. On the other hand, 206 employers had invalid phone numbers, and 411 employers did not respond despite repeated phone calls.

As a result, the survey link was distributed to 767 employers, and over 600 employers responded to the survey.

Despite this, there were numerous duplicate and incomplete survey responses. Some employers with no TTIs or Zorig Chusum graduates also participated in the survey. In this regard, the TWG was forced to remove all those invalid and duplicate responses. In total, 420 responses were recorded for the survey, resulting in a response rate of 54.67%. Given its methodology, an online survey with a response rate of more than 30% is considered a satisfactory participation.

Data Validation and Coding

Since the survey was administered online, the incomplete responses and missing information were unavoidable survey issues that necessitated thorough validation and cleaning. The data validation and cleaning process entailed going through each response and contacting those respondents who had partially completed the survey or had left the survey unfinished.

The survey team recorded all those inconsistent, incomplete and double responses. Accordingly, the respondents were contacted for the explanation and additional information wherever required to fill in the missing data. All the double and inconsistent responses were removed from the survey. The Survey Monkey app and Microsoft Excel were used to validate and edit the data.

Following the completion of data validation and cleaning, the entire data set in excel format was exported to Stata -13 for data coding and analysis. In addition to Stata, Microsoft Excel was used for coding open-ended and multiple responses that required classification and coding.

Data Analysis

For this study, the descriptive analysis method was used, along with descriptive statistics such as frequency, percentage, and central tendency. It is a statistical procedure that summarizes or reduces data to make it easier to understand. It is usually performed prior to the inferential analysis. This is not to say that inferential analysis is better than descriptive analysis. Each analysis serves a distinct purpose.

The collected data were analyzed using STATA-13 and Microsoft excel. This is a well-known and well-documented statistical data analysis program.

The data was interpreted in line with the framework of organizational demographics, industry and business outlook, growth and prospects, employee attraction, retention, and skill set requirements to determine the demand for workers in the labor market. While Stata was used for the majority of the analysis, Microsoft Excel was used for the open-ended and multiple-choice responses. Tables and figures/graphs are used to present the study findings.

The inferential interpretation of the data was possible, but it was purposefully left out because it was beyond the scope of this study 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 TVET (TTIs, IZC and CZC) Graduate Employer Survey was designed with the goal of evaluating our TVET graduates from the perspective of employers and to assist the ministry in developing relevant and responsive TVET and labor market Programmes. In accordance with this, the survey team ensured that the data collection, data analysis, and reporting adhered to the highest ethical standards possible within the parameters of the study objectives.

The Technical Working Group conducted adequate advocacy about the survey and its importance in order to encourage and persuade employers to participate in the survey. Whereas the Labour and Employment Act of Bhutan, 2007, was cited with the primary intention to only encourage the employers to participate in this important survey.

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


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Section III
Organizational profile

The section covered the organizational profile of the employer, their spatial distribution by Dzongkhag, and the main economic activities of the organization.

Location of the organization

Figure 3.1 represents the distribution of the employers in terms of locations (Dzongkhag). Of the 420 respondents who took part in the survey, (41.9%) employers were located in Thimphu, followed by Chhukha with 45 (10.71%) and Paro with 40 (9.52%). The dzongkhags with the lowest distribution of employers were Zhemgang with 02 (0.48%) and Lhuentse with 3 (0.71%). The findings of the Tracer Study Report of 2020 graduates (DTE-MoLHR, 2021), corresponding to the above findings, shows that most of the TVET graduates were working in Thimphu, with 109, followed by Sarpang with 63 at the time of the survey.

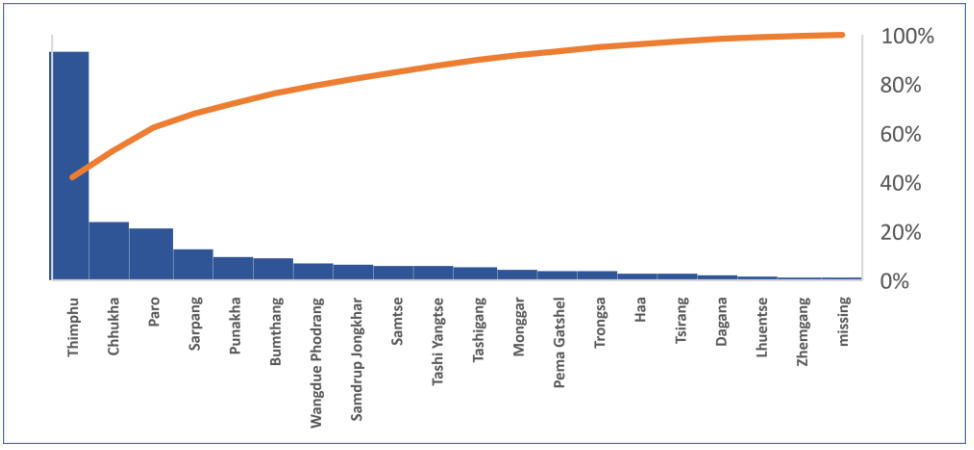


Fig 3.1: Employer distribution across country

Economic activities

The twelve broad economic activities identified during the TVET Reform was adopted in this study to explore the economic activities of the TVET Graduate Employers.

The figure 3.2 indicates that 24.52% of the employers were engaged in 'Construction' activity, followed by 'Business and Services' with 20.71%. The least represented economic activities were 'Mining and Quarrying' with 0.48%, followed by 'Fitness, Beauty and Wellness' with 0.95%. Thus, the higher level of employer engagement in the 'Construction' sector corresponds to the number of workers (1759) in the sector (both Bhutanese and foreign workers) as reported in the Annual Report – June 2020-July 2021 (DoL-MoLHR, 2021).

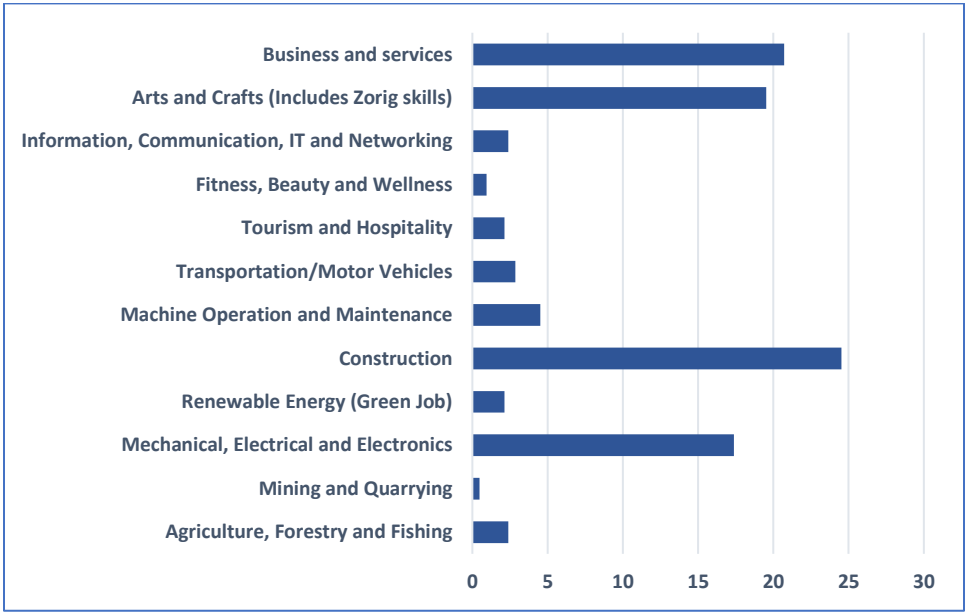


Fig 3.2: Economic activities distribution across different sectors

Section IV
Skill shortage and market demand

Part 1: Recruitment of TTIs and Zorig Chusum graduates

This section includes information regarding the strategies and other methodologies adopted by the employers for the recruitment of TVET graduates or trainees. Furthermore, it also included how most employers prefer to employ the employee.

The importance of the required skills while recruiting TTI and Zorig Chusum graduates is indicated in the table 4.1. A total of 420 employers from twelve major sectors of the economy participated in the study. While four values were missing in this section, 191 favored those graduates with technical skills, followed by the personal attitudes of the graduates during recruitment. Then, they looked at how well they communicated (56) while also taking into account their work experience (41).

Table 4.1: Recruitment factors based on employment status

Recruitment Factors	Employment status			
	Regular/P	Contract/T	missing	Total
Technical Skills/Knowledge	133	58	2	193
Communication Skills	25	31	1	57
Personal Attitudes	35	26	0	61
Workmanship and Professionalism	19	18	0	37
Interpersonal Relationship	15	9	2	26
Working Experience	22	19	1	42

Workmanship and professionalism, and interpersonal relationships are the skills that have the least weight during the recruitment process, with a frequency of 37 and 24 respectively.

Employment Status

As indicated in the figure 4.1, the majority of employers employed the TTI and Zorig Chusum graduates as regular employees, as shown by the frequency of 252 (60%) out of 420 employers. So, it can be inferred that a maximum of our TTI and Zorig Chusum graduates have job stability across almost all economic sectors. However, 39% of the employers signed a contract to retain the employed TTI and Zorig Chusum graduates as their employees.

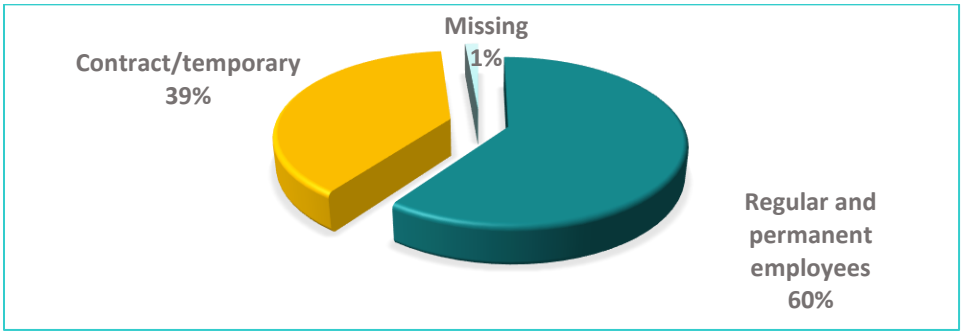


Fig: 4.1 Employment Status

Economic Activities by employment status

'Construction' and 'Arts and Crafts' are the two sectors that employ the most contract employees. This can be the case since the nature of their work is temporary, as specified by the employment contract. They employ graduates from TTI and Zorig Chusum on a contract basis for a specific period of time to complete a project.

Table 4.2: Economic Activities distribution with emploment status

Economic activity	Employment Status in percentage			
	Regular	Contract	Missing	Total
Agriculture, Forestry	80	10	10	100
Mining and Quarrying	100	0	0	100
Mechanical, Electrical and Electronics	71.23	27.4	1.37	100

Economic activity	Employment Status in percentage			
	Regular	Contract	Missing	Total
Renewable Energy	77.78	11.11	11.11	100
Construction	42.72	56.31	0.97	100
Machine Operation and Maintenance	89.47	10.53	0	100
Transportation/Motor Vehicles	83.33	16.67	0	100
Tourism and Hospitality	55.56	44.44	0	100
Fitness, Beauty and Wellness	100	0	0	100
Information, Communication, IT, and Computing	70	20	10	100
Arts and Crafts	39.02	60.98	0	100
Business and services	73.56	25.29	1.15	100
Total	60	38.57	1.43	100

Recruitment method

The figure 4.2 shows that more than 17% of the employers recruited TTI and Zorig Chusum graduates through the Ministry of Labour and Human Resources website, followed by the public employment scheme (other than MoLHR) and private employment services, with 16.9% and 14.05%, respectively, while Web/Online posting stands next with 12.4%. With the technological advancements and impact of the global pandemic, the use of online platforms has drastically increased, leaving behind the mainstream media at 6.9%. Still, 7.8% of the employers indicated that in-campus recruitment is yet another convenient method.

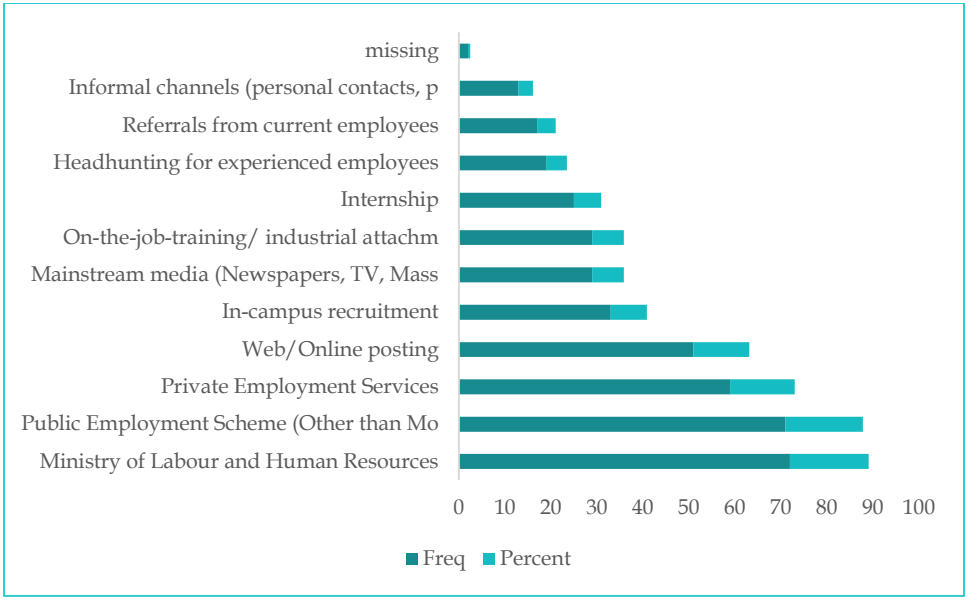


Fig: 4.2 Recruitment method

Part 2: Skills Shortage and Labour Market Demand

This part deals with the skills shortage and labour market demand. It provides an idea of what kinds of skills are in demand in the current labour market and further explores the skills that the Department of Technical Education needs to introduce in order to meet the demand of the future labour market.

Difficulty in getting skilled graduates

Amongst 420 employers, 251 of them found it difficult to get a skilled graduate workforce from TTIs and Zorig Chusums.

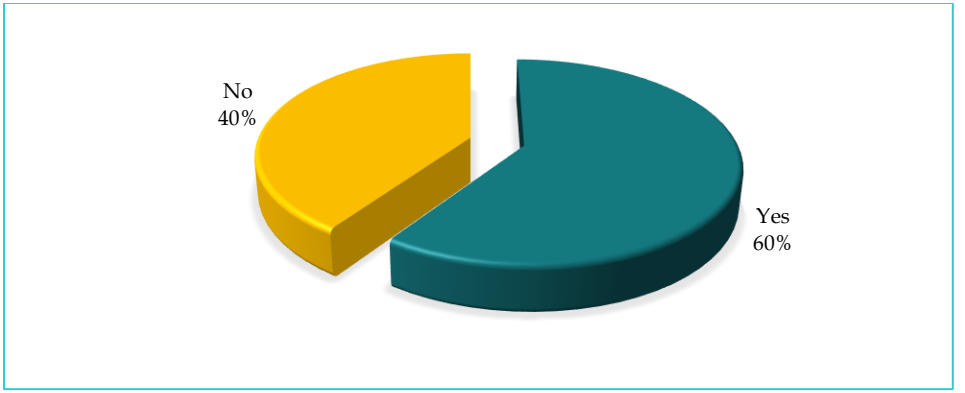


Fig: 4.3 Difficulty in getting graduates

Reasons for difficulty in getting graduates

It could be noted that applicant's lack of work experience and applicants expecting higher wages was the major factor (18.22% each) for this problem. 13.07% of the employers felt that there were not enough applicants while 12.38% felt the mismatch of the skills were the reason for difficulty in getting a skilled workforce. Disciplinary issue was the reason that was least chosen (2.09%) by the employers when asked to state the reason for difficulty in getting a skilled workforce from TTIs and Zorig Chusums. Furthermore, lack of interest and dedication, job hopping, accommodation issues and low perception of such works were few reasons stated by the employers

Table 4.2: Gender preference by economic activity

Reasons	Freq.	Percent
Applicants do not have the adequate work experience	131	18.22
Applicants expect higher wages	131	18.22
Not enough applicants	94	13.07
Applicant doesn't have right skills	89	12.38
Lack of proper job attitude	58	8.07
No adequate supply of TTIs and Zorig Chusum Graduates	49	6.82
Mismatch of choice for the place of posting	47	6.54

Reasons	Freq.	Percent
Applicants lack required soft skills	34	4.73
Lack of attractive work environment	32	4.45
Applicants lack the required education/qualification level	28	3.89
Disciplinary issues	15	2.09
Other (please specify)		
Lack of interest and dedication to the work	2	0.28
Job hoping	1	0.14
Looking for supervisory post	1	0.14
Institute influence on graduate to join firm they refer to	1	0.14
Advanced training must be given by the institute.	1	0.14
Poor practical skill and knowledge	1	0.14
Accommodation (Housing Issue)	1	0.14
RCSC qualification requirement	1	0.14
Down look industry workers	1	0.14
Depends on the manpower strength of the organization	1	0.14
Total	719	100

Skill shortage sectors

Those employers who faced difficulties in getting the TTIs and Zorig Chusum graduates were given the opportunity to select the sector and corresponding skills in which they faced difficulties.

It can be noted from the figure 4.4 that the 'Construction' sector faced the maximum shortage of skilled workers with 26.9% (f-78), followed by the 'Mechanical, Electrical, and Electronics' sector at 23.45% (f-68). The sectors which encountered skill shortages the least were the 'Mining and Quarrying' with 0.34%, the 'Fitness, Beauty, and Wellness' with 0.69%, and the Renewable Energy (Green Job) with 1.03%.

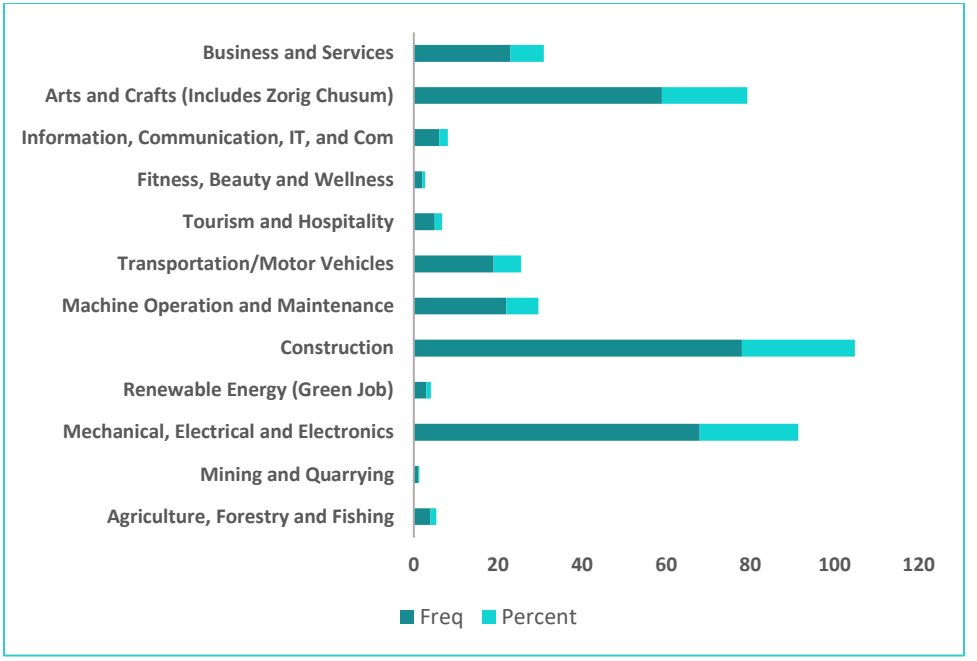


Fig: 4.4 Skill shortage sectors

Agriculture, forestry and fishing

In the 'Agriculture, Forestry and Fishing' sector, the labour shortage is marked at 66.67% in the agro-based food processing and production, followed by 33.33% in dairy product development. However, these courses are rarely offered in our TVET institutions (six TTIs and two Zorig Chusum). The introduction of courses related to the above-mentioned skills would help curb the skills shortage and fulfill the labour demand of the market.

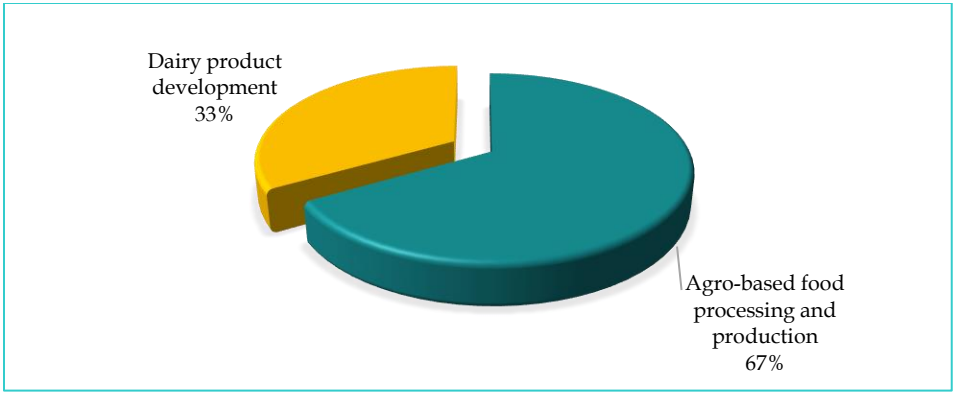


Fig: 4.5 Agriculture, forestry and fishing

Mechanical, Electrical and Electronics

In the 'Mechanical, Electrical, and Electronics' sector, a maximum of 52.24% of the employers remarked that they face a shortage of welders, followed by a shortage of mechanical fitters at 28.36%. Transmission and distribution linemen and electricians are also no exception, with 8.96%. Home appliance repairman is also a job that faces a labour shortage, though only 1.49%. While all of the above skills-related courses are offered in TTIs, the supply of graduates with those skills is not meeting the demands of the market.

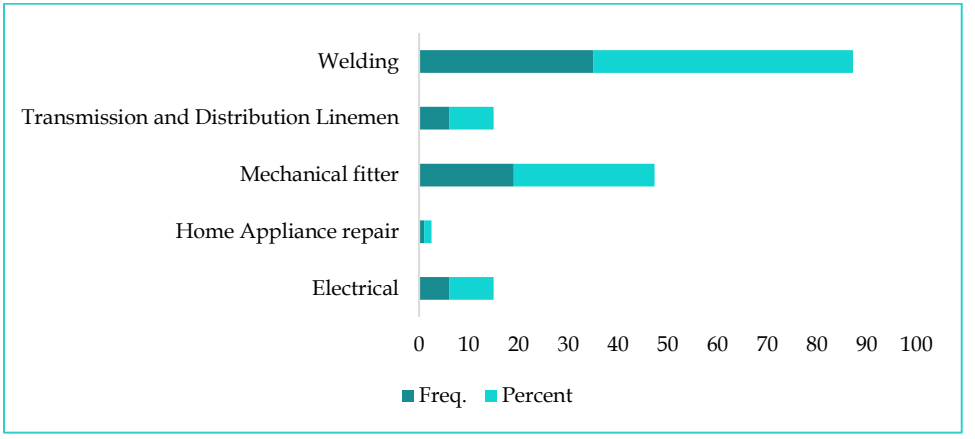


Fig: 4.6 Mechanical, Electrical and Electronics

Renewable Energy (Green Jobs)

In the 'Renewable Energy' sector, the same weighting of labour shortages with 33.33% each has been faced in the field of solar and wind technology, hydropower plant operation, repair, maintenance, and commissioning of transformers/CB/Isolators/CT/PT/etc. Though these courses are offered in TTIs, increasing the enrolment might help solve the requirements.

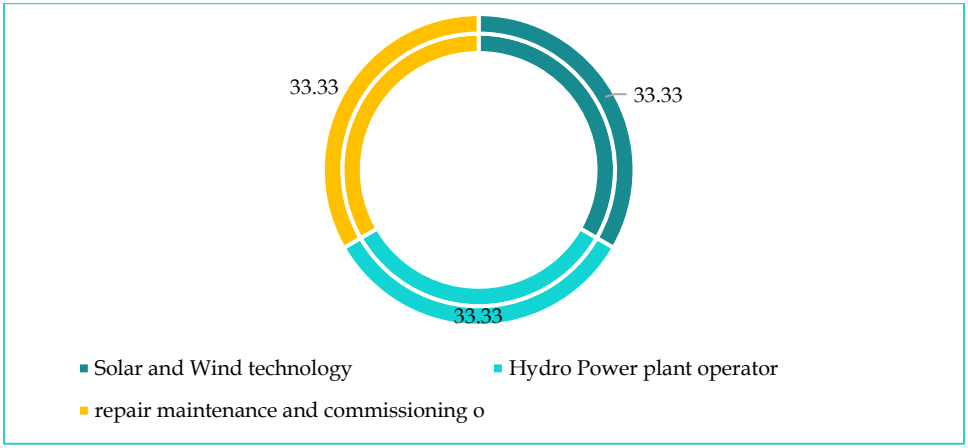


Fig: 4.7 Renewable Energy

Construction sectors

As mentioned in figure 4.8, the 'Construction' sector recorded the maximum labour shortages. In order to meet the demands of the labour market, more labourers with skills in Construction Supervision, masonry, tiles laying, plumbing and pipe fitting, and construction carpentry are required the most as these skills were rated above 10%. However, we cannot simply ignore the demand of producing skilled people in the field of fitting and maintaining false ceilings, furniture making, upholstery, and tunnelling. The rate at which TTIs produce those skilled workforces is very slow.

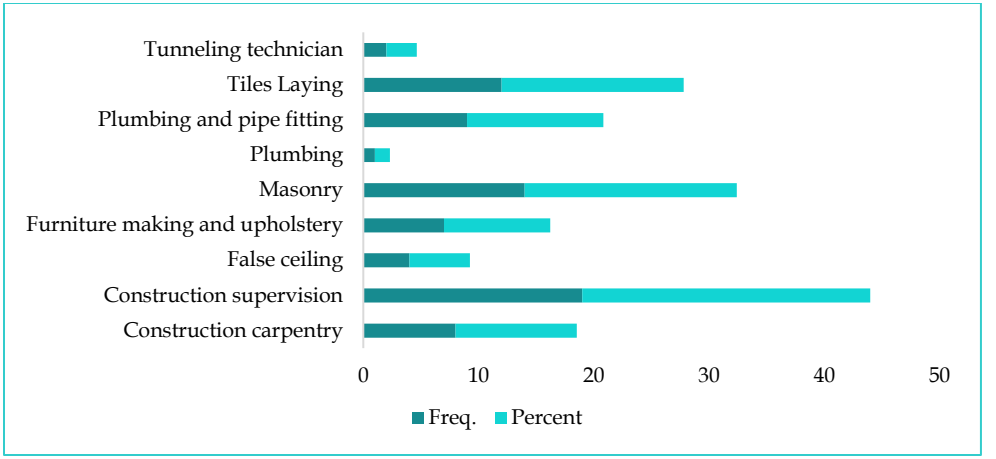


Fig: 4.8 Construction sector

Machine Operation and Maintenance

In the 'Machine Operation and Maintenance' sector, heavy machine operations and maintenance have an acute shortage with 77.27%, followed by lift maintenance with 9.09%. With a percentage of 4.55% each, power operators and looms operation and maintenance technicians are also in demand, according to the employers.

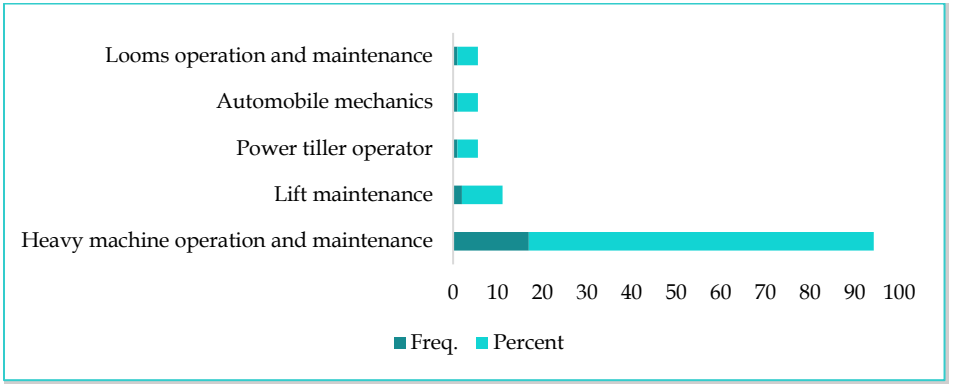


Fig: 4.9 Machine operation and maintenance

Transportation/Motor vehicles

More than half (55.56%) of the employers feel that automobile mechanics are in greatest demand in the 'Transportation/Motor Vehicle' sector, followed by heavy vehicle drivers and auto electricians with 11.11% each.

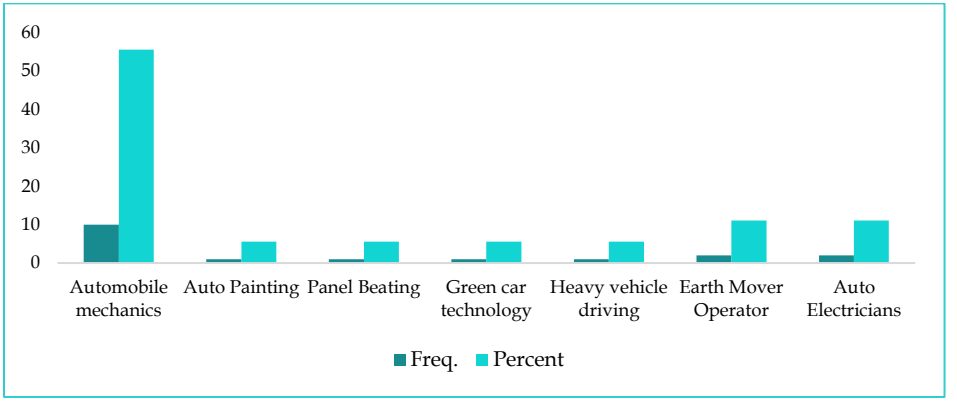


Fig: 4.10 Transportation/Motor Vehicles

Tourism and Hospitality

When it comes to the 'Tourism and Hospitality' sector, hospitality management faces a workforce shortage of 50%. A quarter (25%) of the employers feel that a skilled workforce gap is also present in the food and beverage industry and in bakery and confectionery.

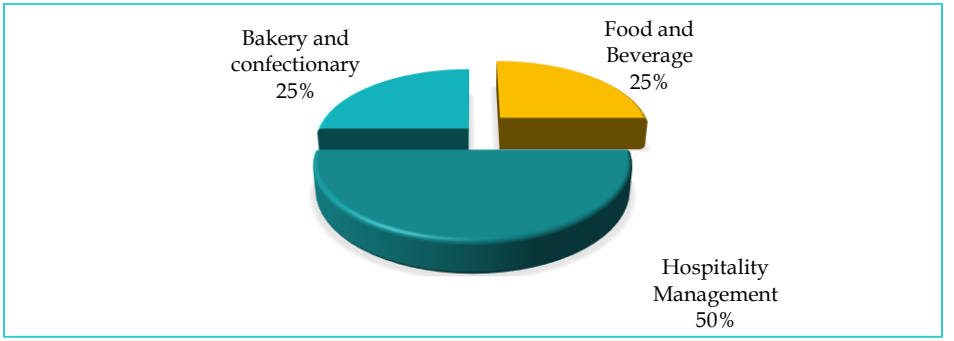


Fig: 4.11 Tourism and hospitality

Information, Communication, IT and Computing

In the 'Information, Communication, IT and Computing' sector, Graphics and Multimedia, and Electronics and Internet of Things industries have a high demand for labour with 33.33%, while cyber and network security and 3-D printing have an equal shortage of 16.67%.

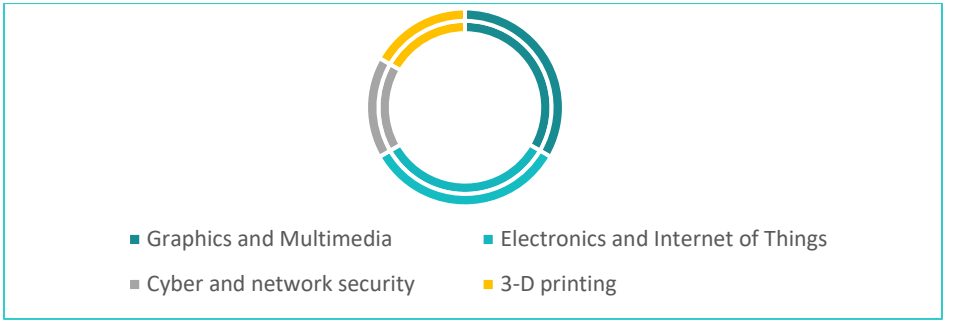


Fig: 4.12 Information, Communication, IT and computing

Arts and crafts (Include Zorig trades)

In the 'Arts and Crafts' sector, skills in tailoring of traditional and western garments have the highest demand with 21.05%. Though the tailoring course for traditional clothes is offered in Zorig Chusum, it still does not meet the requirements of the labour market. The tailoring course for western garments is viable to be introduced as per the demand shown in figure 4.13.

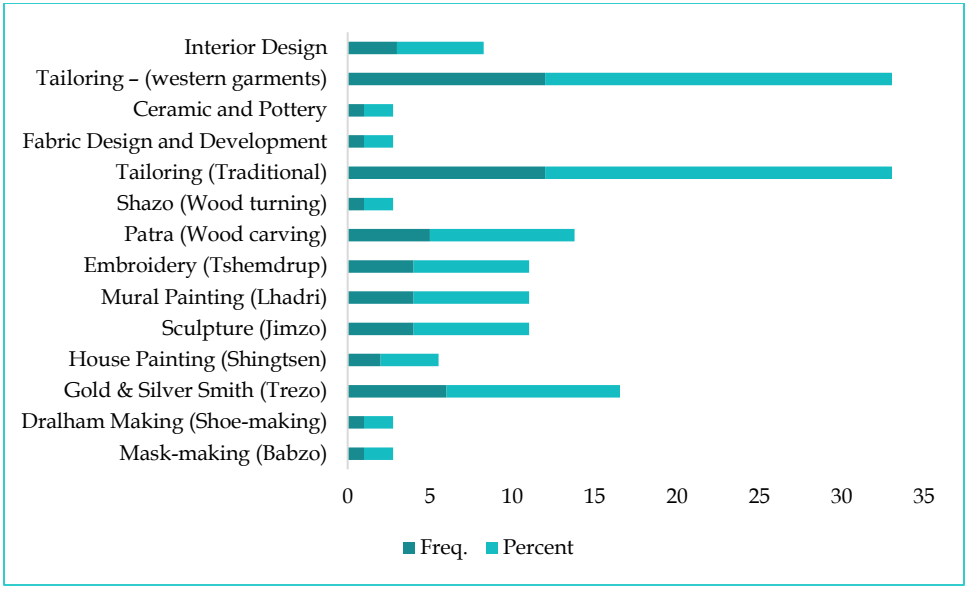


Fig: 4.13 Arts and craft (Includes Zorig trades)

Business and Services

Skills in retail and online business are in demand in the current market of 'Business and Services' sectors with a maximum of 54.55%. It could be due to the current pandemic that online businesses have found their roots in the business ecosystem. Secondly, the requirement for a workforce in manufacturing and marketing stands at 22.73%.

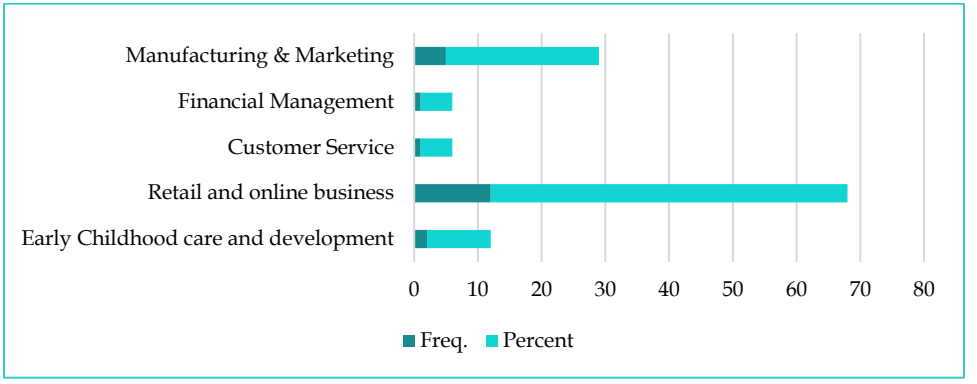


Fig: 4.14 Business and services

Gender preferences while employing TVET graduates

Overall, it is noted that 60% of the employers prefer to employ both male and female graduates equally, 36% prefer to employ only male graduates, while only 4% of the employers prefer female graduates owing to their loyalty to the organization.

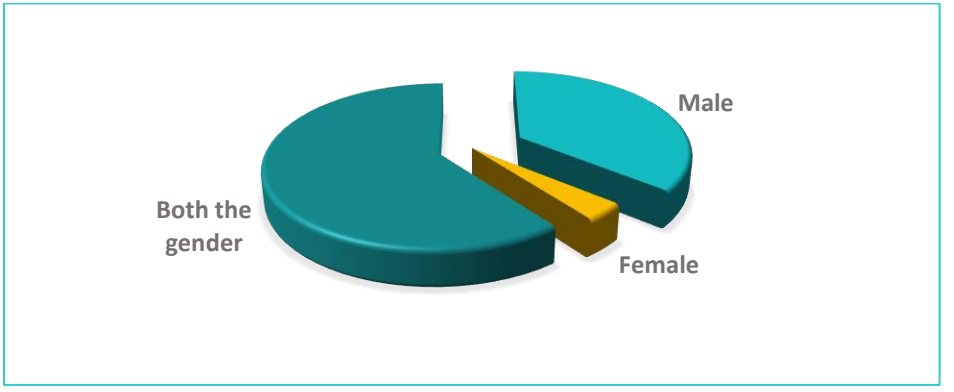


Fig: 4.15 Gender preferences

Reason for gender preference

The employers who preferred either male or female graduates were asked to provide the reasons for their preferences. The top three reasons given by the employers for the gender preferences are 'Nature of work', 'Work environment' and 'Work commitment' with 63.64%, 15% and 11.52% respectively.

Table 4.3: Reasons for gender peferences

Reasons	Male		Female		Total	
	n	%	n	%	n	%
Nature of job	99	94.3	6	5.7	105	63.64
Family obligation	5	83.3	1	16.7	6	3.64
Work commitment	18	94.7	1	5.3	19	11.52
Social stigma	2	100.0	0	0.0	2	1.21
Work environment	23	88.5	3	11.5	26	15.76
Lack of policy intervention	0	0.0	1	100	1	0.61

Reasons	Male		Female		Total	
	n	%	n	%	n	%
Loyalty to the organization	2	33.3	4	66.7	6	3.64
Total	149	90.3	16	9.7	165	100

Gender preference by economic activity

Unfolding gender preferences by economic activity, the male graduates are preferred mostly by the 'Mining and Quarrying' sector (100%) whereas their preferences were least in the 'Fitness, Beauty and Wellness' sector. In case of female graduate preferences, they were mostly preferred by the employers from 'Arts and Crafts' sector and least by the employers belonging in the field of agriculture, mining, renewable energy, machine operation, tourism and ICT.

The maximum number of employers however stated that they preferred both the gender for recruitment. Nevertheless, the interpretation might be limited due to unequal representation of the respondent from different sectors.

Table 4.4: Gender preference by economic activity

Economic Activity	Male		Female		Both		Total
	n	%	n	%	n	%	Total
Agriculture, Forestry and Fishing	5	50	0	0	5	50	10
Mining and Quarrying	2	100	0	0	0	0	2
Mechanical, Electrical and Electronics	35	47.9	1	1.37	37	50.68	73
Renewable Energy (Green Job)	4	44.4	0	0	5	55.56	9
Construction	39	37.9	1	0.97	63	61.17	103
Machine Operation and Maintenance	7	36.8	0	0	12	63.16	19
Transportation/Motor Vehicles	5	41.7	1	8.33	6	50	12
Tourism and Hospitality	3	33.3	0	0	6	66.67	9
Fitness, Beauty and Wellness	1	25	0	0	3	75	4

Economic Activity	Male		Female		Both		Total
	n	%	n	%	n	%	Total
Information, Communication, IT and Computing	3	30	0	0	7	70	10
Arts and Crafts (Includes Zorig skills)	23	28	7	8.54	52	63.41	82
Business and Services	24	27.6	5	5.75	58	66.67	87
Total	151	36	15	3.57	254	60.48	420

Labour market demand

The employers were asked to list down the most required skills that they want the TTIs, IZC and CZC to offer training on. Accordingly the majority of the employers have recommended the the skills in the field of Electrical (90), Masonry (59) and Plumbing (55) for providing the training. Besides these skills, the significant number of employers (75) recommended the institutes to provide the required soft skills (Workmanship, Work Attitude and Professionalism) to TTIs and Zorig Chusum graduates.

The employers were further asked to list down the three skills that will be demanded in the market over the next few years. In this response, the prospective skills provided by the employers are Electrical (81), Masonry (73), Mechanic (55) and Welding (55).

Table 4.5: Labour market demand

Current skills	Freq.	%	Future skills	Freq.	%
Electrical	90	8.43	Electrical	81	7.89
Soft skills	75	7.02	Masonry	73	7.11
Masonry	59	5.52	Mechanic	55	5.36
Plumbing	55	5.15	welding	55	5.36

Foreign Workers

From the total number of 420 respondents, 64.76% of the employers have responded that their organization has foreign workers whereas 34.76% had no foreign workers. 0.48% of the total respondents were missing for this question.

Table 4.5: Foreign workers

Foreign workers	Frequency	Percentage
Yes	146	34.76
No	272	64.76
Missing	2	0.48


SAMZNO


HYUNDAI

Section V
Assessment on TTIs and Zorig Chusum graduates

One of the objectives of the Department of Technical Education, Ministry of Labour and Human Resources is "to ensure quality TVET and a relevant labour market" (*DTE-MoLHR*, 2017). The trainees graduating from the institutes should be work-ready and world-ready the very moment they enter the market. The domains of learning can be categorized as the cognitive domain (knowledge), the psychomotor domain (skills), and the affective domain (attitudes) (Wilson, 2021). In this line, this section presents the employers perspective on the following domains;

1. Technical Skills and Knowledge
2. Soft Skills
3. Workmanship and Job Attitude

Technical Skills and Knowledge

Employers were asked to rate the overall satisfaction of the technical skills and knowledge of TTIs and Zorig Chusum graduates using the four-point Likert scale. ***To interpret the mean value of the above table, the four-point Likert scale has been computed in a new range, which is as follows: a) 1.00-1.75-not at all satisfied, b) 1.76-2.50-not satisfied, c) 2.51-3.25-satisfied, d) 3.26-4.00- very satisfied.***

Overall, employers were satisfied with the graduates' technical skills and knowledge with an average mean rating of 2.82. Amongst all the technical skills, the employers were highly satisfied with the ability of graduates to learn new skills on the job with a mean of 2.96. Whereas the lowest employer satisfaction level regarding the technical skills was noticed on the graduates' ability to perform the job without supervision with a mean of 2.59.

Table 5.1: Technical skills and knowledge of graduates

Technical Skills and Knowledge	NAS	NS	NAS+NS	S	VS	S+VS	Total	Mean
Ability to perform any given task competently	15	78	93	288	39	327	420	2.84
Ability to use suitable tools and equipment to accomplish the task	5	76	81	302	37	339	420	2.88
Ability to perform the job without supervision	23	162	185	200	34	234	419	2.59
Ability to apply OHS components available in the workplace	10	78	88	294	36	330	418	2.85
Ability to learn new skills and knowledge on the job	7	67	74	281	64	345	419	2.96
1-Not at all satisfied (NAS), 2-Not satisfied (NS), 3-Satisfied(S), 4-Very Satisfied (VS)								

Soft skill of the graduates

UNESCO defines soft skills as assets of intangible personal qualities, traits, attributes, habits, and attitudes that can be used in many types of jobs (IBE, 2013). Further, Dao (2014) noted, some skills can be recognized as: communication skills, listening skills, teamwork skills, team-building skills, leadership skills, public speaking skills, understanding and empathizing skills, negotiation skills, sales skills, influencing skills, and wisely refusing skills.

Due to the competition in global markets, soft skills are no longer just nice to have, but necessary to have. A group of experts in the New World of Work in the Twenty-First Century suggested 4C's expertise as part of the core expertise.

It contributes to new ideas as creative individuals, able to solve real-world problems, and able to work together and collaborate in teams to bring solutions to global difficulties through critical thinking in contributing to new ideas as creative individuals (Khoiri et al., 2021).

The respondents were asked to rate how the TTIs and Zorig Chusum graduates display the "soft skills" in their workplace on four-point Likert scale. Then the four-point Likert scales, such as *1-Very poor, 2-Poor, 3-Good, and 4-Very Good,* were computed with a new range for mean interpretation as follows: a) 1 to 1.75-Very Poor, b) 1.75 to 2.5-Poor, c) 2.5 to 3.25-Good, d) 3.25 to 4- Very Good.

The table 5.2 confirms that the TTIs and Zorig Chusum graduates who were employed in their organizations exhibit good performance in soft skills with a mean rating of 2.80 as a whole. This indicates that soft skills components such as critical thinking, communication, collaboration, ICT knowledge, creativity, and innovation have been taught well during the institute training. Thus, the findings from the employers' survey converge with the findings of the tracer study report for 2020 graduates, with a mean rating of 3.09 for the quality of soft-skills learning (DTE-MoLHR, 2021).

Collaboration and communication skills had the highest mean rating of 2.93 each, indicating good. About 74.82% of the respondents agreed that the communication skills of the employed graduates are good, but it should be equally noted that of 418 respondents, 31.58% and 31.10% of total respondents rated poor on the following soft skills: basic ICT skills and knowledge, and creativity and innovation, respectively, which is something to be pondered upon.

Table 5.2: Softskill of the graduates

Soft Skills	VP	P	VP+P	G	VG	G+VG	Total	Mean
Critical Thinking	11	91	102	282	34	316	418	2.81
Collaboration	5	63	68	303	45	348	416	2.93
Communications skills	5	59	64	312	41	353	417	2.93
Basic ICT skills and Knowledge	18	132	150	239	29	268	418	2.66
Creativity & Innovation	13	130	143	244	31	275	418	2.7
1-Very Poor (VP) 2-Poor (P), 3-Good (G), 4-Very Good (VG)								

Workmanship and job attitude

A similar computation of the four-point Likert scale has been used to interpret the workmanship and professionalism of the TTIs and Zorig Chusum graduates. On computation, it was uncovered that the graduates exhibit professionalism and workmanship with an overall mean rating of 2.82 (table 5.3). The table also shows that the graduates are willing to seek guidance and help from the seniors, with a mean rating of 3.08, which implies that graduates' learning curiosity is always high.

Further, 73.68% of respondents believe that the graduates work well in a group to achieve a goal, showing a sense of teamwork and collaboration. 25.90% of the respondents think that the graduates are not ready to take accountability, which could mean a lack of leadership experience.

Notwithstanding, 30.46% of the respondent still believes that employed TTI/IZC graduate, cannot perform at the highest standard of workmanship and professionalism which can be a challenge to be up taken by the institute.

Table 5.3: workmanship and professionalism of the graduates

Workmanship and Professionalism	SD	D	SD+D	A	SA	A+SA	Total	Mean
Can perform at the highest standard of workmanship and professionalism	6	127	133	256	28	284	417	2.73
Can quickly adapt to the workplace/work culture	5	61	66	301	51	352	418	2.96
Works well in a group to achieve a goal	1	50	51	308	59	367	418	3.02
Are willing to seek guidance and help from their seniors	2	44	46	291	81	372	418	3.08
Are punctual in the workplace	6	75	81	271	66	337	418	2.95
Are willing to learn new things	1	67	68	266	83	349	417	3.04

Workmanship and Professionalism	SD	D	SD+D	A	SA	A+SA	Total	Mean
Accepts additional responsibilities other than specified on the job description	7	88	95	278	44	322	417	2.86
Are ready to take accountability	8	108	116	265	36	301	417	2.79
SD-Strongly Disagree D-Disagree, A-Agree, SA-Strongly Agree								

Overall satisfaction with graduates

On measuring the overall employer satisfaction level regarding TTIs and Zorig Chusum graduates working under them, it is indicated that 78% of the employers were satisfied with graduates while the remaining 21% employers are not satisfied. Subsequently, the employers were asked to reason out for their responses.

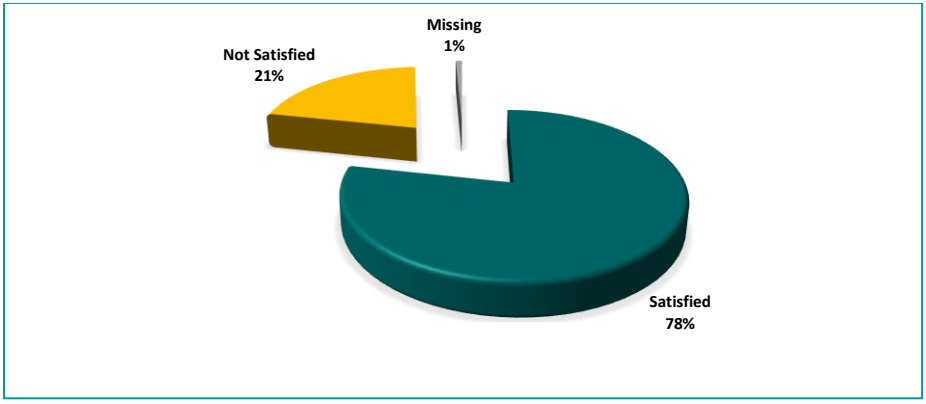


Fig: 5.1 Overall satisfaction

Employer dissatisfaction

The employers were asked to provide reasons for their dissatisfaction with the TTIs and Zorig Chusum graduate employees. It was learnt from the figure 5.2 that most employers (24.38%) are dissatisfied due to lack of technical skills and theoretical knowledge needed for the job. Nonetheless, the need for constant supervision (22.73%), lack of a positive work attitude (14.46%), reluctance to learn new skills and the latest advancements (11.16%) were some of the other reasons pointed out by employers indicating dissatisfaction.

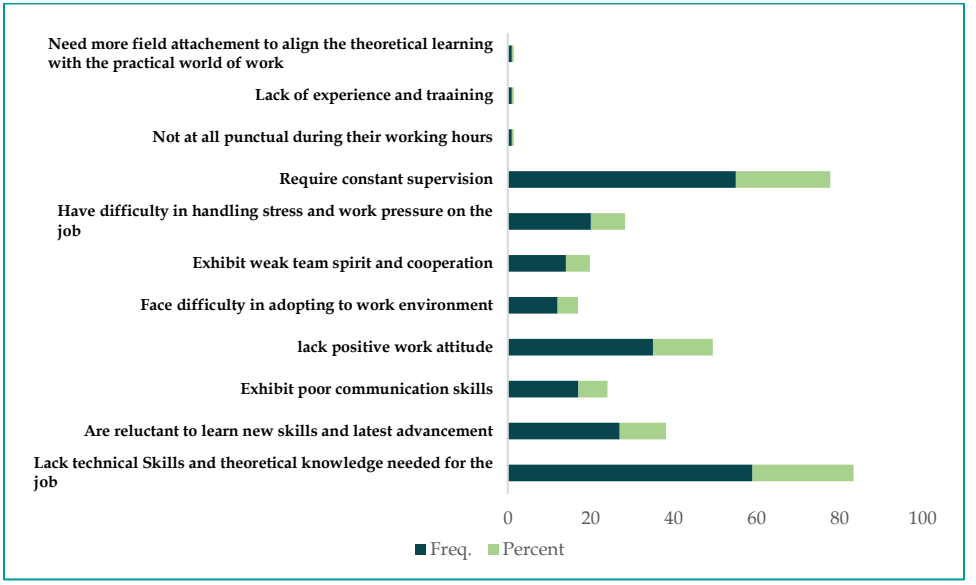


Fig: 5.2 Employer dissatisfaction reasons

Employer satisfaction

The employers were asked to provide reasons for their satisfaction with the TTIs and Zorig Chusum graduate employees. The data shows that most of the employers (16.28%) were satisfied with the TTIs/Zorig Chusum graduate employees because of their ability and enthusiasm to learn new skills and knowledge, followed by their ability to easily adapt to the work environment (14.79%) and their willingness to work beyond their job responsibility (11.06%).

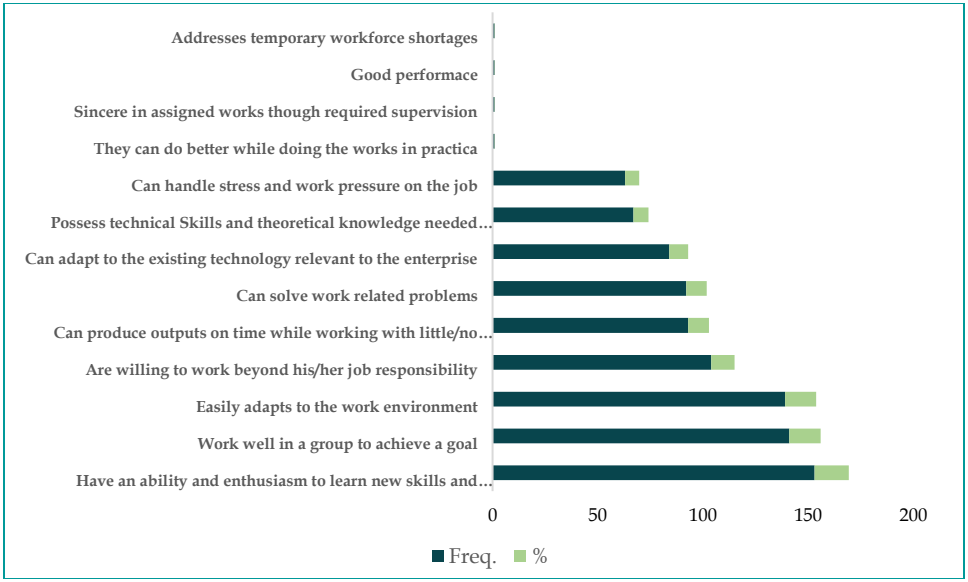


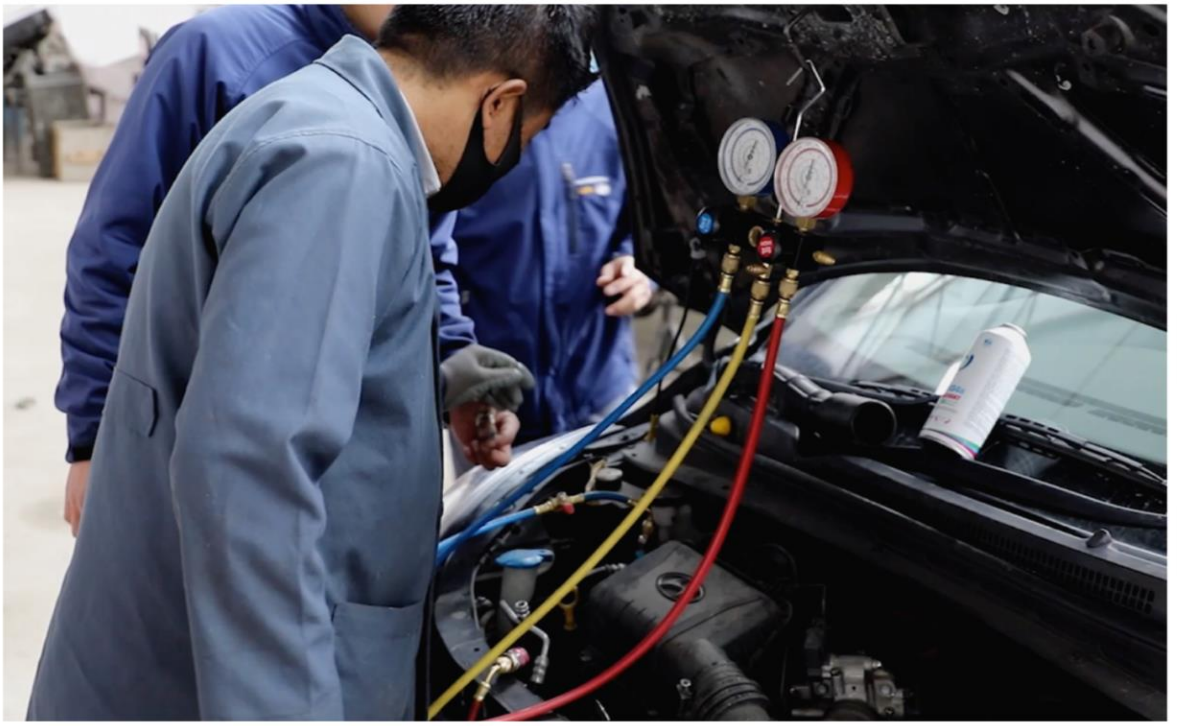
Fig: 5.3 Employer satisfaction reasons

Employer satisfaction and employee retention

The table 5.4 shows that 89.53% of the organization where there was no case of employees leaving the organization were found to be satisfied and 70% of the organization with the cases of employees leaving the organization were satisfied with the TTI/IZC graduate employees.

Table 5.4: Employee retention with employer satisfaction

Employees leaving firm	Satisfied		Not Satisfied		Employers
	n	%	n	%	n
No employee left	154	89.53	18	10.47	172
Employees left the firm	167	70.76	69	29.24	236
Total	321	78.68	87	21.32	408
Missing	12				420

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Section VI
Employee Retention

The most valuable asset for an organization is the work force. This section summarizes the data on the retention rate of TTIs and Zorig Chusum graduates from various organizations, as well as the employer's perspective on why graduates leave. It also includes the graduates' working hours and earnings, as well as the working conditions in their organization.

Employee Retention

The employers were asked to indicate how long does the TTIs and Zorig Chusum graduates work in their organization on an average. As depicted in the figure 6.1, a majority (78.58%) of the employers have the graduates stay with them for 1-5 years in their organization. While 10.6% indicated that graduates employed under them stay with them for less than one year and 21.43% indicated that the graduates, they employ stay for 6-15 years on average.

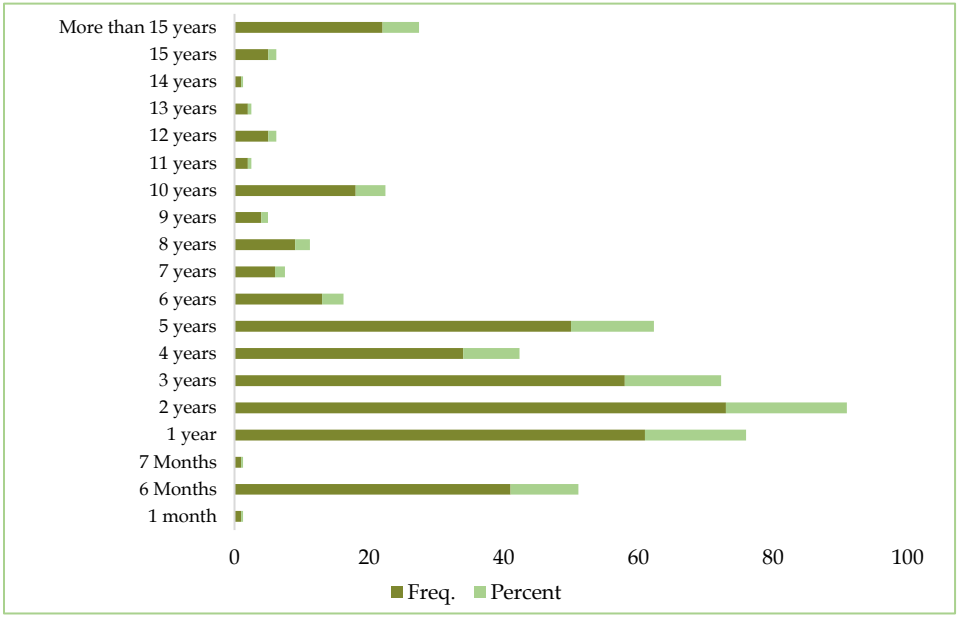

Fig: 6.1 Employee retention

The majority of employers who employ graduates for 5 years or fewer may be attributable to the contract term of work and the job-hopping tendency of TTI/IZC graduates.

Sector wise graduates' retaining difficulties

When asked if they had any problems in retaining employed TTIs and Zorig Chusum graduates, 60.95% of employers answered they didn't, while 38.1% indicated they did, which is troubling because more than a quarter of the respondents reported problems retaining TTIs and Zorig Chusum graduates.

The table 6.1 shows the graduate retaining difficulties as per the economic sectors. 61.5% of the employers did not have difficulty in retaining their TTIs and Zorig Chusum graduates. Of 160 organizations, the following sectors: Fitness, Beauty and Wellness, Arts and Crafts (including Zorig skills), and Mechanical, Electrical, and Electronics had the most difficulty in retaining TTIs and Zorig Chusum graduates, with 50%, 48.1%, and 46.6% respectively responding yes to the question "Do you currently face any difficulties in retaining TTI/Zorig Chusum graduates?"

However, the above inference regarding the 'Mining and Quarrying', 'Fitness, Beauty, and Wellness' sectors cannot be generalized because of the smaller number of respondents from those sectors.

Table 6.1: Sector wise retaining difficulty

Main Economic activity	Difficulty in retaining graduates				
	Yes	%	No	%	Total
Agriculture, Forestry and Fishing	4	40	6	60	10
Mining and Quarrying	0	0	2	100	2
Mechanical, Electrical and Electronics	34	46.6	39	53.4	73
Renewable Energy (Green Job)	1	11.1	8	88.9	9
Construction	35	34.3	67	65.7	102
Machine Operation and Maintenance	4	21.1	15	78.9	19
Transportation/Motor Vehicles	1	8.3	11	91.7	12
Tourism and Hospitality	2	22.2	7	77.8	9

Main Economic activity	Difficulty in retaining graduates				
	Yes	%	No	%	Total
Fitness, Beauty and Wellness	2	50	2	50	4
Information, Communication, IT and Computing	1	10	9	90	10
Arts and Crafts (Includes Zorig skills)	39	48.1	42	51.9	81
Business and Services	37	43.5	48	56.5	85
Total	160	38.5	256	61.5	416

Reasons for graduates' retention difficulties

To go deeper into the causes of challenges in retaining TTI and Zorig Chusum graduates, 160 employers who responded "Yes" were asked to select the most significant reasons.

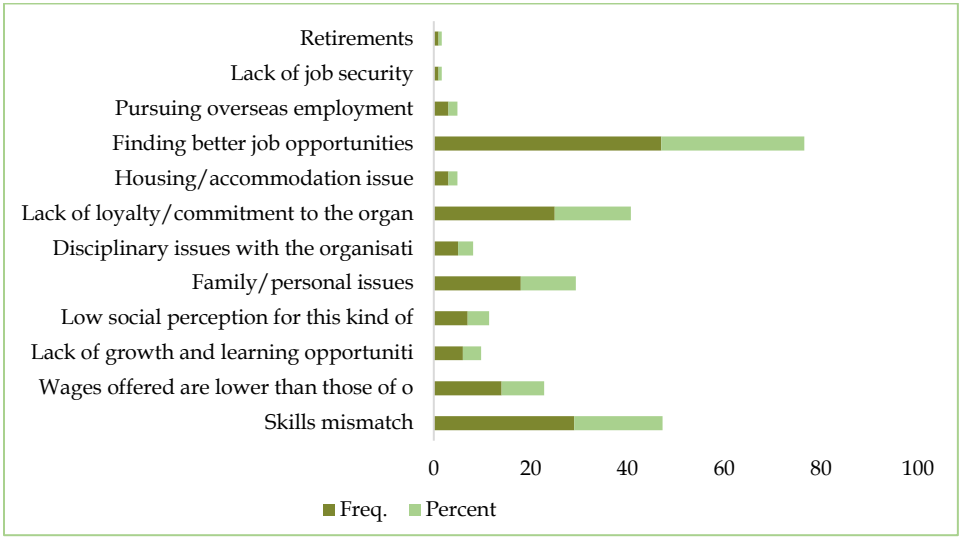

Fig: 6.2 Employee retaining difficulty reasons

A majority (29.37%) of employers selected 'seeking better work options' as the cause for TTIs and Zorig Chusum graduate retention, followed by skills mismatch (18.12 %), lack of loyalty and dedication to the organization (15.62%), family/personal issues (11.25%), low social perception of this kind of job (4.37%),

lack of growth and learning opportunities (3.75%), disciplinary issues with the organization (3.12%), housing and accommodation issues and pursuing overseas employment (1.87%). Only 0.6% of businesses reported having retention difficulties owing to "retirements" and "job security."

Employee insurance scheme

When asked the employers if they support the idea of an employee emergency insurance scheme, 87.62% of the respondents were in favor of the scheme, whereas 10.24% of the respondents were not in favor, which might be due to a lack of awareness.

Fig: 6.3 Employee insurance scheme

Sectors which support employee insurance scheme

The table 6.2 depicts the percentage of economic sectors that support the concept of an Employee Emergency Insurance Scheme (EEIS).

The organizations under the sectors of 'Agriculture, Forestry and Fishing', 'Transportation/Motor Vehicles', 'Tourism and Hospitality', 'Fitness, Beauty, and Wellness' fully support the idea.

About half of the organizations in the 'Mining and Quarrying' industry did not support the idea of EEIS, however this is not justifiable owing to a small survey sample size in this sector.

Overall, about 89.53% of organizations from various industries favor the idea of establishing EEIS. This result leads to the conclusion that the majority of employers who employ TTIs and Zorig Chusum graduates care about the well-being of their employees.

Table 6.2: Sector wise emergency insurance scheme

Main economic sector	Emergency Insurance Scheme				
	Yes	%	No	%	Total
Agriculture, Forestry and Fishing	9	100	0	0	9
Mining and Quarrying	1	50	1	50	2
Mechanical, Electrical and Electronics	70	95.9	3	4.1	73
Renewable Energy (Green Job)	8	88.9	1	11.1	9
Construction	91	90.1	10	9.9	101
Machine Operation and Maintenance	17	89.5	2	10.5	19
Transportation/Motor Vehicles	12	100	0	0	12
Tourism and Hospitality	8	100	0	0	8
Fitness, Beauty and Wellness	4	100	0	0	4
Information, Communication, IT and Computing	8	80	2	20	10
Arts and Crafts (Includes Zorig skills)	67	83.8	13	16.3	80
Business and Services	73	86.9	11	13.1	84
missing	**9**				**9**
Total	**368**		**43**		**420**

Section VII
Income and working condition

As empowered by Section 234 of the Labour and Employment Act of Bhutan 2007 and the Regulation on Working Conditions 2022, the implementation of this regulation will benefit both employers and employees, enhancing working conditions to a greater height, ultimately realizing the national vision of productive, harmonious, and happy working relationships between employers and employees. In light of the above, this section assesses the prevalence of implementation of the Regulation on Working Conditions such as Internal Service Rules (ISR), Occupational Health and Safety (OHS), Provident Fund (PF), income, allowance, and leaves.

Employee benefits and welfare scheme

Each of the employers were asked to select whether their organization has an Internal Service Rule (ISR), Occupational Health and Safety (OHS), Sexual Harassment policy, staff/employee welfare scheme, Provident Fund, and a written contract term with the employees, which could promote decent working conditions, safer working environments, and job security for employees. They were also asked if their organization provides benefits such as maternity/paternity leave, government/public holidays, housing allowance, salary increment to graduates, and pay slips as documentation of money paid. Each component is split down and discussed in the following tables;

Table 7.1: Benefits and welfare scheme

TVET Graduate Employers' Response	Yes	%	No	%
Our organization has Internal Service Rule (ISR)	343	81.67%	73	17.38%
We have occupational health and safety policy in workplace	364	86.67%	52	12.38%
We have Provident Fund for our employees with a recognized Financial Institution	283	67.38%	133	31.67%
We provide pay slips/evidence of wages paid to our employees	354	84.29%	63	15.00%

TVET Graduate Employers' Response	Yes	%	No	%
We have written contract/term of employment for our staff and new recruits	276	65.71%	141	33.57%
We provide Maternity /Paternity leave	359	85.48%	57	13.57%
We have Group Insurance Scheme (GIS) for our employees	177	42.14%	238	56.67%
We have sexual harassment policy in place	237	56.43%	180	42.86%
We have housing allowance	134	31.90%	282	67.14%
We provide government/public holidays	382	90.95%	35	8.33%
We have a salary increment system	364	86.67%	52	12.38%
We have a staff/employee welfare scheme	236	56.19%	180	42.86%

Internal service rule

About 81.67% of employers have ISR in place. However, a few organizations from construction (f=23), Arts & crafts (f = 24), and Business & Services (f=13) do not have ISR, which may be because the recruitment is done on a temporary basis due to the nature of the work.

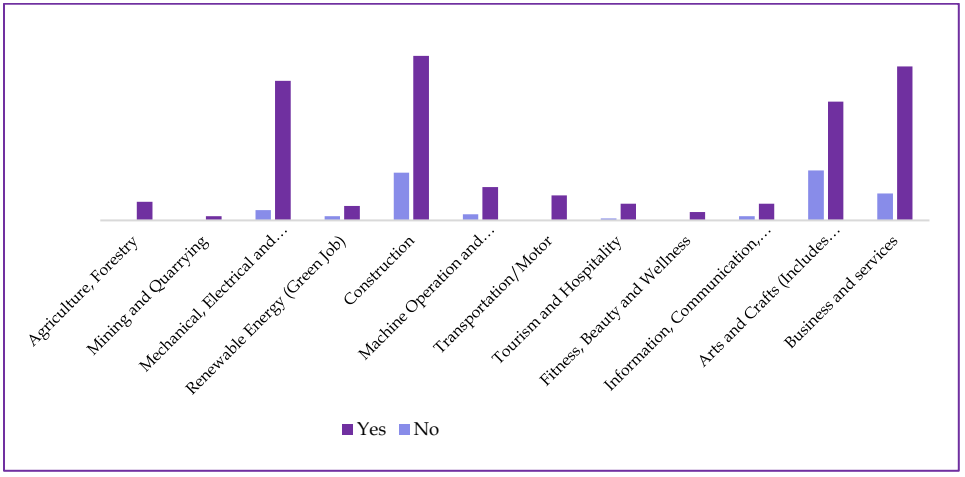

Fig: 7.1 Internal service rule

Occupational Health and Safety Policy

A little more than 85% of employers have occupational health and safety policies in the workplace. A maximum of 22 organizations in 'Arts & Crafts' do not have proper occupational health and safety at their workplace. It could be because they do not have adequate knowledge regarding OHS.

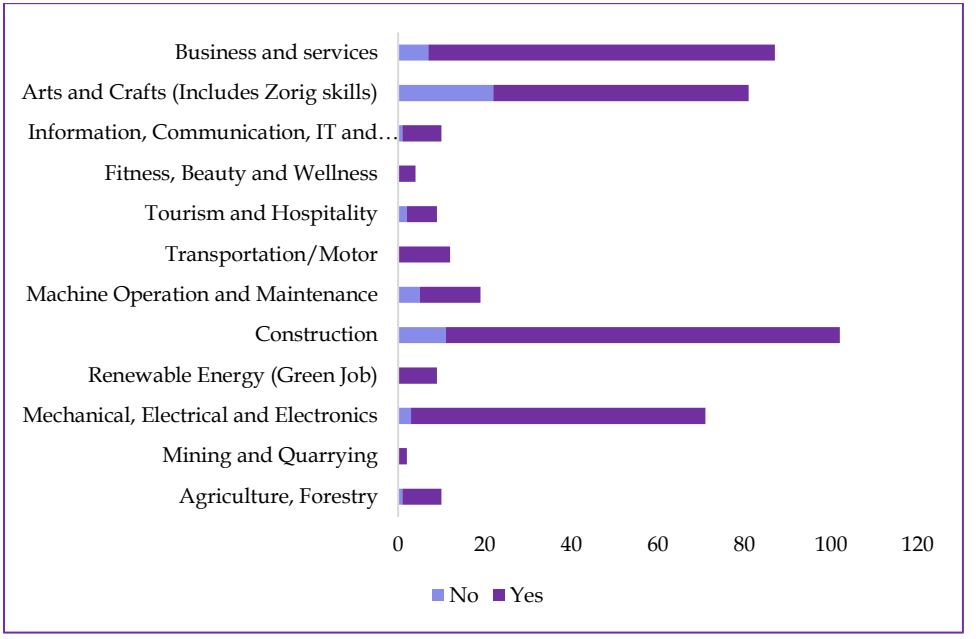

Fig: 7.2 Occupational health and safety policy

Provident Fund for employee

Only 67.38% of employers have a Provident Fund for their employees with a recognized financial institution. The reason could be that many organizations are well aware of the Employment Act and place importance on the welfare of their workforce. It can be supported by the figure 7.3 that 'Construction' (f = 34) and 'Arts & Crafts' (f = 49) are the industries within these sectors that are privately owned and function with contract terms yet provide provident funds.

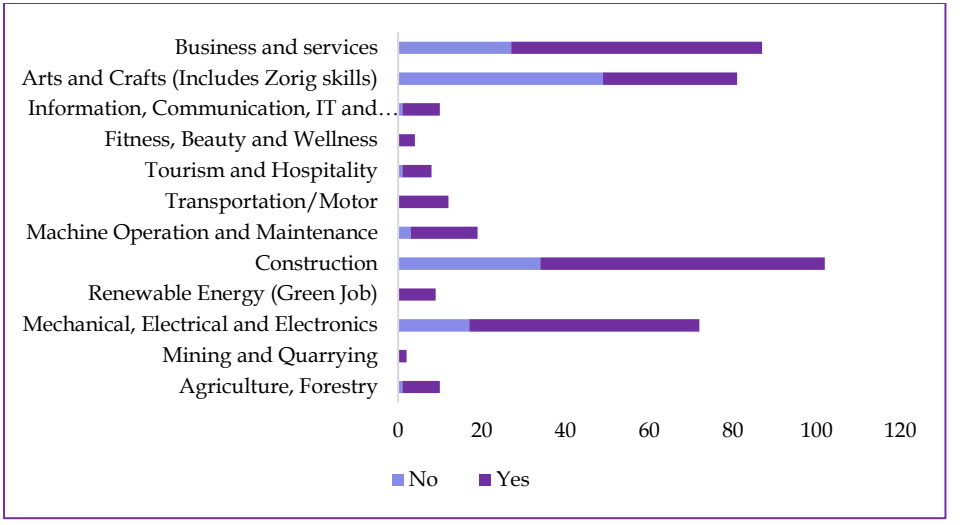

Fig: 7.3 Provident fund for employee

Leave and financial evidence

Almost 84.29% of employers provide evidence of pay slips, and 85.48% of employers provide maternity/paternity leave. However, 'Arts & Crafts' sector has the maximum number of employers who failed to provide the pay slip and maternity/paternity leave because of which some employees are likely to be demotivated, resulting in the resignation of productive employees.

Table 7.2: Leave and financial evidences

Sector	Provide pay slips/evidence of wages		We provide Maternity /Paternity leave	
	No	Yes	No	Yes
Agriculture, Forestry	0	10	0	10
Mining and Quarrying	0	2	0	2
Mechanical, Electrical and Electronics	5	67	7	65
Renewable Energy (Green Job)	0	9	0	9
Construction	16	86	12	89

Sector	Provide pay slips/evidence of wages		We provide Maternity /Paternity leave	
	No	Yes	No	Yes
Machine Operation and Maintenance	0	19	1	18
Transportation/Motor	1	11	0	12
Tourism and Hospitality	1	8	2	7
Fitness, Beauty and Wellness	0	4	0	4
Information, Communication, IT and Networking	1	9	1	9
Arts and Crafts (Includes Zorig skills)	31	50	23	58
Business and services	8	79	11	76
Total	63	354	57	359

Allowances

Only 42.14% of employers have GIS in place for their employees, with the 'Construction' sector having the greatest frequency of 41. Similarly, just 31.90% of employers pay housing allowances to their employees. GIS and housing allowance were not available in the 'Fitness, Beauty and Wellness' and 'Mining and Quarrying' sectors, respectively.

Table 7.3: Allowances

Sector	We have Group Insurance Scheme (GIS) for our employees		We have housing allowance	
	No	Yes	No	Yes
Agriculture, Forestry	3	7	5	5
Mining and Quarrying	1	1	2	0
Mechanical, Electrical and Electronics	35	36	46	26
Renewable Energy (Green Job)	1	8	4	5

Sector	We have Group Insurance Scheme (GIS) for our employees		We have housing allowance	
	No	Yes	No	Yes
Construction	61	41	66	36
Machine Operation and Maintenance	5	14	11	8
Transportation/Motor	6	6	7	5
Tourism and Hospitality	4	4	6	3
Fitness, Beauty and Wellness	0	4	2	2
Information, Communication, IT and Networking	4	6	8	2
Arts and Crafts (Includes Zorig skills)	66	15	68	13
Business and services	52	35	57	29
Total	238	177	282	134

Working hours

The figure 7.4 shows the number of hours per day that employers anticipate TTIs and Zorig Chusum graduates to work.

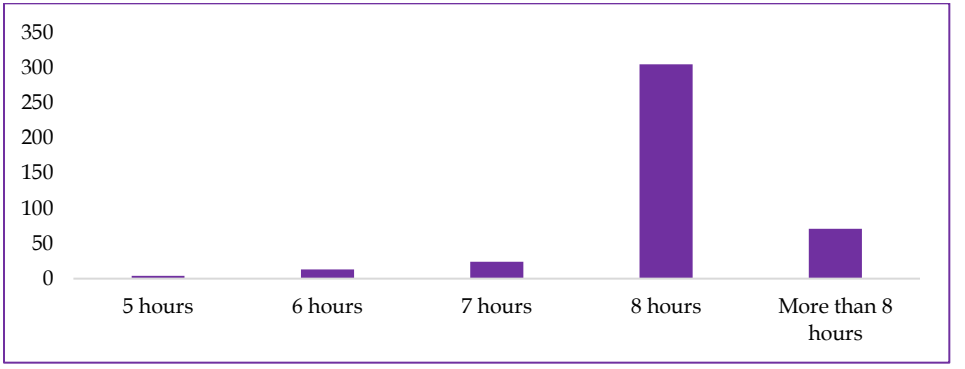

Fig: 7.4 Total working hours

A majority (29.37%) of employers selected 'seeking better work options' as the cause for TTIs and Zorig Chusum graduate retention, followed by skills mismatch (18.12 %), lack of loyalty and dedication to the organization (15.62%), family/personal issues (11.25%), low social perception of this kind of job (4.37%), lack of growth and learning opportunities (3.75%), disciplinary issues with the organization (3.12%), housing and accommodation issues and pursuing overseas employment (1.87%). Only 0.6% of businesses reported having retention difficulties owing to "retirements" and "job security."

Average income

The figure 7.5 shows the average wage paid to TTIs and Zorig Chusum employees by the employers. 26.19% of the organizations pay a salary of Nu. 14001-17000 and 3.1% pay less than Nu. 3001 to TTIs and Zorig Chusum graduates employed in their organization. Only a few organizations (0.48 per cent) pay more than Nu. 42000. The average income of TTIs and Zorig Chusum graduate employees varies according to the figure below. Notwithstanding, the variances in average salary amongst graduates might be attributed to differences in their daily working hours and the nature of the job.

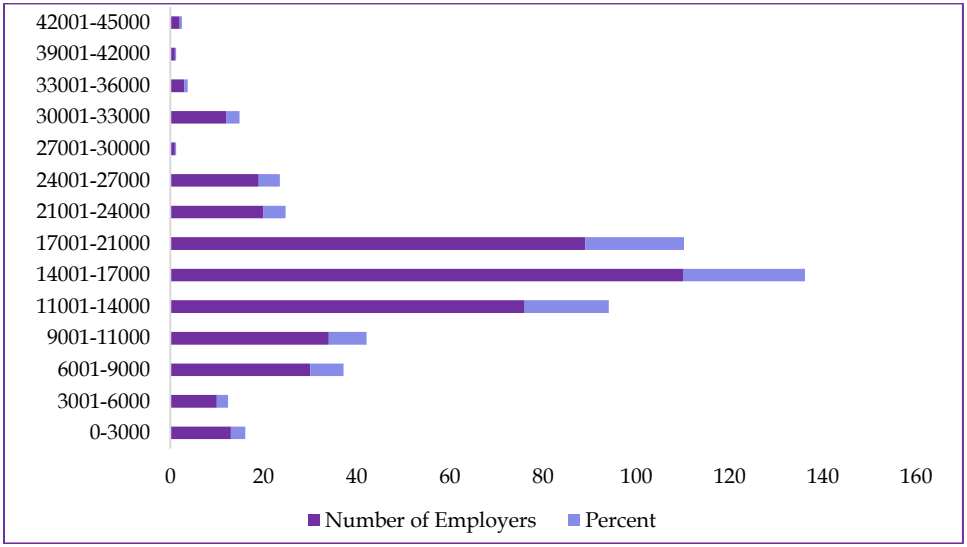

Fig: 7.5 Average monthly income

The data on average monthly income provided by different sectors is given in the annexure.

Retention difficulty based on monthly income

As shown in the figure 7.6, there are no concrete findings to support the hypothesis that a high-income rate leads to high employee retention. As a result, it is possible to conclude that no single factor is responsible for employee retention, but that several factors that influence employee retention must be managed simultaneously, such as compensation and rewards, job security, training and development, supervisor support culture, work environment, and organizational commitment, to name a few (Irshad & Afridi, 2011).

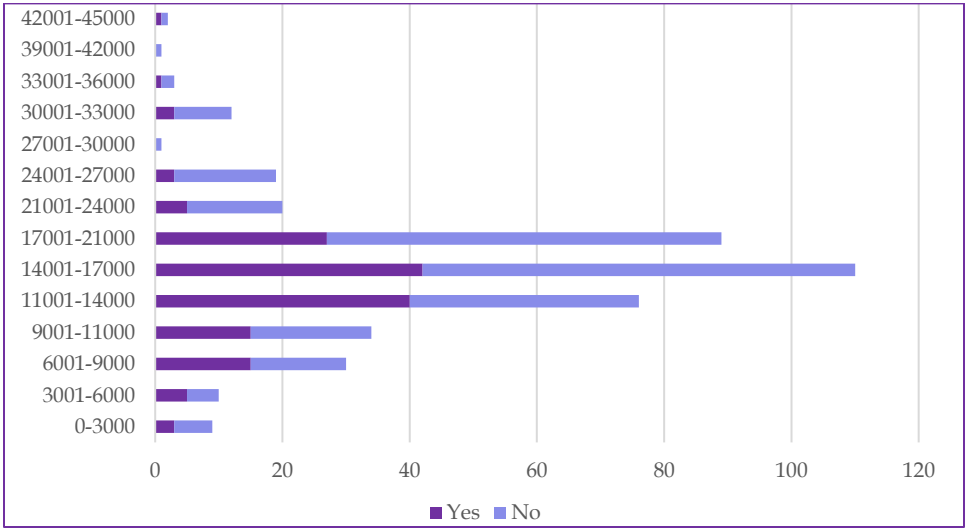

Fig: 7.6 Retention difficulty based on monthly income

Overtime

Out of 329 organizations that make overtime payments to TTIs and Zorig Chusum graduates for their extra working hours, 44.38% make overtime payments of Nu. 50–100 per hour. Following that, 36.48% of organizations pay between Nu. 101 and Nu. 200 and 11.85% of the organizations pay between Nu. 201 and 400 per hour for overtime.

Only 7.29% of organizations paid graduates with Nu. 401 to 500 or more per hour for extra working hours. However, graduates who execute challenging tasks, on the other hand, are likely to be paid more.

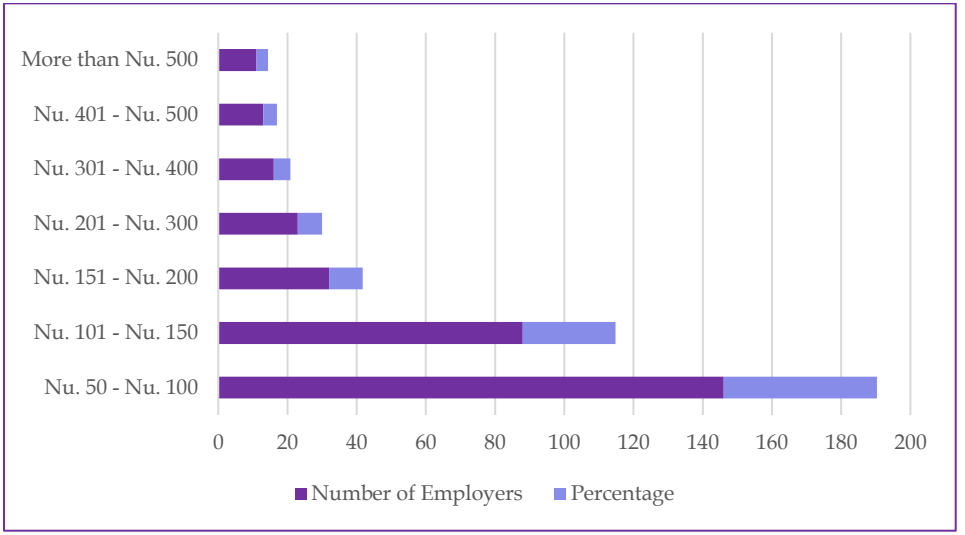

Fig: 7.7 Overtime income

Section VIII:
Dual Training Program (DTP)

Introduction

Dual Training Program is a training delivery system that involves two venues of learning: the Technical Training Institutes (TTI) and Industry. At the TTI, individual trainees are offered the fundamental establishment of theoretical knowledge and a solid framework for practical training, while at the industries, in collaboration with the prospective employers/ implementing partners prepare trainees with hands-on experience. With the completion of the training, the graduate not only gets a National Certificate but also with a vocational training certificate from the industries that the individual was trained at.

The DTP is executed in one of the two ways; the block release or day release. In block release, the trainees spend full time in the institutes and complete 30% of the Dual Training Program (DTP) curriculum, and 70% of the trainees are deployed in the industries to gain hands-on experience. And for the day release, the trainees spend 1 to 2 days a week in the institutes and the rest 3 to 4 days are spent in the industry, and ideally, this is the most preferred mode.

The Dual Training Program (DTP) was introduced in the year 2019 in the following two TTIs under Ministry of Labour and Human Resources.

1. Technical Training Institute Chumey
2. Jigme Wangchuck Power Training Institute – Dekiling

And as of April 2022, a total of 79 trainees has graduated from DTP with the male representation of 63 and 16 female under the courses of Carpentry, Furniture, and Masonry.

This method of training modality is expected to benefit the following stakeholders.

1. **Ministry (MoLHR)**
    - Solve skill mismatch and;
    - Enhance skilled labor force

- Enhance the numbers of enrollment in the TVET institutes and increase the intake capacity
- Strengthen the public-private partnership

2. **For Industry:**

- Tailor-made training relevant to the industry;
- Enhance industry-institute collaboration
- Manpower pooling and HR development;
- Overcome lack of real-world experience.

3. **For Trainees:**

- A positive work attitude builds through real work situations;
- Gain relevant and high-quality training
- Experience an authentic learning environment;
- Opportunity to earn and learn;
- Become an entrepreneur

Further, this training modality is also expected to enhance access to Technical and Vocational Education and Training (TVET) and improve the facilities of Technical Training Institutes (TTIs).

Background

The Department of Technical Education conducts the study on DTP trainees upon the completion of their training to collect feedback and assessment from the trainees regarding the Training Modality, Institute training, facilities and Industry attachment learnings. The study also briefly captures their employability into the labour market. Nevertheless, there has been no study done to assess their competency, quality and relevancy from the employer's perspective thus limiting the information about the degree of employer satisfaction regarding the DTP graduates.

Thus, one of the important reasons for conducting this study was to assess the competency, quality, and relevancy of DTP graduates from the employer's perspective.

The study measures the level of employer satisfaction with a focus on DTP employers using the same survey methodology used for the TVET Graduate Employer Survey which included the TTIs and Zorig Chusum graduates from different training modalities (Regular, SDP, and BBP).

However, there were limited information on the employers who have recruited the DTP graduates. Therefore, the technical working group validated all the partner industries for DTP besides calling each and every DTP graduates about their current workplace. Following validation, there were 36 employers who had hired DTP graduates. However, the team was only able to send the survey link to 30 employers. Despite the fact that the survey was conducted online, 24 employers responded, resulting in an 80 percent response rate.

Organization Profile

Figure 8.1 represents the distribution of the employers in terms of locations (Dzongkhag). Of the 24 respondents who took part in the survey, 8 (33.3%) employers were located in Thimphu, followed by Paro with 6 (25%). The dzongkhags with the lowest distribution of employers were Bumthang, Chukkha, Tashigang, Trashiyangtse and Tsirang.

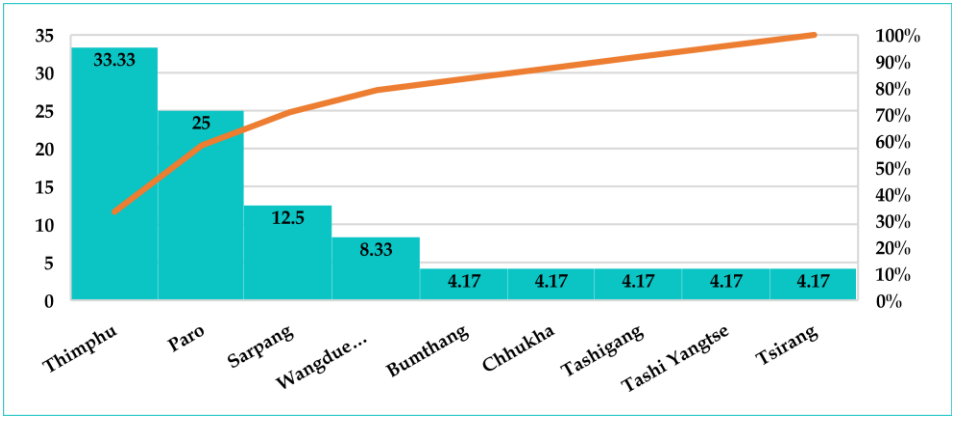

Fig 8.1 Employers by Dzongkhag

Employers by Main Economic Activity

The figure 8.2 indicates that 58.33% of the DTP employers were engaged in 'Construction' activity, followed by 'Arts and Crafts' with 16.67%.

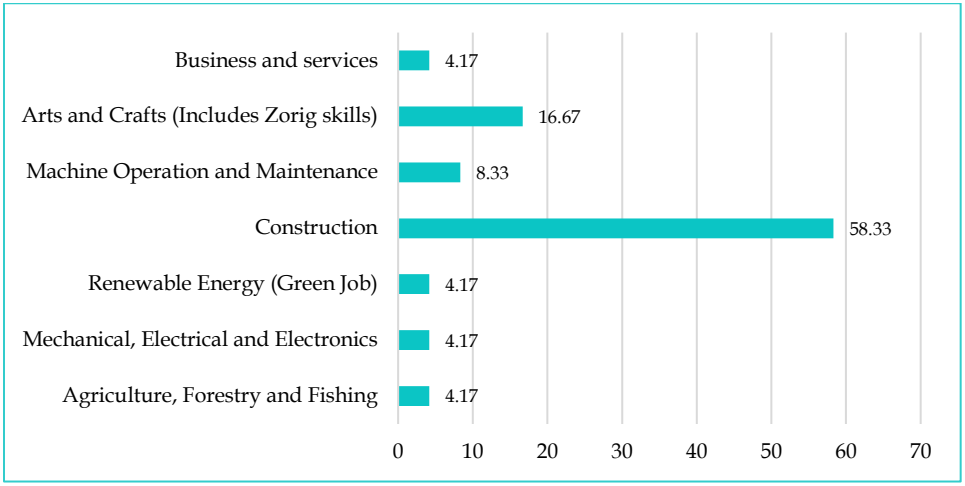

Fig 8.2 Main Economic Activity of the Employers

Recruitment Methods & Recruitment Factors

The importance of the required skills while recruiting TTI and Zorig Chusum graduates is indicated in the table 8.1. The employers were asked to rank the level of importance to the pre-determined recruitment factors. As shown in table below, majority of the employers has given the ranking of 'Extremely Important' to the recruitment factor of technical skills and Knowledge with 12 (50%) respondents. Positively, there were none of the employers who has ranked the 'Interpersonal Relationship' as extremely important recruitment factor.

Table 8.1: Recruitment factor

Recruitment Factor	Freq.	Percentage
Technical Skills and Knowledge	12	50.00
Communications Skills	4	16.67
Personal Attitudes	4	16.67
Workmanship and Professionalism	2	8.33

Recruitment Factor	Freq.	Percentage
Interpersonal Relationship	0	0.0
Working Experience	2	8.33
Total	24	100

Employment Status

As indicated in the figure 8.3, the DTP employers employed the graduates as the regular and contract employees in the equal proportion as shown by the frequency of 12 (50%) in the both the employment status category.

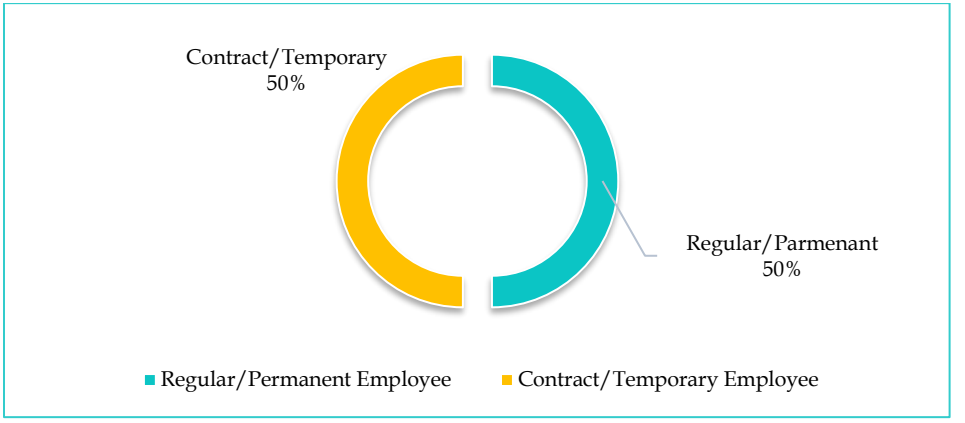

Fig 8.3 Employment Status

Recruitment Method

The figure 8.4 shows that more than 25% of the DTP employers recruited TTI and Zorig Chusum graduates through the Web/Online Posting, followed by Informal Channels (Personal contacts, peer, etc.,) and On-the-job-training/Industrial Attachment with 20.8% each. With the technological advancements and impact of the global pandemic, the use of online platforms has drastically increased.

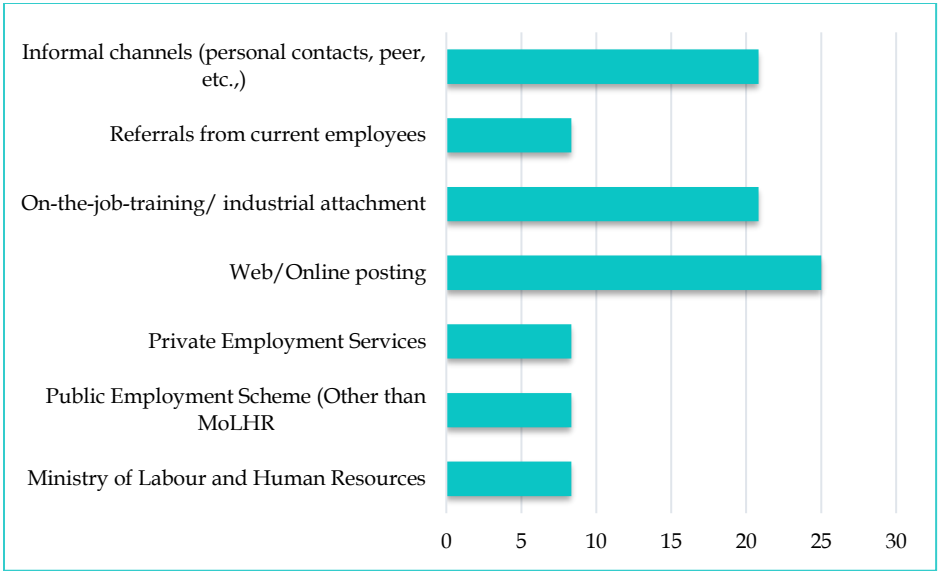

Fig 8.4 Recruitment method

Skills Shortage and Labour Market Demand

Difficulty in getting TTIs and Zorig Chusum Graduates

Amongst 24 employers, 58.3% of them found it difficult to get a skilled graduate workforce from TTIs and Zorig Chusums.

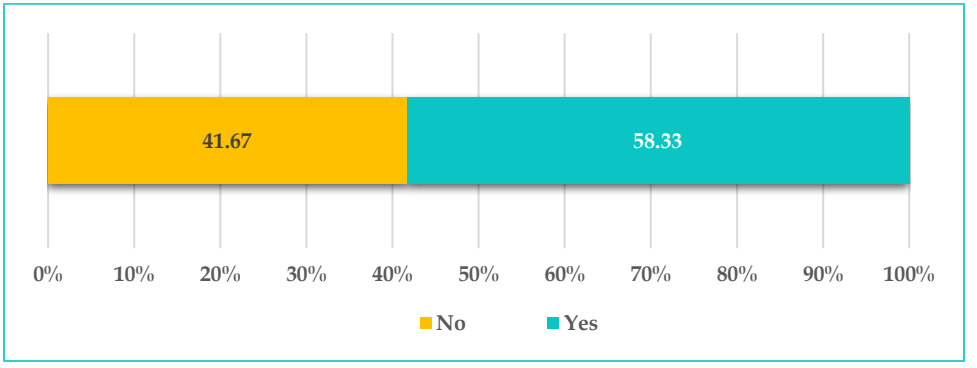

Fig 8.5 Difficulty in getting the graduates

Reason for facing difficulty

Those employers who faced difficulty in getting the graduates indicated that the main cause of this problem was applicants expecting higher pay rates and a lack of work experience. Similarly, employers reported a lack of applicants and in-adequate supply of TTIs and Zorig Chusum Graduates.

Table 8.2: Reason for facing difficulty

Reason for facing difficulty	N	%
Applicants expect higher wages	8	24.24
Applicants do not have the adequate work experience	7	21.21
Not enough applicants	4	12.12
No adequate supply of TTIs and Zorig Chusum Graduates	4	12.12
Applicants lack required soft skills	3	9.09
Lack of proper job attitude	3	9.09
Applicant doesn't have right skills	2	6.06
Applicants lack the required education/qualification level	1	3.03
Disciplinary issues	1	3.03

Employers were asked to identify the most important skills for which they want TTIs, IZCs, and CZCs to provide training. As a result, the majority of employers have recommended Carpentry (6) and Electrical (6) skills (5). Employers were also asked to identify the three skills that will be in high demand in the market over the next few years.

The prospective skills provided by the employers in this response are in the categories of Carpentry and Masonry, with 6 responses each. Besides these skills, the majority of employers in both the section have recommended the institutes to provide the required soft/Employability skills (Work ethics, Team work, workmanships, good attitude, interpersonal skills) to TVET graduates.

Table 8.3: Skills demand

Current Skills	N	%	Future Skills	N	%
Soft/Employability skills	7	13.5	Soft/Employability skills	8	17.0
Carpentry	6	11.5	Carpentry	6	12.8
Electrical	5	9.6	Masonry	6	12.8
Soft/Employability Skills: Work ethics, Team work, workmanships, good attitude, interpersonal skills					

Assessment on DTP graduates

1. Technical Skills and Knowledge

Employers were asked to rate their overall satisfaction with the graduates' technical skills and knowledge using the same question format used in the assessment of other TTIs and Zorig Chusum Graduates.

Overall, the assessment results show that DTP employers are generally satisfied with the technical skills and knowledge of the graduates. Employers were most satisfied with graduates' ability to learn new skills on the job, with a mean of 2.91. With a mean of 2.52, the graduates' ability to perform the job without supervision received the lowest employer satisfaction level regarding technical skills.

Mean: 1.00 -1.75 (Not at all satisfied), 1.76 – 2.50 (Not Satisfied), 2.51 – 3.25 (Satisfied), 3.26 – 4.00 (Very Satisfied)

Table 8.4: Assessment on Technical Skills and Knowledge

Technical Skills and Knowledge	NAS	NS	NAS+NS	S	VS	S+VS	Total	Mean
Ability to perform any given task competently	2	5	7	14	2	16	23	2.70
Ability to use suitable tools and equipment to accomplish the task	1	5	6	14	3	17	23	2.83
Ability to perform the job without supervision	2	9	11	10	2	12	23	2.52

Technical Skills and Knowledge	NAS	NS	NAS+NS	S	VS	S+VS	Total	Mean
Ability to apply OHS components available in the workplace	1	7	8	13	2	15	23	2.70
Ability to learn new skills and knowledge on the job	1	4	5	14	4	18	23	2.91

*****1-Not at all satisfied (NAS), 2-Not satisfied (NS), 3-Satisfied(S), 4-Very Satisfied (VS)*

Soft skill of the graduates

Table 8.5 confirms that the DTP graduates employed in their organizations perform well in soft skills on average. This indicates that critical thinking, communication, collaboration, ICT knowledge, creativity, and innovation were well taught during the institute training.

Communication skills received the highest mean rating of 2.96, indicating a good rating. Graduates' basic ICT skills and knowledge, on the other hand, have received a rating of Poor from employers, with a mean of 2.52.

****Mean: 1.00 -1.75 (Very Poor), 1.76 – 2.50 (Poor), 2.51 – 3.25 (Good), 3.26 – 4.00 (Very Good)***

Table 8.5: Assessment on Soft Skills

Soft Skills	VP	P	VP+P	G	VG	G+VG	Total	Mean
Critical Thinking	2	6	8	11	4	15	23	2.74
Collaboration	1	5	6	14	3	17	23	2.83
Communications skills	1	3	4	15	4	19	23	2.96
Basic ICT skills and Knowledge	0	13	13	8	2	10	23	2.52
Creativity & Innovation	1	8	9	12	2	14	23	2.65

**1-Very Poor (VP) 2-Poor (P), 3-Good (G), 4-Very Good (VG)*

Workmanship and job attitude

A similar four-point Likert scale computation was used to interpret the workmanship and professionalism of the DTP graduates.

Table 8.6 demonstrates that graduates are willing to seek advice and assistance from seniors, with a mean rating of 3.08, implying that graduates' learning curiosity is always high. Furthermore, many employers believe that graduates are eager to learn new things and work well in groups to achieve a common goal.

Regardless, the majority of employers believe that graduates are incapable of performing at the highest level of workmanship and professionalism and are unwilling to accept accountability.

**Mean: 1.00 -1.75 (Strongly Disagree), 1.76 – 2.50 (Disagree), 2.51 – 3.25 (Agree), 3.26 – 4.00 (Strongly Agree)*

Table 8.6: Assessment on Workmanship and Professionalism

Workmanship and Professionalism	SD	D	SD+D	A	SA	A+SA	Total	Mean
Can perform at the highest standard of workmanship and professionalism	1	11	12	8	3	11	23	2.57
Can quickly adapt to the workplace/work culture	1	4	5	14	4	18	23	2.91
Works well in a group to achieve a goal	1	3	4	13	6	19	23	3.04
Are willing to seek guidance and help from their seniors	1	2	3	13	7	20	23	3.13
Are punctual in the workplace	2	4	6	14	3	17	23	2.78
Are willing to learn new things	1	2	3	14	6	20	23	3.09
Accepts additional responsibilities other than specified on the job description	1	4	5	14	4	18	23	2.91
Are ready to take accountability	0	6	6	14	3	17	23	2.87

* *SD-Strongly Disagree D-Disagree, A-Agree, SA-Strongly Agree*

Overall satisfaction with graduates

When it comes to overall employer satisfaction with the DTP graduates working under their supervision, 83% of companies are satisfied, while the remaining 17% are not. Following that, the employers were asked to justify their responses.

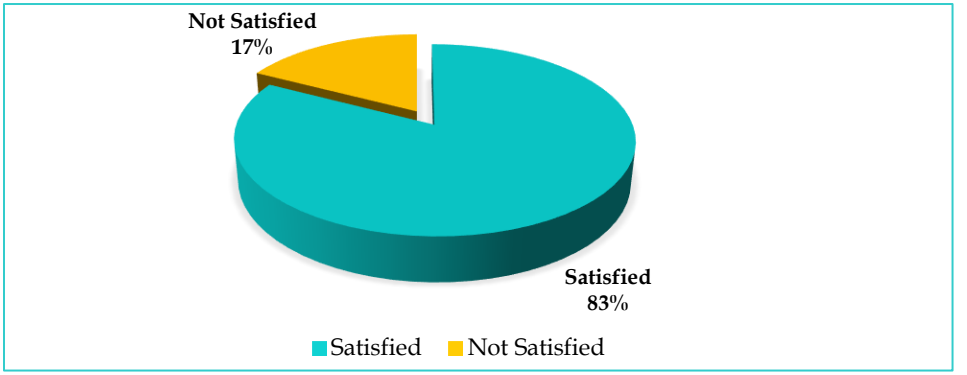

Fig 8.6 Employer Satisfaction

Employer Dissatisfaction

Employers were asked to explain why they were dissatisfied with the DTP graduates. Table 8.7 shows that the majority of employers (44.4%) are not satisfied due to the requirement for constant supervision at work, followed by a lack of good work attitude among graduates.

Table 8.7: Reason for Employer Dissatisfaction

Not satisfied reason	Freq	Percentage
Require constant supervision	4	44.4
lack positive work attitude	2	22.2
lack technical Skills and theoretical knowledge needed for the job	1	11.1
Face difficulty in adopting to work environment	1	11.1
Have difficulty in handling stress and work pressure on the job	1	11.1

Employer Satisfaction

The employers were also asked to explain why they were satisfied with the DTP graduates' performance. According to the data shown in table 8.8, most pf the employers (20.3%) were satisfied with graduate because of their technical abilities and knowledge needed for the job, followed by their ability to work well in a group to achieve a goal.

Table 8.8: Reason given for employer Satisfaction

Satisfied Reason	Freq	Percent
Possess technical Skills and theoretical knowledge needed for the job	13	20.3
Work well in a group to achieve a goal	12	18.8
Easily adapts to the work environment	8	12.5
Can adapt to the existing technology relevant to the enterprise	8	12.5
Have an ability and enthusiasm to learn new skills and knowledge	6	9.4
Can solve work related problems	5	7.8
Are willing to work beyond his/her job responsibility	5	7.8
Can produce outputs on time while working with little/no supervision	4	6.3
Can handle stress and work pressure on the job	2	3.1
Other (please specify)		
Solve temporary manpower problem	1	1.6

Difficulty in Retaining Graduates

When asked if they had any problems retaining the employed graduates, a total of 17 employers reported having difficulty retaining the graduates, while the remaining 6 reported not having any difficulty retaining the graduates.

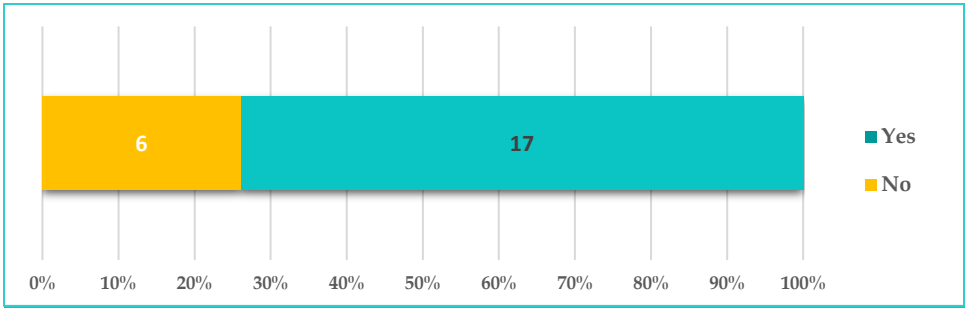

Fig 8.7 Difficulty in retaining

Reason given for facing graduates retaining issue

Those employers who reported having difficulty in retaining the graduates were asked to provide their justifications.

A majority (50%) of the employers selected 'Lack of loyalty/commitment to the organization' as the justification for graduate retention issue followed by 'Finding Better Job opportunities' and 'Lower wages offered'.

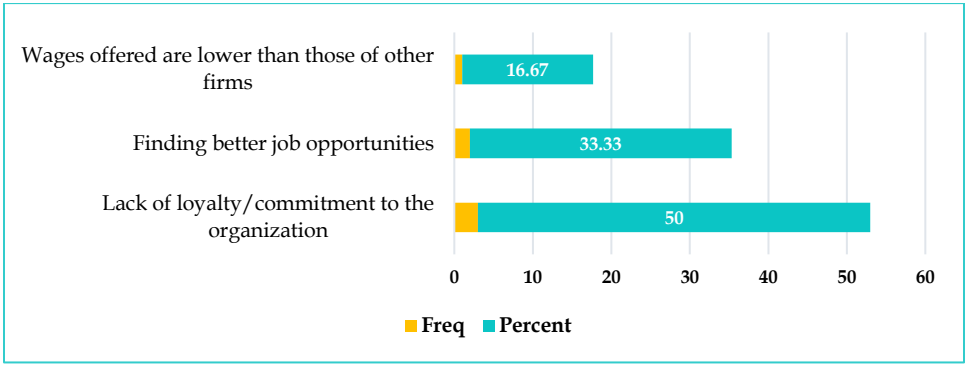

Fig 8.8 Reason given for having difficulty in retaining the graduates

Employee Benefits/ Working Condition

A better workplace environment boosts productivity, aids in talent retention, and, most importantly, is beneficial to the company's overall mental health. Each employer was asked to select whether their organization has the following systems and benefits in place to ensure decent working conditions.

As shown in table 8.9, companies are doing very well on average in terms of providing government holidays, OHS, salary increments, maternity/paternity leave, and other benefits. Nonetheless, the results show that the majority of employers do not provide a Group Insurance scheme, housing allowance, or a staff/employee welfare scheme in their workplace/organization. Similarly, there are a number of employers who do not provide a provident fund.

Table 8.9: Working conditions and benefits

Working Conditions and Benefit	Yes	%	No	%	T
Our organization has Internal Service Rule (ISR)	19	82.6	4	17.4	23
We have occupational health and safety policy in workplace	20	87.0	3	13.0	23
We have Provident Fund for our employees with a recognized Financial Institution	15	65.2	8	34.8	23
We provide pay slips/evidence of wages paid to our employees	19	82.6	4	17.4	23
We have written contract/term of employment for our staff and new recruits	16	69.6	7	30.4	23
We provide Maternity /Paternity leave	19	82.6	4	17.4	23
We have Group Insurance Scheme (GIS) for our employees	10	45.5	12	54.5	22
We have sexual harassment policy in place	15	68.2	7	31.8	22
We have housing allowance	9	39.1	14	60.9	23
We provide government/public holidays	21	91.3	2	8.7	23
We have a salary increment system	21	91.3	2	8.7	23
We have a staff/employee welfare scheme	11	47.8	12	52.2	23

Average Income of the Graduates

Figure 8.9 depicts the average wage paid to graduates by employers. More than half of the graduates earn an average monthly salary of Nu. 12,000 to 15000. The maximum salary earned by graduates' ranges from Nu. 24,001 to 27000. Regardless, differences in average salary among graduates may be due to differences in their daily working hours and the nature of the job.

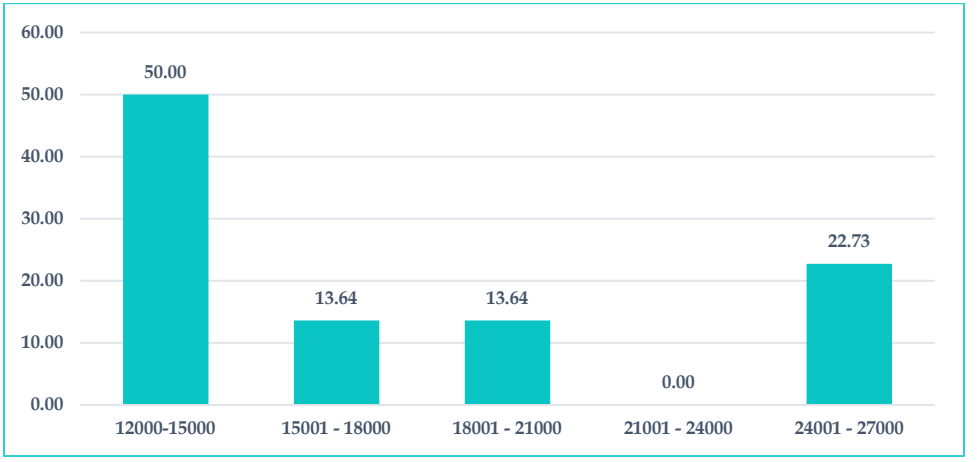

Fig 8.9 Average Income

Employee Recommendation

In general, the study's findings demonstrated positive outcomes in terms of recommending DTP graduates to other organizations based on specific employers' working experiences with them. The majority of the employers (54.17%) reported that they would highly recommended (33.33 percent) or somewhat recommended the graduates to other organizations. This reflects the graduates' outstanding market performance. Only a small percentage of organizations (8.33 percent) said they would not recommend the graduates to other organizations.

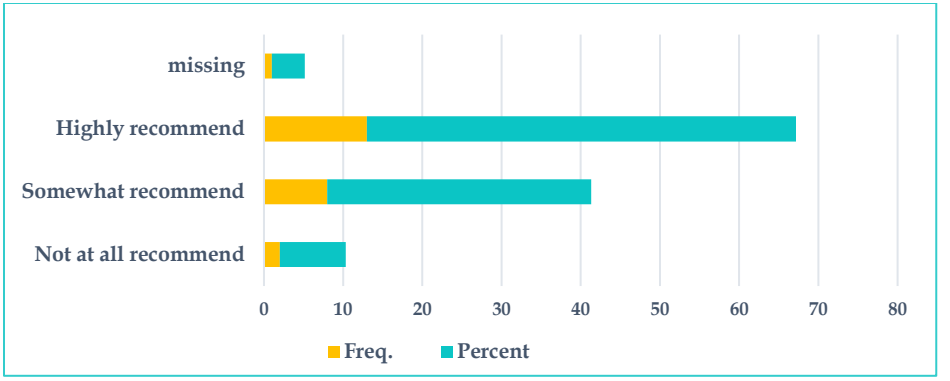

Fig 8.10 Employee Recommendation

Employer suggestions to Improve TVET in TTIs and IZCs

The majority of employers suggested that the trainees should be given more hands-on experience by providing them with more practical training in training institutes. Furthermore, the employers suggested that the institute teach not only core technical skills but also soft/employability skills such as communication, work ethics, work attitude, interpersonal relations, workmanship, and professionalism. Employers believe that graduates must possess the attitude to learn and work besides the technical skills.

Table 8.10: Suggestions to improve TVET in TTIs and IZCs

Suggestions to TTIs/IZC/CZC	Freq.
Focus More on Practical Training	4
Focus on employability skills such as workmanship, Work ethics and attitudes	3
Increase the duration of training	2
Modular courses to be strengthened	2
Increase the varieties of training	1
Good working environment	1
Need upskilling	1
Integrate Bhutanese architectural design courses in the institutes	1

Suggestions to TTIs/IZC/CZC	Freq.
Field attachment at industries would gain exposure.	1
Proper alignment between the institute and industry learning/attachment	1
Provide basic knowledge on wood working machinery	1

Employer suggestions to improve labour market for TVET

The recommendations provided by the employers for the improvement of the labor market and job opportunities for the graduates were presented thematically and analyzed. Many employers have suggested that providing training based on labor market research and a regular upskilling program could improve and contribute to the workplace for TVET graduates. Following that, the employers emphasized the significance of strengthening public and private partnerships (industry-institute linkage) in order to improve the labor market for TVET graduates.

Table 8.11: Suggestions to improve Labour Market for TVET

Suggestion for improving Labour Market	Freq.
Give require training and upskilling	4
Public and private partnership much be strengthened by government	3
Provide real world experience to the graduates	2
Teach Soft/Employability Skills	2
Focus on practical training	1
Focus on technical skills and knowledge	1
Provide Industrial Attachment and internship	1
Career counselling	1
Training should focus on IT, construction and agriculture sectors.	1
Simplify the procedures in job portal system	1
Proper employment planning from the ministry	1

Section VIII
Suggestions and recommendations

This section explores employer referrals of TTIs and Zorig Chusum graduates to other organizations in the labour market, as well as their suggestions for expanding TVET programmes at institutes and boosting the labour market and work opportunities for TVET graduates.

TVET promotion by employers

In general, the study's findings demonstrated good outcomes in terms of promoting TTIs and Zorig Chusum graduates to other organizations based on particular employers' experiences working with them. A majority of the organizations (91.66%) indicated that they would somewhat recommend (51.9%) or highly recommend (39.76%) graduates to other organizations. This reflects the outstanding market performance of the graduates.

Only a small number of organizations (5%) indicated that they would not recommend or not at all recommend the TVET graduates to other organizations.

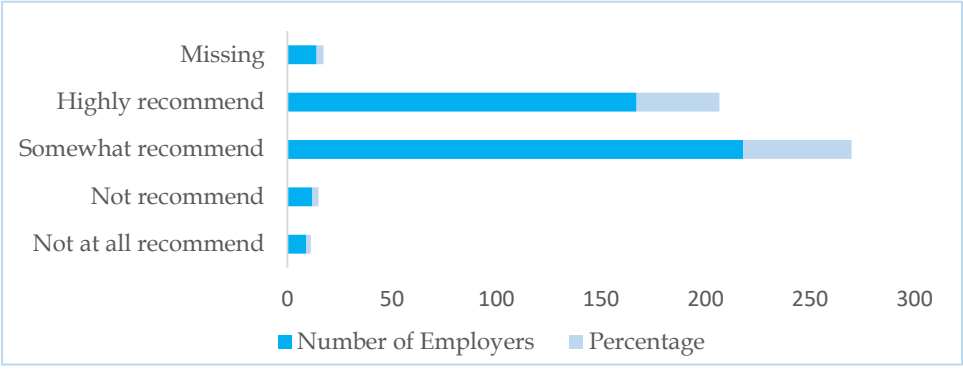

Fig: 9.1 Recommendation by employers

Employer suggestion to improve TTIs and IZCs

While 44.7% of the respondents did not have any suggestions, it should be noted that the following suggestions were made by the remaining respondents.

The need for more practical training, the need for more focus on soft skills, the need for an empirical curriculum, the need to increase OJT duration to cope with emerging technology, and the need for qualification upgradation. The employers (18.13%) suggested that the trainees should be given more hands-on experience by providing them with more practical training.

Around 11.48% of the respondents expressed the need for a training institute to teach not just core skills but also soft skills such as writing skills, communication skills, work ethics, work attitude, moral values, interpersonal relations skills, leadership, management, and ICT skills.

Table 9.1: Suggestions to TTIs and IZCs

Suggestion to Improve TVET in TTIs, IZC and CZC	n	%
Cope up with Emerging Technology	20	6.04%
Upgrade tools & equipment's	14	4.23%
More Practical training	60	18.13%
Increase OJT duration	22	6.65%
Need focus on soft skills	38	11.48%
Qualification upgradation	6	1.81%
Empirical curriculum	23	6.95%
no suggestions	148	44.71%

More than 6% of the respondents strongly suggested that there is a need for an empirical curriculum which is at par with ground reality and with the present time. Almost 6.65% suggested that the current OJT training duration is not enough and that to get more hands-on experience, the OJT duration should be increased. 6.04% of employers asserted that coping and adapting to emerging technology and focusing more on recent technology should become important components in training institutes.

A pragmatic view on the need for up-gradation of qualifications and skills for both instructors and TTIs and Zorig Chusum graduates was also shared, along with the need for refresher training, re-skilling, and general skills for trainers.

Employer suggestion to improve workplace

The recommendations provided by the employers for the improvement of the labor market and job opportunities for TVET graduates were presented thematically and analyzed.

Many companies (f=27) have suggested that providing TVET graduates with proper pay, retirement benefits, and wage rates might improve the image of blue-collar occupations and contribute to enhancing the workplace for TVET graduates. Following that, some (f = 23) companies have urged that the newest tools and equipment be installed in working areas, and graduates to be trained to explore developing new technologies to ensure the highest quality and timely completion of work, which might lead to job prospects for TVET graduates.

A frequency of f = 22 employers advised instilling strong interpersonal skills in the working organization to establish excellent relationships with the employees and create a decent working environment, followed by (f = 18) employers recommending that TVET graduates be given career advancement opportunities.

A few companies (f = 7) urged establishing strict terms and conditions between the organization and the graduates in order to decrease the number of graduates leaving the organization. Similarly, a few employers (f = 7) recommended that TVET graduates be flexible in terms of assigned jobs and working time.

Table 9.2: Suggestions to improve workplace

Suggestions to improve workplace	n	%
Latest tools & equipment	23	7.21%
Wages & renumeration	27	8.46%
Agreement b/w organization and graduates	7	2.19%
Monitoring Team Performance	6	1.88%

Suggestions to improve workplace	n	%
Interpersonal skills	22	6.90%
Career growth opportunity	18	5.64%
Flexibility	7	2.19%
no suggestion	209	65.52%


BHARAT

Key conclusions

To get to this position, we've established the minimum requirement and surveyed TVET graduate employers. However, if we stop here, we will be missing the most crucial aspect of the study. The study's goal was to use the findings to improve training programmes in TTIs and Zorig Chusum. As a result, we don't quit after we've concluded. The first stage in creating proposals for improvement is to reach these findings.

First and foremost, the sampling strategy allows for a 5% margin of error. The team does not claim that the study conclusions are entirely reliable. In contrast, statistical laws are founded on assumptions, probability, and the average. In contrast to Mathematical Science, which is based on logical reasoning and conclusions, statistics measurement can be a little abstract, and the results are frequently unreliable. Accepting some degree of error is necessary.

As a result, study findings such as this one should not be taken at face value. More research is needed to confirm and validate the current findings. However, this does not rule out the possibility that the findings are incorrect. The team feels that the findings should not be publicized and then forgotten, but rather should be submitted to in-depth debate and multiple interpretations to provide new meanings and insights. Then only the study's aim would be served.

Therefore, the following are the major conclusions drawn from the descriptive analysis of the survey:

1. Although the TWG has validated around 2114 employers, only 767 employers were given the survey link, forming the sampling frame, of which only 420 employers responded to the survey, resulting in a response rate of 54.76%.

2. According to the survey, more than 41% of the organizations that responded were distributed in Thimphu, followed by Chukhha and Paro with 10.71% and 9.52%. This finding confirms the finding of tracer study 2020 that the majority of the employing entities are based in Thimphu, Wangdue, Paro and Chhukha.

3. The study also reveals that almost quarter (24.52%) of the organizations were involved in construction activity, followed by Business and Services with 20.71% which indicates a high workforce requirement in these sectors.

4. According to the employers, the most commonly used forum to recruit candidates is online advertisements, especially on the Ministry of Labour and Human Resources website (17.14%), while 6.9% rely on newspaper advertisements. They also remarked that the recruitment method is not only limited to the above two but also uses private employment services, web/online postings, and in-campus recruitment.

5. In general, the majority of the employees (60%) are recruited as regular/permanent and less than 40% are on contract or temporary. Of the working graduates by sectors, 'Arts and Craft' and 'Construction' have the maximum number of employees on the contract due to the nature of the work.

6. The study also reveals that the recruitment factors that the employer considered while recruiting TTIs and Zorig Chusum graduates are technical skills (45%), personality (14%), and communication skills (13.5%).

7. One of the major conclusions drawn from the first-ever employers' survey was that 69% of them find it difficult to get graduates of TTIs and Zorig Chusum graduates for employment. Among the twelve economic sectors, the 'Construction' sector faces shortage with 26.9%, followed by the 'Mechanical, Electrical, and Electronic' sector with 23.45%. Similarly, in the 'Construction' sector, employers are challenged with getting a workforce in masonry (18.42%), tile-laying (15.79%), and construction supervision (25%). The 'Machine Operation and Maintenance' sector has a similar shortage with a 77.27% labour shortage in heavy machine operation and maintenance.

8. A similar trend is also present in the 'Transport/Motor Vehicle' sector with a skill shortage of 55.56% in automobile mechanics although TTIs like Samthang, Thimphu and Rangjung have automobile training courses. This finding shows that enrolment in institutes in the automobile trade has to be increased to meet the market demand.

9. Despite, having a training course in Mechanical and Electrical, the employer still has a shortage of welders with 52.24% and Mechanical fitters with 28.36%. This also means that the institute management or the Department of Technical Education, Ministry of Labour and Human Resources can come up with an intervention to meet the above demand.

10. According to the study, almost a 50% skill gap is experienced by hospitality management and another 25% each in Bakery and Confectionary, and Food and Beverage in the 'Tourism and Hospitality' sector.

11. Correspondingly, there is a skill shortage in tailoring of both western and traditional garments with 25.05% each, followed by gold and silver smith (Trezo) with 10.53%.

12. Surprisingly, 60% of the employers prefer to employ both males and females graduates in their organization indicating gender bias is narrowing. Still, 36% of employers say that they prefer male employees to female ones. The underlying reasons for the preference are a) nature of work/job (63.64%), b) work environment (15.07%), c) work commitment (11.52%), and d) family obligation (3.64%).

13. The study also disclosed that 'Mining and Quarrying' sector is preferred by 100% of males, whereas the least preferred male sector is 'Fitness, Beauty and Wellness' sector with 25%. In the case of female graduate preferences, "Arts and Craft sector is preferred the most (8.54%), followed by agriculture, mining, renewable energy, machine operation, tourism and ICT. The rest of the sectors prefer both genders by more than 50%.

14. Overwhelmingly, the overall satisfaction level of employers' on TTIs and Zorig Chusum graduates was recorded at 78%, while 21% of them were not satisfied.

15. In the satisfaction level of the employers on technical skills and the knowledge of the graduates, overall, 70.5% of the employers are satisfied with the technical skills and knowledge of the graduates. 30% of those who were not satisfied said that graduates lacked technical skills and theoretical knowledge needed for the job, required constant supervision, and lacked a positive work attitude.

16. On a similar note, employers were asked to give reasons for their satisfaction with technical skills and knowledge; 70.5% of those who were satisfied claimed that our graduates have the ability and enthusiasm to learn new skills and knowledge, easily adapt to the work environment, and work well in a group to achieve a goal.

17. When considering the difficulty level of retaining graduates, the majority (60.95%) of employers said that they do not find it difficult to retain, while 30.1% felt the other way. By economic sector, 'Mechanical, Electrical and Electronic' face the retention problem with 46.6%, 34.3% for 'Construction', and 48.1% for 'Arts and crafts'. The reasons why employers could not retain the employee are attributed to seeking better work options (29.37%), skills mismatch (18.12%), lack of loyalty and dedication to the organization (15.62%), family/personal issues (11.25%), and low social perception for this kind of job (4.37%).

18. In terms of implementation of Regulation on Working conditions, 81.67% have internal Service Rule (ISR), 86.67% have Occupational Health and Safety policy, 67.38% have instituted Provident Fund Policy, 65.71% have contract terms and conditions, 85.48% provide maternity and paternity leaves, 42.14% have GIS provision, 56.43% have a harassment policy, 86.67% have pay increment and 90.95% provide holidays. It is of the opinion that many employers are abreast of the Labour Acts and regulations on working conditions due to the constant effort of the Department of Labour.

However, advocacy on Acts and Regulations to be provided to trainees of TTIs and Zorig Chusum, and not only to employers. Despite, the persistent effort put by the Department of Labour on the importance of OHS, 52 organization do not have a strong policy on OHS.

19. Quite a good number of employers (26.19%) pay a salary ranging between Nu. 14001-17000 per month to their employees. While a significant number of employers (21.19%) even pay between Nu.17001 – 21000 per month as per their number of working years and skills.

20. On average 73.14% of our graduate's work eight hours a day which is as per the Labour Act. While 17.3% of the employers have made their employers work for more than eight hours which should have compensated with the overtime payment. And maximum employers (44.38%) pay overtime payments in a range of Nu.50-100 per hour and 26.75% between Nu.101 to 200 per hour.

21. In response to whether they recommend TTIs and Zorig Chusum graduates for employment to others or not, 91.66% of the employers recommend the employment of TVET graduates which is an overwhelming outcome. Only less than 5% of them do not recommend.

22. Finally, an online graduate s' employer survey can give useful information for evaluating and improving TVET programs' relevance and quality. The team believes that a regular program of such type to be conducted to do the trend analysis for enhancement of Institute-Industry linkages. The finding of the study shows that 64.76% of the employers do not have foreign workers in their organization while 34.76 have employed

23. According to the study, the majority of the employers have recommended the skills in the field of Electrical (90), Masonry (59) and Plumbing (55) for providing the training. Besides these skills, a significant number of employers (75) recommended the institutes provide the required soft skills (Workmanship, Work Attitude and Professionalism) to TTIs and Zorig Chusum graduates.

24. The future skills that employers demand as per the changing market trends are Electrical (81), Masonry (73), Mechanic (55) and Welding (55).

Given the study's findings (summarized above) we recommend the following actions:

1. The study encompassing the assessment of competencies of TTIs and Zorig Chusum graduates, and suggestion for strengthening TVET program in Technical Training Institute and institute for Zorig Chusum resulted in unanimous theme of graduates having satisfiable competencies, the need for more hands-on practical training and the need to increase OJT duration all implying the **need to revisit the course duration and bring the necessary changes in it**.

2. Even in the public TVET institutions, some institutes do not have teachers for certain soft skills subject and the functioning of with it or without it is now questionable with the employers being just satisfied with the competencies regarding soft skills of the graduates and the suggestive call for the need to focus on soft skills requires much priorities placed on soft skills and not labeling it literally as "soft" skill.

3. To address the ever-changing labour market demand, training programmes that are responsive to business demands have become critical, since the majority of organizations that hired graduates are looking for individuals with skills that are not offered in TTIs and Zorig Chusum. Keeping this in mind, TTIs and Zorig Chusum must be flexible in delivering training in courses that are in high demand in the market, which may assist in reducing unemployment issues.

4. TTIs and Zorig Chusum are catering to the needs of the labour market by training youths and supplying them in the market. However, the supply is not able to fulfill the demands of the market.

TTIs and Zorig Chusum must conduct need-based programs in a variety of occupations rather than routinely producing graduates of the same occupations for years in order to match TVET supply with labor market demand and remove the obstacles that deter and demotivate graduates' effective integration into the labor market.

5. For the provision of training and employment, there is enormous potential for encouraging cooperation and synergies between institutes and employers/industries through structured Dual Training Programme (DTP). TTIs and Zorig Chusum will have to start coordinating certain key courses with major and small enterprises across economic sectors and geographical areas.

6. In every organization, the Internal Service Rule complying with the minimum standards set out in the Labour and Employment Act 2007 shall be prepared and implemented for the benefit of both the employers and employees.

Annexes

Annex 1: Employer distribution across country

Location	Freq.	Per cent
Bumthang	17	4.05
Chhukha	45	10.71
Dagana	4	0.95
Haa	5	1.19
Lhuentse	3	0.71
Monggar	8	1.9
Paro	40	9.52
Pema Gatshel	7	1.67
Punakha	18	4.29
Samdrup Jongkhar	12	2.86
Samtse	11	2.62
Sarpang	24	5.71
Trashigang	10	2.38
Tashi Yangtse	11	2.62
Thimphu	176	41.9
Trongsa	7	1.67
Tsirang	5	1.19
Wangdue Phodrang	13	3.1
Zhemgang	2	0.48
missing	2	0.48

Annex 2: Economic activities distribution across different sectors

Main activity	TS	CS	PA	WP	IP	WE
Agriculture, Forestry, and Fishing	5	0	1	1	1	2
Mining and Quarrying	1	0	1	0	0	0

Main activity	TS	CS	PA	WP	IP	WE
Mechanical, Electrical and Electronics	40	10	12	5	2	4
Renewable Energy (Green Energy)	4	1	2	1	0	1
Construction	49	13	11	10	5	15
Machine Operation and Maintenance	13	0	2	0	2	1
Transportation/Motor Vehicle	4	1	4	1	1	1
Tourism and Hospitality	4	3	1	1	0	0
Fitness, Beauty and Wellness	3	0	0	1	0	0
Information, Communication, IT and Computing	7	0	2	0	1	0
Arts and Crafts (Include Zorig Skills)	26	18	11	10	8	7
Business and services	37	11	14	7	6	11

Annex 3: Employment status of graduate employee

Employment Status	Freq.	Percent
Regular/Permanent employee	252	60
Contract/Temporary employee	162	38.57
missing	6	

Annex 4: Economic activities distribution with employment status

Economic activity	Employment Status			
	Regular/P	Contract/T	missing	Total
Agriculture, Forestry, and Fishing	80	10	10	100
Mining and Quarrying	100	0	0	100
Mechanical, Electrical and Electronics	71.23	27.4	1.37	100
Renewable Energy (Green Energy)	77.78	11.11	11.11	100
Construction	42.72	56.31	0.97	100
Machine Operation and Maintenance	89.47	10.53	0	100
Transportation/Motor Vehicle	83.33	16.67	0	100
Tourism and Hospitality	55.56	44.44	0	100

Economic activity	Employment Status			
	Regular/P	Contract/T	missing	Total
Fitness, Beauty and Wellness	100	0	0	100
Information, Communication, IT and Computing	70	20	10	100
Arts and Crafts (Include Zorig Skills)	39.02	60.98	0	100
Business and services	73.56	25.29	1.15	100
Total	60	38.57	1.43	100

Annex 5: Skill shortage sectors

Sector	Freq	Percent
Agriculture, Forestry and Fishing	4	1.38
Mining and Quarrying	1	0.34
Mechanical, Electrical and Electronics	68	23.45
Renewable Energy (Green Job)	3	1.03
Construction	78	26.9
Machine Operation and Maintenance	22	7.59
Transportation/Motor Vehicles	19	6.55
Tourism and Hospitality	5	1.72
Fitness, Beauty and Wellness	2	0.69
Information, Communication, IT, and Com	6	2.07
Arts and Crafts (Includes Zorig Chusum)	59	20.34
Business and Services	23	7.93
Total	290	100

Annex 6: Agriculture, forestry and fishing

Agriculture, Forestry and Fishing	Freq.	Percent
Agro-based food processing and production	2	66.67
Dairy product development	1	33.33
Total	3	100

Annex 7: Mechanical, Electrical and Electronics

Mechanical, Electrical and Electronics	Freq.	Percent
Electrical	6	8.96
Home Appliance repair	1	1.49
Mechanical fitter	19	28.36
Transmission and Distribution Linemen	6	8.96
Welding	35	52.24
Total	67	100

Annex 8: Renewable Energy

Renewable Energy	Freq.	Percent
Solar and Wind technology	1	33.33
Hydro Power plant operator	1	33.33
repair maintenance and commissioning o	1	33.33
Total	3	100

Annex 9: Construction sector

Construction	Freq.	Percent
Construction carpentry	8	10.53
Construction supervision	19	25
False ceiling	4	5.26
Furniture making and upholstery	7	9.21
Masonry	14	18.42
Plumbing	1	1.32
Plumbing and pipe fitting	9	11.84
Tiles Laying	12	15.79
Tunneling technician	2	2.63
Total	76	100

Annex 10: Machine operation and maintenance

Machine Operation and Maintenance	Freq.	Percent
Heavy machine operation and maintenance	17	77.27
Lift maintenance	2	9.09

Machine Operation and Maintenance	Freq.	Percent
Power tiller operator	1	4.55
Automobile mechanics	1	4.55
Looms operation and maintenance	1	4.55
Total		100

Annex 11: Transportation / motor vehicles

Transportation/Motor vehicles	**Freq.**	**Percent**
Automobile mechanics	10	55.56
Auto Painting	1	5.56
Panel Beating	1	5.56
Green car technology	1	5.56
Heavy vehicle driving	1	5.56
Earth Mover Operator	2	11.11
Auto Electricians	2	11.11
Total	18	100

Annex 12: Tourism and hospitality

Tourism and Hospitality	Freq.	Percent
Food and Beverage	1	25
Hospitality Management	2	50
Bakery and confectionary	1	25
Total	4	100

Annex 13: Digital media, IT and computing

Digital media, IT and Computing	Freq.	Percent
Graphics and Multimedia	2	33.33
Electronics and Internet of Things	2	33.33
Cyber and network security	1	16.67
3-D printing	1	16.67
Total	6	100

Annex 14: Arts and crafts (Includes Zorig trades)

Arts and crafts (Include Zorig trades)	Freq.	Percent
Mask-making (Babzo)	1	1.75
Dralham Making (Shoe-making)	1	1.75
Gold & Silver Smith (Trezo)	6	10.53
House Painting (Shingtsen)	2	3.51
Sculpture (Jimzo)	4	7.02
Mural Painting (Lhadri)	4	7.02
Embroidery (Tshemdru)	4	7.02
Patra (Wood carving)	5	8.77
Shazo (Wood turning)	1	1.75
Tailoring (Traditional)	12	21.05
Fabric Design and Development	1	1.75
Ceramic and Pottery	1	1.75
Tailoring – (western garments)	12	21.05
Interior Design	3	5.26
Total	57	100

Annex 15: Business and services

Business and Services	Freq.	Percent
Early Childhood care and development	2	9.09
Retail and online business	12	54.55
Customer Service	1	4.55
Financial Management	1	4.55
Manufacturing & Marketing	5	22.73
Other (please specify)	1	4.55
Total	22	100

Annex 16: Gender preferences

Gender preferences	Freq.	Percent
Male	151	35.95
Female	15	3.57
Both the gender	254	60.48

Annex 17: Gender preference by economic activity

Economic Activity	Male		Female		Both		Total
	n	%	n	%	n	%	Total
Agriculture, Forestry and Fishing	5	50	0	0	5	50	10
Mining and Quarrying	2	100	0	0	0	0	2
Mechanical, Electrical and Electronics	35	47.9	1	1.37	37	50.68	73
Renewable Energy (Green Job)	4	44.4	0	0	5	55.56	9
Construction	39	37.9	1	0.97	63	61.17	103
Machine Operation and Maintenance	7	36.8	0	0	12	63.16	19
Transportation/Motor Vehicles	5	41.7	1	8.33	6	50	12
Tourism and Hospitality	3	33.3	0	0	6	66.67	9
Fitness, Beauty and Wellness	1	25	0	0	3	75	4
Information, Communication, IT and Computing	3	30	0	0	7	70	10
Arts and Crafts (Includes Zorig skills)	23	28	7	8.54	52	63.41	82
Business and Services	24	27.6	5	5.75	58	66.67	87
Total	151	36	15	3.57	254	60.48	420

Annex 18: Employer satisfaction with economic activity

Economic Activity	Satisfied		Not Satisfied		Missing		Total
	N	%	N	%	N	%	
Agriculture, Forestry and Fishing	10	100	0	0	0	0	10
Mining and Quarrying	1	50	1	50	0	0	2
Mechanical, Electrical and Electronics	56	76.7	16	21.9	1	1.4	73
Renewable Energy (Green Job)	8	88.9	1	11.1	0	0	9

Economic Activity	Satisfied		Not Satisfied		Missing		Total
	N	%	N	%	N	%	
Construction	79	76.7	24	23.3	0	0	103
Machine Operation and Maintenance	17	89.5	2	10.5	0	0	19
Transportation/Motor Vehicles	12	100	0	0	0	0	12
Tourism and Hospitality	7	77.8	2	22.2	0	0	9
Fitness, Beauty and Wellness	3	75	1	25	0	0	4
Information, Communication, IT and Computing	7	70	3	30	0	0	10
Arts and Crafts (Includes Zorig skills)	61	74.4	20	24.4	1	1.22	82
Business and Services	68	78.2	18	20.7	1	1.15	87
Total	329	78.3	88	21	3	0.7	420

Annex 19: Employer dissatisfaction reasons

Reason for employer disatisfaction	Freq.	Percent
lack technical Skills and theoretical knowledge needed for the job	59	24.38
Are reluctant to learn new skills and latest advancement	27	11.16
Exhibit poor communication skills	17	7.02
lack positive work attitude	35	14.46
Face difficulty in adopting to work environment	12	4.96
Exhibit weak team spirit and cooperation	14	5.79
Have difficulty in handling stress and work pressure on the job	20	8.26
Require constant supervision	55	22.73
Other (please specify)		
Not at all punctual during their working hours	1	0.41
Lack of experience and training	1	0.41
need more field attachment to align the theoretical learning with the practical world of work	1	0.41
Total	242	100

Annex 20: Employer satisfaction reasons

Reason	Freq.	%
Have an ability and enthusiasm to learn new skills and knowledge	153	16.28
Work well in a group to achieve a goal	141	15
Easily adapts to the work environment	139	14.79
Are willing to work beyond his/her job responsibility	104	11.06
Can produce outputs on time while working with little/no supervision	93	9.89
Can solve work related problems	92	9.79
Can adapt to the existing technology relevant to the enterprise	84	8.94
Possess technical Skills and theoretical knowledge needed for the job	67	7.13
Can handle stress and work pressure on the job	63	6.7
Other (please specify)		
They can do better while doing the works in practical	1	0.11
Sincere in assigned works though required supervision	1	0.11
Good performance	1	0.11
Addresses temporary workforce shortages	1	0.11
Total	940	100

Annex 21: Employee retention with employer satisfaction

Employees leaving firm	Satisfied		Not Satisfied		Employers
	n	%	n	%	n
No employee left	154	89.53	18	10.47	172
Employees left the firm	167	70.76	69	29.24	236
Total	321	78.68	87	21.32	408
Missing	12				420

Annex 22: Sector wise retaining difficulty

Main Economic activity	Difficulty in retaining TTIS&IZC graduates				
	Yes	%	No	%	Total
Agriculture, Forestry and Fishing	4	40	6	60	10

Main Economic activity	Difficulty in retaining TTIS&IZC graduates				
	Yes	%	No	%	Total
Mining and Quarrying	0	0	2	100	2
Mechanical, Electrical and Electronics	34	46.6	39	53.4	73
Renewable Energy (Green Job)	1	11.1	8	88.9	9
Construction	35	34.3	67	65.7	102
Machine Operation and Maintenance	4	21.1	15	78.9	19
Transportation/Motor Vehicles	1	8.3	11	91.7	12
Tourism and Hospitality	2	22.2	7	77.8	9
Fitness, Beauty and Wellness	2	50	2	50	4
Information, Communication, IT and Computing	1	10	9	90	10
Arts and Crafts (Includes Zorig skills)	39	48.1	42	51.9	81
Business and Services	37	43.5	48	56.5	85
Total	160	38.5	256	61.5	416

Annex 23: Retaining difficulty

Employers expected working years	Difficulty in retaining TTIs and IZC Graduates				
	Yes	%	No	%	Total
1 month	0	0	1	100	1
6 Months	18	43.9	23	56.1	41
7 Months	1	100	0	0	1
1 year	26	42.6	35	57.4	61
2 years	38	52.1	35	47.9	73
3 years	23	39.7	35	60.3	58
4 years	13	38.2	21	61.8	34
5 years	18	36	32	64	50
6 years	5	38.5	8	61.5	13
7 years	2	33.3	4	66.7	6
8 years	0	0	9	100	9
9 years	2	50	2	50	4

Employers expected working years	Difficulty in retaining TTIs and IZC Graduates				
	Yes	%	No	%	Total
10 years	4	22.2	14	77.8	18
11 years	0	0	2	100	2
12 years	1	20	4	80	5
13 years	1	50	1	50	2
14 years	1	100	0	0	1
15 years	1	20	4	80	5
More than 15 years	1	4.5	21	95.5	22
Missing					14
Total	155	38.2	251	61.8	406

Annex 24: Employee retaining difficulty reasons

Reason	Freq.	Percent	Cum.
Skills mismatch	29	18.24	18.24
Wages offered are lower than those of another firm	14	8.81	27.04
Lack of growth and learning opportunities	6	3.77	30.82
Low social perception for this kind of job	7	4.4	35.22
Family/personal issues	18	11.32	46.54
Disciplinary issues with the organization	5	3.14	49.69
Lack of loyalty/commitment to the organization	25	15.72	65.41
Housing/accommodation issue	3	1.89	67.3
Finding better job opportunities	47	29.56	96.86
Pursuing overseas employment	3	1.89	98.74
Lack of job security	1	0.63	99.37
Retirements	1	0.63	100

Annex 25: Sector wise emergency insurance scheme

Main economic sector	Emergency Employee Insurance Scheme				
	Yes	%	No	%	Total
Agriculture, Forestry and Fishing	9	100	0	0	9
Mining and Quarrying	1	50	1	50	2
Mechanical, Electrical and Electronics	70	95.9	3	4.1	73
Renewable Energy (Green Job)	8	88.9	1	11.1	9
Construction	91	90.1	10	9.9	101
Machine Operation and Maintenance	17	89.5	2	10.5	19
Transportation/Motor Vehicles	12	100	0	0	12
Tourism and Hospitality	8	100	0	0	8
Fitness, Beauty and Wellness	4	100	0	0	4
Information, Communication, IT and Computing	8	80	2	20	10
Arts and Crafts (Includes Zorig skills)	67	83.8	13	16.3	80
Business and Services	73	86.9	11	13.1	84
missing	**9**				**9**
Total	**368**		**43**		**420**

Annex 26: Internal service rule

Sector	Our organization has Internal Service Rule (ISR)	
	No	Yes
Agriculture, Forestry and Fishing	0	9
Mining and Quarrying	0	2
Mechanical, Electrical and Electronics	5	67
Renewable Energy (Green Job)	2	7
Construction	23	79
Machine Operation and Maintenance	3	16
Transportation/Motor Vehicles	0	12

Sector	Our organization has Internal Service Rule (ISR)	
	No	Yes
Tourism and Hospitality	1	8
Fitness, Beauty and Wellness	0	4
Information, Communication, IT and Computing	2	8
Arts and Crafts (Includes Zorig skills)	24	57
Business and Services	13	74
Total	73	343

Annex 27: Provident fund for employees

Sector	Our organization has Internal Service Rule (ISR)	
	No	Yes
Agriculture, Forestry and Fishing	1	9
Mining and Quarrying	0	2
Mechanical, Electrical and Electronics	17	55
Renewable Energy (Green Job)	0	9
Construction	34	68
Machine Operation and Maintenance	3	16
Transportation/Motor Vehicles	0	12
Tourism and Hospitality	1	7
Fitness, Beauty and Wellness	0	4
Information, Communication, IT and Computing	1	9
Arts and Crafts (Includes Zorig skills)	49	32
Business and Services	27	60
Total	52	364

Annex 28: Leave and financial evidences

Sector	Provide pay slips/evidence of wages		We provide Maternity /Paternity leave	
	No	Yes	No	Yes
Agriculture, Forestry and Fishing	0	10	0	10
Mining and Quarrying	0	2	0	2
Mechanical, Electrical and Electronics	5	67	7	65
Renewable Energy (Green Job)	0	9	0	9
Construction	16	86	12	89
Machine Operation and Maintenance	0	19	1	18
Transportation/Motor Vehicles	1	11	0	12
Tourism and Hospitality	1	8	2	7
Fitness, Beauty and Wellness	0	4	0	4
Information, Communication, IT and Computing	1	9	1	9
Arts and Crafts (Includes Zorig skills)	31	50	23	58
Business and Services	8	79	11	76
Total	63	354	57	359

Annex 29: Allowances

Sector	We have Group Insurance Scheme (GIS) for our employees		We have housing allowance	
	No	Yes	No	Yes
Agriculture, Forestry and Fishing	3	7	5	5
Mining and Quarrying	1	1	2	0
Mechanical, Electrical and Electronics	35	36	46	26
Renewable Energy (Green Job)	1	8	4	5
Construction	61	41	66	36

Sector	We have Group Insurance Scheme (GIS) for our employees		We have housing allowance	
	No	Yes	No	Yes
Machine Operation and Maintenance	5	14	11	8
Transportation/Motor Vehicles	6	6	7	5
Tourism and Hospitality	4	4	6	3
Fitness, Beauty and Wellness	0	4	2	2
Information, Communication, IT and Computing	4	6	8	2
Arts and Crafts (Includes Zorig skills)	66	15	68	13
Business and Services	52	35	57	29
Total	238	177	282	134

Annex 30: Retention difficulty based on monthly income

Average Income	Difficulty in retaining TVET graduates		Total
	Yes	No	
0-3000	3	6	9
3001-6000	5	5	10
6001-9000	15	15	30
9001-11000	15	19	34
11001-14000	40	36	76
14001-17000	42	68	110
17001-21000	27	62	89
21001-24000	5	15	20
24001-27000	3	16	19
27001-30000	0	1	1
30001-33000	3	9	12
33001-36000	1	2	3
39001-42000	0	1	1

Average Income	Difficulty in retaining TVET graduates		Total
	Yes	No	
42001-45000	1	1	2
Total	**160**	**256**	**416**

Annex 31: Overtime income

Amount	Number of Employers	Percentage
Nu. 50 - Nu. 100	146	44.38
Nu. 101 - Nu. 150	88	26.75
Nu. 151 - Nu. 200	32	9.73
Nu. 201 - Nu. 300	23	6.99
Nu. 301 - Nu. 400	16	4.86
Nu. 401 - Nu. 500	13	3.95
More than Nu. 500	11	3.34
Total	329	100

Annex 32: Recommendation by employers

Recommendation	Number of Employers	%
Not at all recommend	9	2.14
Not recommend	12	2.86
Somewhat recommend	218	51.9
Highly recommend	167	39.76
missing	14	3.33
Total	420	100

Annex 33: Suggestions to TTIs and IZCs

Suggestion to Improve TTIs	n	%
Cope up with Emerging Technology	20	6.04%
Upgrade tools & equipment's	14	4.23%
More Practical training	60	18.13%
Increase OJT duration	22	6.65%

Suggestion to Improve TTIs	n	%
Need focus on soft skills	38	11.48%
Qualification upgradation	6	1.81%
Empirical curriculum	23	6.95%
no suggestions	148	44.71%

Annex 34: Suggestions to improve workplace

Suggestions to improve workplace	n	%
Latest tools & equipment	23	7.21%
Wages & renumeration	27	8.46%
Agreement b/w org and graduates	7	2.19%
Monitoring Team Performance	6	1.88%
Interpersonal skills	22	6.90%
Career growth opportunity	18	5.64%
Flexibility	7	2.19%
no suggestion	209	65.52%

Annex: 35 Skill that the employers want TTIs, IZC, CZC to provide training

Skills that employers want TTIs, IZC and CZC to provide training					
S N	Skill	Frequency	S N	Skill	Frequency
1	Electrical	91	**102**	Engraving	1
2	Soft Skills (Communication Skills, Work Attitude and Workmanship)	75	**103**	EV And Hybrid Technology	1
3	Masonry	60	**104**	Excavator Repairs and Maintenance	1
4	Tailoring	57	**105**	Farm Machinery Repair and Maintenance	1
5	Plumbing	55	**106**	Fashion Design	1
6	Welding	55	**107**	Field Survey	1

Skills that employers want TTIs, IZC and CZC to provide training					
S N	Skill	**Frequency**	**S N**	**Skill**	**Frequency**
7	Mechanical	53	**108**	Food And Beverages	1
8	Painting	49	**109**	Food Packaging	1
9	Carpentry	37	**110**	Formwork	1
10	ICT	29	**111**	Gearbox	1
11	Auto-Electrical	26	**112**	Gold Electroplating	1
12	Rod Bending	23	**113**	Gold Leaf Applying	1
13	Tailoring Western Garment	23	**114**	Gold Smith	1
14	Tile Laying	23	**115**	Graphic Designing	1
15	Auto-Mechanical	17	**116**	Grass Fiber	1
16	Design And Drawing	14	**117**	Grinding	1
17	Machine Operation	14	**118**	Hardware Maintenance	1
18	Auto-Painting	12	**119**	Health Equipment Repair and Maintenance	1
19	Sculpture	11	**120**	Heavy Vehicle Operation	1
20	Fabrication	10	**121**	HEMO	1
21	Wood Carving	10	**122**	Hospitality	1
22	Panel Beating	9	**123**	House Painting	1
23	Rod Bending	9	**124**	Human Modelling	1
24	Civil Engineering	8	**125**	HVD	1
25	Furniture Making	8	**126**	Hydro Power Training	1
26	Designing	7	**127**	Hydraulic Mechanics	1
27	Electronics	7	**128**	Industrial Electrical	1

Skills that employers want TTIs, IZC and CZC to provide training					
S N	Skill	**Frequency**	**S N**	**Skill**	**Frequency**
28	Construction Carpentry	6	**129**	Industrial Lighting	1
29	Embroidery	6	**130**	Inspection Of Lines and Substations	1
30	False Ceiling	6	**131**	Installation Of Breakers	1
31	Home Appliance Maintenance	6	**132**	Instrumentation (Plc)	1
32	Concrete Carving	5	**133**	Irrigation	1
33	Customer Service	5	**134**	Japanese Design	1
34	Lathe Machine Operation	5	**135**	Lacquering	1
35	Networking	5	**136**	Lamination Operation	1
36	Upholstery	5	**137**	Land Survey	1
37	Cement Carving	4	**138**	Laser Welding	1
38	Interior Design	4	**139**	Loom Operation	1
39	Traditional Arts	4	**140**	Luminary Design Expert	1
40	Ac Maintenance and Motor Winding	3	**141**	LVS	1
41	Bar Bending	3	**142**	Machine Fitting	1
42	Chef	3	**143**	Machine Maintenance	1
43	Construction	3	**144**	Machine Repair and Maintenance	1
44	Contemporary Art	3	**145**	Maintenance Of Distribution Ss Lines	1
45	Dralham Making	3	**146**	Marketing	1
46	Electric Vehicle Mechanics	3	**147**	Mask Dancing	1
47	Engineering	3	**148**	Mask Making	1

Skills that employers want TTIs, IZC and CZC to provide training					
S N	Skill	**Frequency**	**S N**	**Skill**	**Frequency**
48	Entrepreneurship	3	**149**	Mechatronics	1
49	Machine Embroidery	3	**150**	Mini Tiller Operation	1
50	Machine Polishing	3	**151**	Motor Connection Circuit	1
51	Motor Winding	3	**152**	Motor Control and Power Circuits	1
52	Plastering	3	**153**	NLP	1
53	Spa And Beautician	3	**154**	Nursery Plantation	1
54	Transformer Maintenance	3	**155**	Office Management	1
55	Accounting	2	**156**	Operating Of HVAC System	1
56	Auto Cad	2	**157**	Operation & Maintenance of Hv Substations & Lines	1
57	Automotive	2	**158**	Operation And Maintenance of Transformer, Acb and Vcb	1
58	Data Analyst	2	**159**	Operation Of Switch-Gears	1
59	Drawing And Estimations	2	**160**	Panel And Motors	1
60	Engine Overhauling	2	**161**	Pastry	1
61	Generator Maintenance	2	**162**	Paver Operation	1
62	House Wiring	2	**163**	Penal Beater	1
63	HVAC	2	**164**	Plant Operator's	1
64	Inventory	2	**165**	Plastic Processing	1
65	Joinery	2	**166**	Post Press Technician	1

Skills that employers want TTIs, IZC and CZC to provide training					
S N	Skill	**Frequency**	**S N**	**Skill**	**Frequency**
66	Lift Maintenance	2	**167**	Power Line Maintenance.	1
67	Mechanical	2	**168**	Printer And Copy Machine	1
68	Maintenance Of Generators, Transformers and Motors	2	**169**	Printing Press	1
69	Mobile Repairing	2	**170**	Project Cost Estimator	1
70	Modern Art	2	**171**	Project Management	1
71	Operation & Maintenance of Transformer	2	**172**	RCC Works	1
72	Power System Control & Protection	2	**173**	Rebar Fitting	1
73	Surveying And Mining	2	**174**	Reinforcement Bar	1
74	Tractor Operation	2	**175**	Relays	1
75	Wood Working	2	**176**	Repair & Maintenance of Farm Machinery	1
76	Ac/Dc Drive	1	**177**	Repair And Maintenance of EME	1
77	Auto Vehicle Driving	1	**178**	Sale Man/Girl	1
78	Bamboo Works	1	**179**	Scada And Automation	1
79	Food And Beverages	1	**180**	Security	1
80	Basic On Hydropower	1	**181**	Servicing	1
81	Basic Training on Erp, Sap	1	**182**	Sewing Machine Maintenance	1
82	Book Binding	1	**183**	Sheet Metal Cladding	1

Skills that employers want TTIs, IZC and CZC to provide training					
S N	Skill	**Frequency**	**S N**	**Skill**	**Frequency**
83	Book Keeping	1	**184**	Shutter Fabrication	1
84	Bridge Construction	1	**185**	Shuttering Carpentry	1
85	Casting	1	**186**	Silver Smith	1
86	Color Mixing	1	**187**	Silver Electroplating	1
87	Color Sheet Fitting	1	**188**	Sound And Networking System	1
88	Combine Harvesting Training	1	**189**	Souviner Making	1
89	Construction Supervisor	1	**190**	Steel Works	1
90	Construction Of CRM Wall	1	**191**	Three Phase Ac/Dc Motors	1
91	Control Panel Operator	1	**192**	Traditional Alter Making	1
92	Crafting	1	**193**	Tunneling	1
93	Crane Operation	1	**194**	Underground Power Distribution Network	1
94	Designing Arts on CNC	1	**195**	Use Of Equipment Like Laser, Levelling Equipment's, Other Measurement Systems	1
95	Distribution Lineman	1	**196**	Using 3D/4D Machine	1
96	Drilling	1	**197**	Vehicle Glass Tint and Number Plate Making	1
97	Driving	1	**198**	Water Treatment Plant	1

Skills that employers want TTIs, IZC and CZC to provide training					
S N	Skill	Frequency	S N	Skill	Frequency
98	Dth Machine Operation and Maintenance	1	**199**	Western Furniture Making	1
99	Earth Mover Operation	1	**200**	Winder man	1
100	Electrical Drawing	1	**201**	Wood Craft	1
101	Electrical Meter and Relay Reading	1	**202**	Wood Turning	1
Grand Total					**1067**

Annex 36: Skill market will demand over next few years

Skill market will demand over next few years					
S N	Skill	Freq	S N	Skill	Freq
1	Electrician	81	**95**	Concreting (Rebars, Shuttering and Concreting)	1
2	Masonry	73	**96**	Copper Bracing	1
3	Mechanic	55	**97**	Copper Electroplating	1
4	Welding	55	**98**	Designing Arts on CNC	1
5	IT	49	**99**	Digital Artist	1
6	Plumbing	44	**100**	Digital Marketing	1
7	Painting	42	**101**	Digital Painting	1
8	Carpentry	41	**102**	Distribution Lineman Training	1
9	Soft Skills	32	**103**	Draftsman	1
10	Auto Denting/Welders & Auto Painters	30	**104**	Dth Machine Ecm Icm	1
11	Tailoring (Western Garments)	29	**105**	Electrical Audit	1
12	Tailoring (Traditional)	26	**106**	Electrical Fitting	1
13	Auto Electrician	22	**107**	Electroplating	1
14	Tile Laying	22	**108**	Elevator Operator	1
15	Auto Mechanic	14	**109**	Emotional Intelligence	1
16	Wood Carving	13	**110**	Engineer	1

Skill market will demand over next few years					
S N	Skill	Freq	S N	Skill	Freq
17	Tailoring	12	**111**	Engineering Drawings	1
18	Machine Operator	11	**112**	Excavator, Boomer Operator, Tower Crane Operators	1
19	Designing	10	**113**	Extruder Machine Operation Skills	1
20	Fabrication	10	**114**	Farming	1
21	Rode Bending	10	**115**	Fiber Technician	1
22	Embroidery	9	**116**	Gold Electroplating	1
23	Furniture Making	9	**117**	Graphic Designing	1
24	Panel Beater	9	**118**	Grass Fiber	1
25	Automation	8	**119**	Grinding	1
26	Construction	8	**120**	Hardware Technician	1
27	EV Mechanics	8	**121**	Heavy Vehicle Body and Cabin Development	1
28	Sculpture	8	**122**	Heavy Vehicle Driving	1
29	Drawing	7	**123**	Herbal Medicine	1
30	Electronic Repairing Skills (Mobile, Tvs Etc)	7	**124**	High Design Flooring Skills	1
31	False Ceiling	7	**125**	High Pressure Welders	1
32	Communication	6	**126**	Hmpt Operation	1
33	Contemporary Art	6	**127**	Hospitality	1
34	Lhadri	6	**128**	Hrv Technician	1
35	Upholstery	6	**129**	Irrigation Survey	1
36	Artificial Intelligence	5	**130**	Japanese Design	1
37	Construction Carpentry	5	**131**	Lamination Operators	1
38	Entrepreneurship	5	**132**	Laser Measurement	1
39	Heavy Vehicle Mechanic	5	**133**	Linemen	1
40	Repair & Maintenance 0f HVAC, Vrf, Ac, Welkin Cooler, Ups Lifts & Dg	5	**134**	Loom Operator	1

Skill market will demand over next few years					
S N	Skill	Freq	S N	Skill	Freq
41	Supervisors	5	**135**	Maintenance Of Sewing Machines.	1
42	3D Printing	4	**136**	Management	1
43	Fitter	4	**137**	Marble Fitting	1
44	Interior Designing	4	**138**	Marking Knowledge	1
45	Water Treatment	4	**139**	Mask Carving	1
46	Cyber Security	3	**140**	Mechanization	1
47	Earthmoving Machine Operation	3	**141**	Mini Hydro Networking	1
48	Electric Vehicle Mechanic	3	**142**	Mining	1
49	Fashion Designer	3	**143**	Modern Art Using Glass Fiber	1
50	Lathe Machine Operator	3	**144**	Modern Clothes Designer	1
51	Music	3	**145**	Motor Rewinder	1
52	Plastering	3	**146**	Multi Media	1
53	Shuttering	3	**147**	Natural Pigments Extraction	1
54	Traditional Arts	3	**148**	Online Freelancing	1
55	App Development	2	**149**	Operation & Maintenance of Transformer, Acb and Vcb	1
56	Auto Technician	2	**150**	Operation Of Switch-Gears	1
57	Beautician	2	**151**	Packaging Design and Development	1
58	Cement Carving	2	**152**	Pastry	1
59	Cobbler	2	**153**	Paver Operation	1
60	Crafting	2	**154**	Plastic Processing Skills	1
61	Data Analysis	2	**155**	Plc Coding with Electrician	1

Skill market will demand over next few years					
S N	Skill	Freq	S N	Skill	Freq
62	Driving	2	156	Post-Harvest Production	1
63	Electrical Engineering	2	157	Power System Control & Protection	1
64	Electrical Switchgear and Protection.	2	158	Power System Operation and Control	1
65	Front Desk	2	159	Power Tiller Training	1
66	Gold And Silver Smith	2	160	Printing Machine Operation	1
67	Human Modeling	2	161	Problem Solving on Ac/Dc Machines	1
68	Machine Embroidery	2	162	R&M Of Machine	1
69	Marketing	2	163	RCC And Shuttering Works	1
70	Mechanical Engineer	2	164	RCC Structural Work	1
71	Mechatronics	2	165	Realistic Sculpture	1
72	Renewal Energy	2	166	Rebar Fitter	1
73	Souviner Design and Development	2	167	Remote Communication and Collaboration	1
74	Spa & Massage Therapy	2	168	Road Engineer	1
75	Technician	2	169	Rural Water Supply Scheme	1
76	Traditional Boot Making	2	170	Satellite Skills	1
77	Transformer Maintenance	2	171	Scada Skills	1
78	3D Wood Carving	1	172	Sewage Management	1
79	Aluminum Worker	1	173	Sheet Metal Work	1
80	Animation	1	174	Shutter Fabrication	1
81	Auto Polish	1	175	Skilled Construction Services	1

Skill market will demand over next few years					
S N	Skill	Freq	S N	Skill	Freq
82	Auto Printing	1	**176**	Slate Carving	1
83	Barber	1	**177**	SlCM & Crane Operator	1
84	Bhutanese Costume Design	1	**178**	Solar Power Panel O & M	1
85	Book Binding	1	**179**	Specialist Technicians	1
86	Boomer Operation	1	**180**	Ss Railing Fittings	1
87	Boot Making (Western)	1	**181**	Surveyor	1
88	Borewell And Water Pump Installation Skill	1	**182**	Tower Crane Operator	1
89	Brush Cutter	1	**183**	Tractor Mechanic	1
90	Business Management	1	**184**	Tunnelling Technician	1
91	Casting	1	**185**	Upvc Window Fittings	1
92	Cifa Operator	1	**186**	Vehicle Glass Tint	1
93	Computer Hardware and Networking	1	**187**	Western Fashion Design	1
94	Computerized Machine Fabric Cutting	1		Grand Total	921

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