

Key issues in inclusive TVET reform in Bhutan

OCCASIONAL PAPER 3

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November 2023**

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ACRONYMS

4IR	Fourth Industrial Revolution
BEST	Bhutan Education and Skills Training
DTE	Department of Technical Education
FGD	Focus group discussion
GAC	Global Affairs Canada
GNH	Gross National Happiness
GPI	Gender Parity Index
IDI	International Development Institute
IZC	Institutes of Zorig Chusum
MEAL	Monitoring, evaluation, accountability and learning
MoESD	Ministry of Education and Skills Development
MoLHR	Ministry of Labour & Human Resources
OJT	On-the-job training
PRA	Participatory rapid appraisal
PWD	People with disabilities
RGoB	Royal Government of Bhutan
TBE	Theory based evaluation
TOT	Training of trainers
TTI	Technical Training Institute
TVET	Technical and vocational education and training

1. INTRODUCTION

Technical and vocational education and training (TVET) prepares learners to be work-ready and to contribute to innovation in the economy. In Bhutan, TVET is also viewed as an avenue to address an increasing problem with youth unemployment that was exacerbated by the COVID-19 pandemic. In order to do so, however, TVET programming needs to provide trainees with relevant knowledge and skills needed in today's 21st century economy. Recognizing this need, Bhutan's King issued a Royal Kasho, or edict, in 2020 outlining the need for education reform that builds creative thinkers who are problem solvers, and to draw on new technology to drive this reform. The Monarch's concern for technology-driven education reform is particularly relevant. TVET faces the need to respond to the emergence of Industry 4.0, also known as the Fourth Industrial Revolution (4IR). Industry 4.0 is driven by disruptive changes in technology and technology-human interactions. Increases in connectivity, analytics, advanced robotics, machine learning and artificial intelligence all reshape the nature of interactions in society and with the economy. The skills now demanded by industry and manufacturing are very different than they were just several years ago.

Bhutan's current labour force is not well prepared for the changes brought on by Industry 4.0. Approximately half of the labour force is employed in agriculture that, as the least productive sector of the economy, generates less than 20% of GDP (National Statistics Bureau, 2022). A large proportion of the labour force has little or no education. At the same time, the economy struggles to absorb those with tertiary education (Ministry of Education & Skills Development, 2023). Workers across the economy regardless of education report having poor digital competencies and youth unemployment skyrocketed in 2021, increasing from 11.9% to 22.6% (Ministry of Education & Skills Development, 2023). In this context, Bhutan has embarked on a process of TVET reform. The reform process is intended to provide Bhutanese youth with the skills needed in Industry 4.0 to not only address youth unemployment but to foster a more innovative and competitive economy. Moreover, TVET reform will occur within the country's indigenized national development model, known as Gross National Happiness (GNH). GNH conceptualizes development as a process that moves beyond a sole focus on economic growth and incorporates interrelated economic, social, governance, cultural and environmental dimensions. The reform of the TVET system in Bhutan therefore represents a key initiative to respond to the needs of its changing economy - and to do so within a holistic understanding of development.

This study explores the current character of the TVET system in Bhutan to identify key issues that will require attention in the reform process. It pays particular attention to issues of inclusion of vulnerable populations, including women and people with disabilities (PWD). Through a mixed methods approach, the study identifies and analyzes issues specific to a range of TVET stakeholders including TVET trainees and graduates, TVET trainers, policymakers, senior TVET officials, TVET administrative staff, industry partners and the general public. The data used in the study were collected as part of the Bhutan Education and Skills Training (BEST) project. BEST partners the International Development Institute (IDI) at Humber College in Toronto, Canada,

with the Ministry of Education & Skills Development (MoESD) in Bhutan. The five-year project (2022-2027), funded by Global Affairs Canada (GAC), will contribute to comprehensive reform of the TVET sector by aligning with Bhutan's 2021 National TVET Reform Plan 2.0. The project will deliver interventions at the national level to create sustainable management processes for systemic reform, institutional level to implement gender and environmentally sensitive pedagogical practices and curriculum, industry level to create strong TVET-industry linkages, and community level to influence public mindsets about TVET.

The study is structured in the following manner. Section 2 provides a contextual overview of the TVET system in Bhutan and the nature of the reform process. Section 3 outlines the methods used in the study to explore the current character of the TVET system. An overview and analysis of the findings makes up section 4. It explores current issues related to community perceptions of TVET, institutional capacity within TVET institutions and related government agencies, industry partners' relationships with the system, and TVET trainees' and graduates' assessments of their training and post-graduation employment opportunities. Section 5 outlines key issues that emerge from across the experience of these stakeholders that will need attention in the TVET reform process.

2. TVET AND REFORM IN BHUTAN

Technical and Vocational Education and Training decreases unemployment and drives economic growth by providing youth with the knowledge and skills needed for technical jobs (Azzoim & Arb, 2013; Brunello & Giannini, 2004; Min & Tsang, 1990; Paryono, 2017). As a development strategy, it has been used to provide an educational pathway to meaningful employment for those who are marginalized or vulnerable (Wheelahan & Moodie, 2016). Nonetheless, TVET systems globally, and in the Global South in particular, face multiple challenges to their effectiveness. Studies from multiple country and regional contexts illustrate that TVET training content often lags the rapid technological advances in industry, creating a disconnection between existing and needed skills (Koo, 2016; Sedighi, 2015; Wheelahan & Moodie, 2016). Moreover, pedagogical techniques are often ineffective with top-down and textbook-heavy teaching (Adhikari, 2018; Bhurtel, 2016;). These curricular and pedagogical challenges reside within TVET institutions that often lack effective management, administration and policies (Adhikari, 2018; Botea et al., 2015; Bhurtel, 2016; Nagamuthu et al., 2019). Engaging underrepresented, marginalized or vulnerable populations in TVET systems also faces challenges. While TVET offers a potential vehicle to promote gender equality by increasing access to technical training and employment for women, a traditionally underrepresented group in TVET programs, TVET systems themselves tend to be sites that reproduce patriarchal dynamics and norms rather than transform them (Bray-Collins, Andrade & Wanjiru, 2022). People with disabilities similarly face challenges within TVET systems. While relatively little research exists on people with disabilities and TVET, growing evidence suggests that negative cultural attitudes towards disability, poor physical access to TVET facilities, inflexible training, teachers untrained in working with PWD, and poor policy support all act as barriers to the effective inclusion of PWD (Adhikari, 2018; Ebuenyi et al., 2020; Makanya et al., 2014). The

promise of TVET therefore appears to rest within a significant set of challenges related to economic appropriateness, relevant curriculum and pedagogy, effective governance, and meaningful inclusion.

Bhutan’s TVET systems has its origins in the creation of Don Bosco Technical School in 1965. The school evolved into the Royal Technical Institute and was followed by the establishment of Royal Bhutan Polytechnic in 1974. The National Technical Training Authority was subsequently created in 1999 to better regulate TVET. The governance of TVET was later moved to the Ministry of Labour & Human Resources (MoLHR) in 2003. Two new departments were created under MoLHR, the Department of Human Resources and Department of Occupational Standards, to oversee the delivery and regulation of TVET. Six new public Technical Training Institutes (TTIs) were also established. In 2017, the Department of Technical Education (DTE) was created within MoLHR to take over the administration of the public TVET system, including the six new Technical Training Institutes (TTIs) and two Institutes of Zorig Chusum (IZC). By 2022/2023, a process of reform in the public sector resulted in DTE being absorbed into the Ministry of Education and Skills Development (MoESD).

The six Technical Training Institutes currently offer technical training in areas such as automotive repair, masonry, plumbing and welding. The two institutes of Zorig Chusum, including the National Institution of Zorig Chusum in Thimphu, the capital, and the College of Zorig Chusum in eastern Bhutan, offer education in the 13 traditional arts and crafts of Bhutan. Together, the eight TTIs and IZCs make up the formal public TVET system. There are also 120 private TVET training providers and public sector providers outside of the formal public system. This study focuses only on the formal public system.

Table 1: Public TVET institutions by type and location

TVET Institution	Sector of Courses Offered	District
<i>Technical Training Institutes (TTIs)</i>		
Technical Training Institute Chumey	Construction	Bumthang
Technical Training Institute Khuruthang	Mechanical & electrical	Punakha
Technical Training Institute Rangjung	Electrical, furniture & automobile	Trashigang
Technical Training Institute Samthang	Automobile	Wangdue Phodrang
Technical Training Institute Thimphu	Automobile	Thimphu
Jigme Wangchuk Power Training Institute	Construction & hydropower	Sarpang
<i>Institutes of Zorig Chusum (IZC)</i>		
National Institute of Zorig Chusum	Traditional arts & crafts	Thimphu
College of Zorig Chusum	Traditional arts & crafts	Trashiyangtse

In 2022 there were 1,371 trainees enrolled in public TVET institutions. A distinct gender gap exists in the system as female trainees make up only 29% of TVET students and only 31% of TVET trainers are women (Policy and Planning Division, 2022).

Bhutan places high priority on TVET. Bhutan’s 2008 constitution entrenches vocational training as a principle of state policy. According to Article 9 (12): “The State shall endeavour to ensure the right to work, vocational guidance and training and just and favourable conditions of work.” Despite this importance, the current state of TVET is characterized by a disconnection between the skills learned by TVET trainees and the demands of the current Bhutanese economy. The result is a poor capacity of the TVET system to address youth unemployment (Wangchuk, 2021). Young women are disproportionately affected by unemployment as they make up 61.3% of unemployed youth. Reforming the TVET system so it provides Bhutanese youth, and young women in particular, with an education pathway to relevant skills for the 21st century economy is therefore a critical need. In order to do so, the TVET reform process, which was initiated under the former MoLHR and is now being implemented by MoESD, focuses on reforming the “Four Ps” – Place, Product, People and Process – encompassing a comprehensive approach to reform.¹ The comprehensive approach holds the potential to address the challenges found in the broader TVET literature: reforming ‘place’ will address the need for updated equipment and improved physical access; ‘product’ will revise and update curriculum to meet current industry needs; ‘people’ will build pedagogical and management capacity of TVET stakeholders; and ‘process’ will modernize policies, procedures and systems.

The TVET reform process in Bhutan takes place within the country’s distinct Gross National Happiness development model. GNH’s focus on interrelated social, cultural, economic, ecological and governance dimensions creates the enabling conditions for people’s happiness as the end goal of development. Happiness in GNH is not understood in the western sense of immediate pleasure, but as a harmonious balance between material wellbeing and the ecological, cultural and spiritual aspects of an individual and society. GNH therefore constructs development as a vehicle to foster the multiple dimensions of being human. GNH is indigenized through its foundation in Bhutanese cultural values. At the same time, it has gained increasing international attention as an alternative development model. Moreover, it appears to have generated significant development gains within Bhutan through its use in the policy process (Schroeder, 2018).

The original conception of GNH incorporated four pillars: equitable socio-economic development, environmental sustainability, cultural preservation and promotion, and good governance. Promoting these pillars is the pathway to creating the enabling conditions for happiness. More recently, it has been expanded into nine domains.

1. For a detailed description of the 4P strategy, see Wangchuk, N. (2021). Preparing the Technical and Vocational Workforce. Druk Journal 7(2), 118-123.

Figure 1: The nine domains of Gross National Happiness



TVET reform will take place within this development context; a context that promotes the interconnected role of education in the country’s larger development process. TVET is therefore not just about education that contributes to employment and economic growth, but has connections to social, ecological and cultural concerns. Given this GNH context, of particular concern to the BEST project and the reform process will be making the TVET system more inclusive of vulnerable groups like young women and people with disabilities. Reform will also promote a TVET system that is environmentally friendly, both in terms of the ecological footprint of the system itself and in promoting green jobs. Promoting Bhutanese cultural resilience through TVET, particularly through the Institutes of Zorig Chusum, is another focus of reform.

The remainder of this study explores the character of the current TVET system to identify and analyze key issues that will be important to address for the success of the reform process.

3. METHODS

The study used a mixed methods approach to data collection and analysis. In addition to the review of secondary sources, quantitative data were collected through three surveys and complemented by a qualitative exploration through multiple focus group discussions (FGDs). Incorporating qualitative methods as a complement to quantitative methods provides a deeper exploration of the ‘how’ and ‘why’ while also foregrounding stakeholders’ voices. The result is greater relevance and accountability in the collection and analysis of data. Mixed methods were also chosen as they lessen the potential methods-induced bias that is characteristic of quantitative and qualitative methods when used alone. Mixed methods therefore enable more comprehensive, complementary, accountable and valid findings (Greene, 2005).

The following provides details on the specific data collection tools used in the study.

3.1 Community Survey

An in-person survey of community members was undertaken to identify current levels of support for TVET education and its role in increasing gender equality and providing an employment pathway for PWD. The survey occurred during the monsoon season, which makes travel to some areas of Bhutan difficult or dangerous. Accordingly, the survey used a non-probability purposive sample to identify communities that were accessible. There are 20 dzongkhags (districts) in Bhutan. Out of these, 10 accessible dzongkhags were identified for data collection. These 10 were selected to represent roughly equal geographic representation across the west, centre, east, south and north of the country. In addition, they were selected to represent a mix of urban and rural areas.

Within each selected dzongkhag, face-to-face questionnaires were administered by enumerators using a convenience sample. Enumerators attended public areas in the communities and approached people based on their availability. In Thimphu, the capital city with significantly more population than elsewhere in the country, a variety of public places were attended to broaden the representation of community members. This included the main market, business areas, the centre of town and residential areas. Enumerators used phones or tablets to administer the survey through Kinaki, an online research and evaluation software. The survey did not ask for people’s names or other personal identifiers.

In order to broaden the reach of the survey beyond the 10 dzongkhags, it was decided to add an online survey to supplement the face-to-face survey. The online survey link was sent to online Bhutanese influencers who subsequently publicized it to their online followers. This resulted in a wider geographic reach beyond the original 10 dzongkhags, with respondents representing 19 of the 20 dzongkhags. Overall, a total of 414 respondents completed the community survey.

This hybrid method of face-to-face and online surveys using non-probability sampling requires some caution in the interpretation of results as it is not representative of the population overall. Nonetheless, the sample provides useful data given the total number of 414 respondents out of a

total population of 771,600 people.² Moreover, these respondents represent a diverse geographic mix and variation across rural and urban communities.

3.2 Key Stakeholders Survey

The Key Stakeholders Survey collected data from relevant government officials, senior TVET administrators, TVET staff involved in trainee recruitment, TVET staff involved in advising and counselling, and industry partners. Data were collected from the entire population of these stakeholders using a single survey. This allowed for a common set of questions related to context and process that provided a larger number of responses to strengthen overall conclusions and enable comparative data across stakeholder type. The survey also contained a specific set of questions for each stakeholder type related to their individual position type.

The survey was developed on Kinaki and the link to the online survey was sent out to key stakeholders by email. MoLHR records were used to identify participants’ email addresses. In order to promote as high a response rate as possible, the email was sent from an email account of a MoLHR official.³ Survey responses were automatically uploaded to Kinaki. Respondents remained anonymous as the survey did not include personal identification questions related to names or specific TVET institutional affiliations or, in the case of industry partners, the names of their businesses.

An overall response rate of 48% was initially achieved after the expiration of the survey period. All of the respondents representing government officials and senior TVET administrators completed the survey in this period, leaving very low response rates for TVET staff, likely due to the timing of the survey between academic years, and industry partners. Three reminder emails with extensions to the survey period were subsequently sent out by MoLHR officials. No significant change in the response rate occurred after these reminders. It was therefore decided to directly contact respondents from the stakeholder categories of recruitment staff, advising/counselling staff and industry partners to administer the survey over the phone. As the online survey responses already received were anonymous, it was required to telephone all respondents within these categories, including those who had already completed the survey. Only those contacted who had not previously completed the survey did so on the phone. As a result of this pivot in approach, a response rate of 87.7% was achieved.

2. Note that a random sample of Bhutan’s overall population of 771,600 would require an ideal sample size of 384 people with a 95% confidence level and 5% margin of error.

3. MoLHR was the lead ministry of TVET reform when this study was undertaken. This has since shifted to MoESD with the dissolution of MoLHR.

3.3 Focus Group Discussions

Focus Group Discussions were facilitated to generate qualitative data to more deeply explore the current state of the TVET system and its broader context. Table 3 presents the categories of FGD participants and the number of participants disaggregated by gender. For each category of FGD participants, quota sampling was used to ensure roughly equal number of males and females (with the exception of FGDs that included only females) and, where relevant, type of TVET institution. Given the face-to-face nature of the FGDs and the timing of the research mission during the period in between academic years (as well as the monsoon), the geographic reach was limited to the region around the capital city. MoLHR officials contacted potential FGD participants based on their records and guided by the quota sample. No financial or other incentive was given to participants. Verbal consent was acquired from participants and confidentiality was promoted by not recording names or institutional affiliations. The FGDs occurred in English with a Dzongkha speaker always present. Only in a few cases was there a need to translate into Dzongkha. Notes were taken during each FGD on a password protected computer by someone on the research team.

Table 3: Focus Group Discussion participants

Focus Group Discussion (FGD) participants	Number of participants
Government officials8	(4 females/4 males)
TVET trainees19	(11 females/8 males)
TVET trainees – Females only FGD	8 (8 females)
Graduates of a Technical Training Institute (TTI)	16 (5 females/11 males)
Graduates of an Institute of Zorig Chusum (IZC)	20 (6 females/14 males)
TVET Trainers	20 (4 females/16 males)
Vulnerable women	7 (7 females)
People with disabilities (PWD)	10 (5 females/5 males; 4 PWD/6 NGO staff)
Industry representatives	14 (10 females/4 males)
Total FGD Participants:	122 (60 females/62 males)

Several steps were used to validate FGD data and to promote accountability. First, facilitators regularly repeated and summarized participants’ comments during the discussions and requested confirmation from the participants that the summations were accurate. Second, overall themes emerging from each FGD were summed up at the end of each discussion by the facilitator and participants again asked to confirm that these themes were accurate. Third, FGD participants were given the opportunity to ask facilitators questions about the FGD process, content, use

of data, or the project itself. Fourth, the facilitator and notetaker met after an individual FGD to discuss their understanding and confirm agreement on the main themes that participants had confirmed. Lastly, the use of a hybrid approach that combined standard focus group facilitation with participatory rapid appraisal (PRA) techniques further helped promote the collection of valid information and promote accountability. The PRA techniques placed control in the hands of the participants and foregrounded their voices. Bhutan is a hierarchical society and several of the FGDs involved younger trainees. It is also a society that is very respectful towards outsiders. As some of the FGDs were facilitated by older staff from Canada, there was a risk that respondents might feel it necessary to answer in ways they felt most respectful to the facilitators. The PRA techniques addressed this by enabling interactions to occur among participants themselves and through anonymous written exercises, which were then confirmed through the validation strategies discussed above.

3.4 TVET Graduates Tracer Study

Data on graduates were collected from the Tracer Study Report for 2020 Graduates which was published in 2021. The Tracer Study is undertaken annually. It was decided to use graduate data from the 2021 tracer study to avoid administering another survey just prior to the next round of the tracer study. In order to account for the potential impact of COVID-19, an earlier tracer study from 2016, TVET Graduates 2015-2016, was also reviewed and compared to the results of the 2021 study. While this provided some interesting data, much of it was not comparable to the 2021 study.

3.5 Analysis

Data from the surveys were automatically imported into Kinaki where they were cleaned and analyzed using a series of calculations. Notes from the FGDs and the lead researcher’s field notes were uploaded to QDA Miner Lite where they were coded into themes through an iterative process. Triangulation across methods and within methods was used to assess the validity of the collected data.

4. RESULTS & ANALYSIS

4.1 Community Perspectives on TVET

4.1.1 Profile of community respondents

The 414 respondents to the Community consist of 47.34% females (196/414), 41.06% males (170/414) and 10.14% (42/414) who preferred not to state their sex (PNS). The most common age reported by respondents was between 19-29 years of age (46.14%) with no respondents reporting an age of 65 or more years of age. This is a shortcoming of the convenience sample as it misses out on a perspective from this group. It may be that a proportion of the 4.11% that preferred not to report their age were from this age category.

Table 4: Age of community survey respondents

Age	Number of respondents	Percent of respondents, incl. by sex
18 and under	10	2.42% Female: 2.55% Male: 1.76% Prefer not to say: 4.76%
19-29 years	191	46.14% Female: 52.04% Male: 37.06% Prefer not to say: 61.9%
30-49 years	168	40.58% Female: 38.27% Male: 51.76% Prefer not to say: 11.9%
50-64 years	21	5.07% Female: 4.08% Male: 7.65% Prefer not to say: 0%
65 years and over	0	0.00%
Preferred not to report age	17	4.11% Female: 2.55% Male: 1.18% Prefer not to say: 21.43%
Total	414	100.00%

The majority of respondents are married (58.18%) followed by respondents who are single (31.88%). A small proportion of the respondents are divorced (2.65%) or widowed (0.72%). Just over four percent of respondents (4.35%) preferred not to report their marital status. Respondents who reported some kind of disability made up 5.17% of respondents with 88.89% not reporting a disability. The remaining respondents preferred not to report whether or not they have a disability.⁴

Over half of respondents, 55.31%, currently live in a rural area with 43.72% living in an urban area. Overall, respondents live in 19 of Bhutan’s 20 dzongkhags. Only Haa dzongkhag in the west of the country had no respondents. The largest proportion came from Sarpang dzongkhag (12.32%) in the south, with the fewest respondents from Dagana in the south and Lhuentse in the east (0.97% each).

4. The 5.17% of respondents reporting a disability is based on responses to the Washington Group of Questions, an internationally recognized method for collecting information on disability. The Community Survey also used a binary “yes/no” question on disability that yielded a disability rate of 4.35%.

Table 5: Community survey respondents by Dzongkhag

Dzongkhag	Percent of all respondents (n)	Percent of Females (n)	Percent of Males (n)	Percent of those who preferred not to provide sex (n)
Bumthang	4.35% (18/414)	3.57% (7/196)	4.71% (8/170)	7.14% (3/42)
Chhukha	6.52% (27/414)	6.63% (13/196)	7.06% (12/170)	4.76% (2/42)
Dagana	0.97% (4/414)	1.02% (2/196)	1.18% (2/170)	0% (0/42)
Gasa	4.35% (18/414)	5.61% (11/196)	3.53% (6/170)	0% (0/42)
Haa	0% (0/414)	0% (0/196)	0% (0/170)	0% (0/42)
Lhuentse	0.97% (4/414)	0% (0/196)	2.35% (4/170)	0% (0/42)
Monggar	3.14% (13/414)	3.57% (7/196)	1.76% (3/170)	7.14% (3/42)
Paro	2.9% (12/414)	3.06% (6/196)	3.53% (6/170)	0% (0/42)
Pemagatshel	4.83% (20/414)	3.06% (6/196)	7.65% (13/170)	2.38% (1/42)
Punakha	3.14% (13/414)	2.55% (5/196)	4.12% (7/170)	2.38% (1/42)
Samdrup Jongkhar	9.42% (39/414)	8.67% (17/196)	11.18% (19/170)	7.14% (3/42)
Samtse	2.17% (9/414)	2.55% (5/196)	1.76% (3/170)	2.38% (1/42)
Sarpang	12.32% (51/414)	13.27% (26/196)	10.59% (18/170)	14.29% (6/42)
Thimpu	9.9% (41/414)	12.24% (24/196)	9.41% (16/170)	2.38% (1/42)
Trashigang	5.8% (24/414)	3.57% (7/196)	5.88% (10/170)	16.67% (7/42)
Trashiyangtse	12.08% (50/414)	11.22% (22/196)	13.53% (23/170)	11.9% (5/42)
Trongsa	1.93% (8/414)	1.53% (3/196)	1.76% (3/170)	4.76% (2/42)
Tsirang	7.25% (30/414)	9.18% (18/196)	4.71% (8/170)	9.52% (4/42)
Wangdue Phodrang	1.93% (8/414)	2.55% (5/196)	1.18% (2/170)	2.38% (1/42)
Zhemgang	2.66% (11/414)	3.06% (6/196)	2.94% (5/170)	0% (0/42)

4.1.2 Community support for TVET

Community members were asked to identify the extent of their agreement on a five-point scale (1=strongly agree; 2=agree; 3=neither agree nor disagree; 4=disagree; 5=strongly disagree) with the statement “Overall, I support TVET education with its focus on technical skills as a good education option for Bhutanese.” Eighty-six percent either agreed or strongly agreed with the statement, indicating a high level of support for TVET. The results were fairly similar across sex (F: 88.77%; M: 84.12%; Preferred not to state (PNS): 83.33%), people from rural versus urban areas (R: 86.46%; U: 86.17%), people with disabilities and those without (With disability (WD): 83.33%; No disability (ND): 86.96%; PNS: 78.26%) and age (18 & under: 70%; 19-29: 84.81%; 30-49: 89.28%; 50-64: 85.71%; PNS: 88.24%). A total of 10.39% of respondents were neutral on the question with only 2.60% disagreeing or strongly disagreeing that they support TVET. Across the disaggregation categories it is notable that the lowest degree of support for TVET is among respondents 18 years of age or younger, the exact group of people who are potential future TVET trainees.

This result is somewhat surprising given a common sentiment found in policy documents that TVET is held in low esteem by the Bhutanese public. This sentiment also came through in several FGDs. Multiple participants in the focus groups with existing trainees, graduates of TTIs, and government officials stated that, in their experience, family, friends and the general public look down on TVET as “blue collar” education for those who do not have other options. An outlier was graduates of an IZC who all stated that a positive view was held of their education in their interactions with people. This is likely due to IZC education focusing on traditional arts and crafts in a society where cultural preservation is highly valued.

The difference in findings on community support in the FGDs versus the community survey raises the issue of potential acquiescence bias in the survey. Yet other questions added to the survey for triangulation purposes illustrate that this is not the case. Another question asked respondents for their level of agreement with the statement “Learning technical skills at a Technical Training Institute is a good pathway to getting a job.” Similar to the original question, 85.37% of respondents either agreed or strongly agreed. Respondents who disagreed or strongly disagreed were only 2.17% with 12.32% neutral. Again, acquiescence bias may be pointed to as an issue. Yet subsequent questions that asked respondents to compare the value of TVET education to university education demonstrate otherwise. Respondents were asked whether getting an education at a TVET institution is better than getting one at a university or college. The question was asked twice with oppositional language i.e. the first version of the question asked whether TVET education is better while the second version asked if a university education is better. A majority, 52.3% agreed or strongly agreed that a TVET education is better when answering the first version of the question. Just over 11% disagreed or strongly disagreed with 35.27% neutral. Alternatively, only 36.6% agreed or strongly agreed that a university education is better when answering the second version.

It should be noted, however, that the lack of data from respondents 65 years or older may also

influence the dataset. How this may do so is less clear. It may be expected that an older generation that likely overwhelmingly grew up in a rural context may not be as positive about TVET as other age groups. The fact that respondents under 18, however, were least likely to support TVET suggests this may not be the case.

While community respondents report significant support for TVET, they also believe that it is Bhutanese youth who are less interested in TVET. Only 43.5% agree that youth are interested in technical careers. Disagreement was reported by 25.85% while 29.95% were neutral. It should be noted, however, that all of these findings from the Community Survey occur in the context of only 36.47% of respondents claiming to have considerable knowledge (29.47%) or great knowledge (7%) of TVET. In contrast, 11.59% have no knowledge, 20.29% have little knowledge and 30.43% have some knowledge. Their support for TVET may therefore be based on limited knowledge of what it is. This is likely further complicated by the fact that TVET education in Bhutan encompasses both training in traditional technical fields by TTIs as well as in traditional arts and crafts by IZC. Again, the latter tends to be held in high esteem when compared to the former.

4.1.3 TVET as a viable education option for women

Evidence from other country contexts illustrates that TVET institutions tend to reproduce patriarchal norms (Bray-Collins, Andrade & Wanjiru, 2022). In Bhutan’s TVET sector, issues with gender inequality also exist. The sector scores 0.44 on the Gender Parity Index (GPI), which measures the ratio of female total net enrollment rate to the male total net enrollment rate. A score of under 1.0 indicates a disparity in favour of males. In light of this situation, the Community Survey asked respondents whether they would recommend getting a TVET education to a friend or family member who is female and wants to continue her education. Among female respondents, 83% agreed or strongly agreed that they would recommend a TVET education to a female friend or family member. This was similar to the results for male respondents (82%) and people who did not to provide their sex (83%). Only 0.48% of respondents strongly disagreed and 2.17 disagreed.

The perception that TVET provides a viable education pathway for women is complemented by a slightly lower but still relatively high percentage of respondents who support TVET as a means to promote women’s equality. A total of 74.3% of all Community Survey respondents agree or strongly agree that they support TVET as a vehicle to promote equality for women. Interestingly, males were slightly more likely to do so (F: 71.94%; M: 76.47%; PNS: 69.05%). Again, only a small proportion of respondents strongly disagreed (1.45%) or disagreed (8.45%) with 15.7% neutral.

On the surface, the high support for TVET as an option for women, and one that will promote gender equality, is again somewhat surprising. Other questions in the survey further confirm this support. When asked if TVET education is more appropriate for men than women, only 22.3% agreed or strongly agreed with similar proportions of men and women. Further, 86% of respondents, again with similar proportions of men and women, agreed or strongly agreed that women are just as likely as men to complete a TVET course. Nonetheless, this outward

support likely masks a more complex situation. Bhutan ranks only 126 out of 146 countries in the Global Gender Gap Report of 2022 (World Economic Forum, 2022). Gender inequality is clearly a significant issue in the country. This is borne out in some of the information collected in the FGDs. The two FGDs with female TTI graduates and with vulnerable women showed that while there may be societal support for women to participate in TVET education generally, there remain patriarchal norms that require women to also take care of children, cook, and engage in other household duties. Support for women participating in TVET education may exist in the abstract, but the expected double burden women face potentially inhibits their ability to make this a reality. Other FGD participants discussed more overt gender stereotyping where people felt TVET is “a man’s education”.

The situation is even more significant in relation to employment after TVET graduation. While women completing TVET education may have community support, once women try to enter the technical workforce, they face discrimination. Female graduates and females working within industry reported in the focus groups that they may be hired due to the technical skills they acquired through their TVET education, but they end up not working in technical positions once employed. This was confirmed by industry representatives themselves. Many participants in the industry focus group spoke of this occurring in response to customers demanding that a female employee not do the work, such as automobile repair. Other respondents spoke of women being viewed as too weak. Ultimately, respondents spoke of qualified women often ending up doing administrative or sales work unrelated to their skills and tending to be far underrepresented in technical industries overall.

Complicating this is an issue raised by participants in the FGD with industry representatives. Both male and female representatives of industry mentioned a significant problem they face with retaining TVET graduates as employees. This sentiment was widespread in the focus group. In their experience, many TVET graduates get the tertiary education credential with little intention of working in a related field long-term. Their experience was that graduates simply want the TVET credential to improve their chances for higher paying jobs in other fields. TVET graduates therefore do not stay in a job long as they move on to unrelated, higher paying employment. Government officials in a separate focus group concurred that a major issue is low wages in technical industries. Significantly, industry representatives stated the problem is much more pronounced with female TVET graduates who rarely stay long as employees. This is not surprising given the issue of women often not being given technical work in which they are qualified. Yet it may illustrate that women are using their own agency in response to significant gender-based barriers rooted in the cultural norms that characterize technical employment. Further, this agency allows them to potentially better their situation through using the TVET credential to get higher paying work elsewhere. This is speculative at this point and worth further research in the future to gain a deeper understanding of how women are using their TVET education.

4.1.4 TVET as a viable education option for people with disabilities

The prevalence of disability in Bhutan is 2.1%. Eighty percent of people with disabilities live in rural areas and females comprise 52% of all PWD (National Statistics Bureau, 2018). While there is no meaningful data available on employment rates of PWD in Bhutan, previous research has found that PWD are generally considered a burden and unable to engage in income generating employment (Schuelka, 2015). TVET reform in Bhutan holds the potential to address this by increasing TVET accessibility to PWD to broaden educational pathways and employment opportunities for them. The current situation for PWD, however, diverges somewhat from the situation for women. As previously discussed, 83% of women perceive TVET as a viable education pathway for females, with similar percentages for respondents who are men and people who did not disclose their sex. For respondents with disabilities, an even larger percentage, 94%, stated that they view TVET as a viable education path for PWD. This is further confirmed by information provided by FGD participants who have a disability. While these respondents discussed significant challenges like physical access to and within TVET institutions, as well as the need to develop specific kinds of TVET training that allow people with different kinds of disabilities to be successful, they viewed TVET generally as an excellent and viable pathway to employment. Moreover, they further believed that pairing TVET programs with training in entrepreneurship skills is a particularly useful strategy. They suggested that such an approach will enable PWD to build both individual life skills and livelihood skills. They pointed to existing Bhutanese businesses created by PWD as models for this.

This positive perspective among PWD is not shared to the same degree by respondents in the Community Survey who did not report a disability. Sixty-nine percent of these respondents agreed or strongly agreed that TVET is a viable education option for PWD. While still a fairly high percentage, it is nearly 30% points lower than PWD themselves. A FGD with industry representatives illustrated that they felt technical work is often too dangerous for PWD or that they would simply not be able to do it. TVET trainers concurred, suggesting some forms of training would be too dangerous. They also felt that as trainers they did not have the proper training to teach PWD.

Participants in the FGD involving people with disabilities were well aware of this perspective on their perceived helplessness and claimed it was common in broader Bhutanese society. They further pointed out that this attitude lumps PWD into a catch-all category without sensitivity to different kinds of disabilities and the implications for TVET education and work. Most interestingly, FGD participants with disabilities discussed the deep-seated root of what they felt was Bhutanese society’s general lack of concern for the situation of PWD. The Buddhist concept of karma (cause and effect) results in a person’s disability being understood as resulting from that person’s own karmic action. Disability is brought upon oneself. Society therefore has no moral obligation to address the challenges faced by those with disabilities. Respondents with disabilities emphasized that this cannot be avoided as karma is a key tenet of Buddhism. At the same time, they suggested

that karma can be used constructively to promote the rights of PWD in education and otherwise. First, as good deeds lead to a better next life, such a message can be promoted to Bhutanese society to encourage positive interventions to assist PWD in education. Second, PWD who understand their disability as being brought on by themselves can use this notion as a motivating driver to empower themselves. Overall, the situation in Bhutan therefore reflects what is found in the broader literature: negative community attitudes rooted in culture represent a potential barrier to PWD accessing TVET and technical employment. The specific cultural context may be different, but the impact is the same.

These findings illustrate that changing community mindsets on TVET as an engine for meaningful gender equality, especially in the technical workforce, and as a viable education pathway for PWD is critical for the reform process. The findings also suggest that changing such mindsets will face significant challenges. Engrained patriarchal norms that exist alongside reported support for TVET to promote gender equality, and religious beliefs that potentially entrench inaction on issues related to PWD, represent potential barriers that will require TVET reform to include public outreach activities that change mindsets.

4.2 Institutional Capacity

The lack of capacity within TVET institutions themselves that is outlined in the literature is one of the key issues that hinders TVET effectiveness. The design of relevant curriculum, delivery of effective pedagogy, and good governance are common challenges. Part of Bhutan’s TVET reform process will involve building capacity within TVET institutions to design, deliver and manage programming that is needed in the 4th Industrial Revolution. Given the TVET challenges related to women and PWD, doing so in an inclusive manner is also critical. Civil servants within the former MoLHR, senior administrators at each TVET institution, TVET staff involved in student recruitment, and TVET staff responsible for student advising/counselling will all be directly involved in delivering and managing a reformed TVET system. The Key Stakeholders Survey collected data from each of these groups as well as from industry partners. Further data were also collected through several FGDs.

4.2.1. Profile of key stakeholder respondents

The survey was sent to the population of these key stakeholders. The MoLHR identified all civil servants involved in a TVET policy role, senior TVET administrators, all relevant TVET staff and existing industry partners. Of the 90 people that make up this population, 79 responses were received for a response rate of 87.8%. There was a 100% response rate for all sub-categories within the survey except industry partners, who had a response rate of 63.3%.

Overall, survey respondents consisted of 30.38% civil servants, 12.66% senior TVET administrators, 22.78% student recruitment staff, 10.13% student advising/counselling staff, and 24.05% industry partners. Females made up 30.38% of respondents and males made up 69.62%. A surprising 12.82% of survey respondents reported some kind of disability with women’s rate significantly

higher than men’s (21% vs 9.26%).

Respondents who live in an urban area made up 63.29% with 36.71% living in a rural area. This reflects the reality of most government officials and industry partners being located in Thimphu, the capital. In terms of age, the majority of respondents, 55.70%, were between 30-49 years of age with the smallest proportion, 3.80% being 65 years of age or older.

Table 6: Age of key stakeholders survey respondents

Age	Number of respondents	Percent of respondents, incl. by sex
18-29 years	16	20.25% Female: 20.83% Male: 20.00%
30-49 years	44	55.70% Female: 70.83% Male: 49.09%
50-64 years	16	20.25% Female: 0.00% Male: 29.09%
65 years and over	3	3.80% Female: 8.33% Male: 1.82%
Preferred not to report age	0	0.00%
Total	79	100.00%

4.2.2 Government officials and senior TVET administrators

A key component of the TVET reform process will be to build the capacity of senior TVET officials in the Ministry and within individual TVET institutions to manage a reformed system, and to do so in a manner that is inclusive and environmentally responsible. The survey collected information on the current confidence of these officials in their ability to manage a reformed TVET system that is gender sensitive, disability inclusive and environmentally responsible. Overall, 50% (F: 42.86%; M: 53%) of these officials combined agreed or strongly agreed that they are confident that they have the knowledge and skills necessary to do so in areas relevant to their own work. When broken down by respondent type, the 50% figure applies to both government officials and senior TVET administrators.

A gap emerges, however, when these officials were asked about their confidence in managing a reformed system that is inclusive of vulnerable populations (women and PWD) versus their confidence in managing a system that is environmentally responsible. Fifty percent of respondents are confident they have the knowledge and skills to manage a reformed TVET system that is

inclusive of women and PWD. Conversely, a much higher number, 70.59%, are confident in managing a reformed system that is environmentally responsible. A gender gap emerges in this latter area with men far more likely than women to report confidence (F: 50%; M: 85%). A further gap also emerges. Senior administrators at TVET institutions are considerably more likely to report confidence in having the knowledge and skills to manage reform in an environmentally responsible manner (80%) than officials at the Ministry (66.67%).

Ministry officials who participated in an FGD spoke of the kinds of capacities in which they lacked confidence for managing TVET reform. Most common was the need for research and analysis skills. They felt such skills are critical for officials to be able to identify key issues in need of reform, including issues related to women and PWD, and explore different response options. They also spoke of the need for enthusiasm for TVET, and TVET champions, as a capacity that is needed at both the Ministry and in individual TVET institutions. They felt that administrators and staff at these institutions often have managerial knowledge but little TVET knowledge or enthusiasm, and even less knowledge about working with vulnerable populations.

While only 50% of both Ministry officials and senior TVET administrators reported confidence in their own ability to carry out effective reform, the perception of their abilities held by other stakeholders is even lower. The 50% of Ministry officials who reported confidence in their ability to manage an inclusive and environmentally responsible reformed TVET system compares to only 34.54% of the other key stakeholders who agreed or strongly agreed that these government officials have the needed knowledge and skills to guide reform.

Senior TVET administrators fared somewhat better with 50.72% of the other stakeholders agreeing or strongly agreeing that these administrators have the necessary skills to manage reform. As the reform process builds the capacity of government officials and senior TVET administration officials to manage a reformed TVET system, it will also need to engage in a communications strategy across the TVET sector that builds confidence among other stakeholders in the new capacity of these senior officials.

4.2.3 TVET institution staff: Trainee recruitment

Part of TVET reform will address the capacity of TVET institutions to recruit trainees with a particular emphasis on recruiting women and PWD. TVET recruiting staff from across the 8 public TVET institutions were asked about their confidence in their ability to recruit trainees generally. Nearly two thirds, 61.11%, agreed or strongly agreed that they are confident in their ability to recruit trainees generally. Yet, when respondents were asked more specifically about their confidence in recruiting women or PWD, a dramatic drop occurs. Just over 33% agree or strongly agree that they are confident that they have the knowledge and skills to recruit women effectively. Only 22.22% agree or strongly agree they are confident they have the ability to effectively undertake recruitment of PWD.

The relatively low confidence among respondents in recruiting women and PWD is paralleled by a lack of current recruitment strategies specifically focused on recruiting them. Recruitment staff at only one TVET institution reported that their institution engages in such targeted recruitment of both women and PWD. Moreover, none of the 8 TVET institutions have provided training to staff in recruiting trainees who are women or PWD. In terms of record keeping, 21.43% of respondents said they keep records on the number trainees with disabilities while 92.3% keep records on the number of female trainees.

Respondents were also asked about the overall effectiveness of the trainee recruitment policies and procedures at their institutions. While 68.42% agreed or strongly agreed that their institutions’ policies and procedures are effective, 78.95% also stated that it is still important to reform existing recruitment policies and procedures.

4.2.4 TVET institution staff: Trainee advising and counselling

Reforming trainee advising and counselling services is another component of TVET reform intended to strengthen the capacity of institutions to support trainees during their studies and in their post-graduation search for employment. Similar to TVET recruitment staff, these respondents were asked about their confidence in their current ability to provide counselling and advising services to trainees generally. Only 25% agreed or strongly agreed that they have confidence in their overall abilities to do so. When asked more specifically about their confidence in advising or counselling trainees that include women and PWD, this drops in half (12.5%) with only female respondents reporting any degree of confidence.

Respondents not only have low confidence in their abilities to provide advising and counselling, most also believe their institutions do not have effective advising and counselling services. Only 25% agreed that their institution has effective services. Not surprisingly, 87.5% agreed or strongly agreed that current advising and counselling services need to be reformed. None of the institutions these respondents work at currently have student career services for both women and PWD, although one institution reported having a career service for women and two have a career service for PWD. Only 25% of respondents reported receiving some kind of training on advising or counselling vulnerable students.

4.2.5 TVET trainers

In 2021 there were 168 TVET trainers in the public TVET system made up of 54 females and 114 males (Department of Technical Education, 2021). Each TVET institution has an average of 21 trainers. Of these trainers, 163 are permanent employees with 5 on contract. Just under half, 44.65%, have 10 or more years of service. There were also 10 international volunteer teachers in 2021 (Department of Technical Education, 2021).

Table 7: Number of TVET Trainers in TTIs and IZC by sex (2021)

TTI and IZC	Male	Female	Total	%
JWPTI	22	5	27	16.1
NIZC	20	4	24	14.3
TTI Kuruthang	7	15	22	13.1
TTI –Samthang	13	7	20	11.9
CZC	16	7	23	13.7
TTI Rangjung	14	4	18	10.7
TTI Chumey	12	8	20	77.9
TTI Thimphu	10	4	14	8.3
Total	114	54	168	100

Source: DTE. (2021). *TVET Statistics of Bhutan: In the Quest for Transforming TVET through Data-Driven Approach*. Thimphu: DTE, page 133.

In order to be qualified to teach, trainers must have one qualification higher than the level at which they instruct. Currently, 72.02% have diplomas, 23.21% have bachelor’s degrees, 4.17% have a certificate and less than 1% have a master’s degree (Department of Technical Education, 2021). No TVET training institution for these trainers exists in Bhutan, so a Training of Trainers (TOT) approach is used to build TVET training capacity. The TOT program involves four levels. Level 1 includes instruction in technical areas and pedagogy. Level 2 provides further training on abilities, knowledge, visualization and evaluation. Developing analytical and supervisory skills characterize level 3. Completion of level 4 provides advanced skills in the provision of training and conducting research. Seventy-seven percent of trainers had completed level 1 by 2021 (Department of Technical Education, 2021). Very few trainers have been trained in ICT skills that can be applied in the classroom. From 2019-2020, only 27 instructors from across the TVET system received ICT training for the classroom. This included 19 trainers who received 7 days of training in using Google in the classroom and 8 trained in digital literacy for 3 days. Overall, the professionalization of TVET trainers is cited by the Department of Technical Education as an ongoing issue, as is the need for more female trainers who can act as role models (Department of Technical Education, 2021).

Table 8: Qualifications of TVET trainers in TTIs and IZC (2021)

TTI and IZC	Bachelor's	Certificate	Diploma	Master's	Total	%
JWPTI	8	0	19	0	27	16.1
NIZC	1	1	22	0	24	14.3
TTI Ku-ruthang	8	2	12	0	22	13.1
TTI Samthang	4	1	14	1	20	11.9
CZC	3	0	20	0	23	13.7
TTI Rangjung	4	0	14	0	18	10.7
TTI Chumey	7	0	13	0	20	11.9
TTI Thimphu	4	3	7	0	14	8.3
Total	39	7	121	1	168	100

Source: DTE. (2021). TVET Statistics of Bhutan: In the Quest for Transforming TVET through Data-Driven Approach. Thimphu: DTE, page 137.

The TVET reform process will build the capacities of TVET trainers through a series of interventions that seek to enable them to develop skills in curriculum development, teaching skills, and entrepreneurship training. Currently, it is somewhat challenging to assess the effectiveness of TVET trainers as meaningful and adequate data assessing individual trainers are currently not available. Nonetheless, an FGD with trainers provided insight into their perceptions of the current state of the TVET system and their role in it. Twenty trainers took part in the FGD, including 4 women and 16 men. They represented both TTIs and an IZC. FGD participants first spoke of societal perspectives of TVET. A common sentiment among most TTI trainers in the FGD is that their chosen TVET teaching career is seen by society as teaching youth for “low jobs” or “blue collar work.” Several of these participants spoke of the need to re-brand TVET as contributing to Gross National Happiness in the country. Trainers from the IZC spoke of a much different perception in society, where their work is seen as culturally important.

In addition to current societal perspectives on TVET, participants also spoke about the current state of TVET courses and pedagogy. All of the TTI participants felt the curriculum is several steps behind the market despite needing to be several steps ahead. They also spoke of outdated

machinery and the need for greater soft skills in the curriculum. Participants from the IZC provided a very different view, again reflecting the very different nature of the content of training and the nature of machinery at IZC. They did not feel their curriculum was behind the market as the arts and crafts they teach are traditional and use traditional methods. When it came to pedagogy, all TTI and IZC trainers felt they lack proper teaching skills. They stated that they have technical skills but little training in teaching. None of them indicated that they had any knowledge of how to teach vulnerable students, including students with disabilities. One participant encapsulated this sentiment by describing herself as a student in her own classroom as she learns how to teach on the job through trial and error. All indicated their interest in learning teaching methods used outside of Bhutan.

A PRA activity used in the trainer FGD identified and ranked key challenges in the current TVET system that trainers feel are in most need of reform. Through this process, 8 of 20 participants identified the need to build teaching capacity. Four pointed to the need for better equipment in the classroom. Three identified the need to update curriculum while another three specifically mentioned the need to adapt curriculum to the global economy. Two other participants felt the need for better industry linkages was the priority for TVET reform.

Overall, the available data point to a current situation where TVET trainers lack capacity on a wide scale. Improved pedagogical skills, updated and revised curriculum, better industry linkages, an improved societal outlook on TTIs, and improved equipment represent a significant list of capacity gaps.

4.2.6 Industry partners

More closely connecting TVET programming to the needs of industry will be a critical part of successful reform. Overcoming the current mismatch between the skills required in the current economy versus the ones currently being taught in TVET institutions is critical. Currently, 3 of 8 TVET institutions have formal partnerships with industry. Of these existing partnerships, 19 industry representatives responded to the Key Stakeholders Survey. They represented a range of industries, including manufacturing, automobile repair, construction, metal fabrication, general workshop, and electrical (1). A focus group discussion with technical businesses that currently are not TVET partners also occurred and involved 14 people.

Unlike TVET trainers, a significant percentage of these industry representatives, 78.95%, agreed or strongly agreed that current courses provide graduates with needed skills and competencies for emerging economic sectors. At the same time, satisfaction with the nature of the courses does not translate into the same degree of overall satisfaction with graduates. Industry partners were asked about how satisfied they currently are with the ability of TVET graduates to fill the labour market needs of the Bhutanese economy in an environmentally friendly way. Just over half, 52.64%, were either satisfied or very satisfied. It is notable that when the environmental component of the question was dropped and respondents were asked about their satisfaction with the ability

of TVET graduates to fill labour market needs generally, satisfaction rose over 10 points to 63.16%, indicating that industry employers see the need for TVET graduates who have stronger knowledge and skills in environmentally sustainable practices. Ultimately, only 38% of participating industry partners hired a TVET graduate in the past year.

The focus group discussion with industry representatives who do not currently have formal partnerships with TVET institutions illustrated that there is significant demand for creating these partnerships. They are seen as mutually beneficial. Many of these FGD participants spoke of current informal relationships with TVET institutions where they provide on-the-job training (OJT) to trainees as part of their TVET education. They subsequently lose them to other companies after the trainees graduate. Participants felt a formal partnership would help ensure a smooth transition from OJT trainee to employee upon graduation. Most FGD participants also mentioned an interest in forming TVET partnerships to share the costs of sending trainees abroad to learn advanced skills. Several participants mentioned that they were willing to share the cost of this at 50/50 with a TVET institution partner.

Participants in this FGD were also asked to assess current TVET courses for their relevance to the 21st century economy in Bhutan. While many of them felt the courses were quite good, there was widespread agreement that TVET training lacks up-to-date equipment. Many participants also stated that TVET training should involve additional training in soft skills, with the ability to deal with customers identified as the most important one. The need for customer relations skills was also identified as a gap in current training in the two FGDs with TVET graduates. Graduates saw a role for industry/TVET institution partnerships in addressing this gap.

A final issue on the current state of industry/TVET institution partnerships arose in the FGD discussion with graduates of an IZC. These participants noted that, unlike trainees in TTIs, there were few options for industry partnerships as their programs focus on traditional arts. Few companies exist beyond individuals in these fields, making such partnerships difficult to establish. Industry partnering for IZC is therefore a more challenging situation.

4.3 TVET Trainees and Graduates

Trainee enrollment across all TVET institutions in 2020 was 922 trainees, including 689 males and 233 females (Department of Technical Education, 2021). The lower enrollment of females is a key issue of inequality. The Gender Parity Index (GPI), which compares access to education for females and males, averages only 0.44 across all TVET institutions for the period of 2015-2020 (Department of Technical Education, 2021). A figure below 1.0 is considered a disparity in favour of males (UNESCO, n.d.).

Table 9: Gender Parity Index by TVET institution

TVET Institution	Sector of courses offered	GPI
Technical Training Institutes (TTIs)		
Technical Training Institute Chumey	Construction	0.86
Technical Training Institute Khuruthang	Mechanical & electrical	0.56
Technical Training Institute Rangjung	Electrical, furniture & automobile	0.40
Technical Training Institute Samthang	Automobile	0.10
Technical Training Institute Thimphu	Automobile	0.18
Jigme Wangchuk Power Training Institute Dekiling	Construction & hydropower	0.32
Institutes of Zorig Chusum (IZC)		
National Institute of Zorig Chusum	Traditional arts & crafts	0.37
College of Zorig Chusum	Traditional arts & crafts	0.43

Understanding the current experiences of TVET trainees and graduates, and women in particular, is critical for shaping the nature of the reform process so it more effectively responds to trainee needs. The annual tracer study of TVET graduates provides insight into these experiences. The study targeted all 2020 graduates and achieved an 82.8% response rate.

4.3.1 Profile of graduate respondents

Of the 469 respondents to the tracer study survey, 336 (71.64%) were male and 133 (28.36%) were female. The percentage of graduates who are female ranged significantly by the institution from which they graduated. A low of 4.08% of graduates from TTI Thimphu were female while a high of 47.56% graduates from TTI Chumey were female.

Table 10: Graduates by sex and institution (2020)

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

Source: Department of Technical Education. (2021). TVET Statistics of Bhutan: In the Quest for Transforming TVET through Data-Driven Approach. Thimphu: DTE, MoLHR, page 16.

Over half of these graduates, 55.56%, were 22-24 years of age. The remaining graduates were 19-21 years (21.32%), 25-27 years (19.83%), 28-30 years (2.56%) and 31-32 years old (0.64%). The majority of the graduates (53.64%) began their TVET education after completing Class X. Slightly less (45.73%) had completed Class XII while the remaining 1% had less than Class X or completed monastic education (Department of Technical Education, 2021).

In terms of where these graduates live after graduating, 56.56% live in four of Bhutan’s 20 dzongkhags (districts). These four dzongkhags include Thimphu (23%), Sarpang (13%), Wangdue Phodrang (12%) and Punakha (8%). None of the remaining 16 dzongkhags are home to more than 5% of graduates. This spatial distribution does not reflect graduates’ place of origin, which is much more dispersed across the country. Dzongkhags of origin with the largest proportion of graduates are Pemagatshel (14%), Samdrup Jongkhar (11%), Trashigang (9%) and Chukha (8%). The first three are all from the east of the country which is poorer and more rural than the west. Only 2% of graduates originally come from Thimphu dzongkhag despite it being the post-graduation home for 23%. As the dzongkhag where the capital city is located, this is not surprising. It clearly demonstrates the reality of rural/urban migration in Bhutan.

Table 11: Number of graduates by Dzongkhag of origin (2020)

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

Source: Department of Technical Education. (2021). TVET Statistics of Bhutan: In the Quest for Transforming TVET through Data-Driven Approach. Thimphu: DTE, MoLHR, page 20.

4.3.2 Satisfaction among graduates & trainees

The proportion of 2020 graduates who identified satisfaction with the quality of their TVET education was 65%. Current trainees, which included both TTI and IZC trainees, were asked in several FGDs to describe what they like best about their education and what is most challenging. The greatest number of TTI trainees identified on-the-job training (OJT) as the best part as well as the social aspect of the education experience. IZC trainees reported that learning traditional skills was the best part of their training. The greatest challenges were the physical nature of the education, with female trainees in particular identifying this challenge; machines that do not work and can’t be used; and the short duration in which to complete projects. Overall, half of current TVET trainees who participated in FGDs would recommend TVET education to their friends.

Graduates of a TTI or IZC were also asked to identify the best and most challenging aspects of their education experience. Among the TTI graduates, half had found employment in their field. Almost all of the IZC graduates were working in their field. TTI graduates identified a range of things they like best about their experience with no single issue dominating. Like current trainees, they identified great satisfaction with OJT and the social aspect of school life. Most IZC graduates identified contributing to the nation through cultural preservation as the best part, again illustrating the unique nature of the training they received. Like the TTI graduates and current trainees, they also identified the social life during their education as one of the best aspects of their experience. Learning new things and the skillfulness of the trainers was identified by small numbers of IZC graduates.

Challenges identified by TTI graduates were quite diverse. This included their perception of too much theoretical learning, the need for better soft skills learning, poor and outdated equipment, and the physical nature of the work. Several female participants noted gender discrimination in post-graduation employment. IZC graduates also identified a range of challenges with no single issue dominant. Issues included learning the skills themselves, not enough training time, and machines that break down with no one having knowledge of how to fix them.

Graduates were also asked to identify one or two things they would change if they were tasked with reforming the TVET sector. All TTI graduates agreed that they would like the TVET system to provide services to access international employment. Indeed, all of them confirmed that they personally would like to find work in Australia or elsewhere abroad. This desire is confirmed more broadly in other studies. A labour market report published in 2023 found that 70.3% of young jobseekers believe there are better work opportunities abroad and 68.9% are actively seeking work or training abroad (Ministry of Education & Skills Development, 2023).

Half of the FGD participants would increase the duration of training time and increase classroom space, and a third of participants identified updating in-class machinery. All of the IZC graduates

agreed that they would reform their education by introducing modern technology and modern teaching methods into the curriculum from outside of Bhutan. This is particularly interesting as IZC education involves the use of traditional methods to engage in Bhutan’s traditional arts and crafts. Moreover, many of these graduates stated that preserving Bhutan’s culture through their work was one of the best parts of their education. Further discussion with these FGD participants revealed that they feel local cultural practices are not threatened by new technology. Indeed, quite the opposite is the case: traditional culture can be effectively preserved and protected by allowing it to evolve. Other things IZC graduates would change are more classroom space and better safety equipment. Like the TTI graduates, about half would recommend TVET education to a friend.

In addition to exploring satisfaction and challenges experienced during their TVET training, graduates also reported on their employment after graduation. Forty-one percent of 2020 TVET graduates found employment in a technical field within 6 months. Some caution is required in interpreting this figure. A total of 45.56% of 2020 graduates found employment in a technical field, including those who took longer than 6 months to find a job after graduating. This overall employment rate is much lower than what is reported in the pre-pandemic 2016 tracer report. That year saw 87.89% of graduates employed. Unfortunately, the 2016 tracer report does not provide a timeline for when graduates found employment, nor does it provide details on the type of employment found, so a directly comparable figure is not available. Nonetheless, it can likely be assumed from these figures that the 2020 rate of employment within 6 months is low, likely a reflection of the COVID-19 pandemic.

Two final issues related to graduates’ employment are notable. First, 64% of female graduates reported having difficulty finding work compared to their male counterparts. Second, the tracer study found that 20.37% of graduates are dissatisfied with their employment with low wages as a key reason. The challenge of employee retention pointed out by participants in the industry FGD is a reflection of this.

5. KEY ISSUES FOR TVET REFORM

The broader literature on TVET demonstrates that challenges to effectiveness exist in the areas of mismatched skills across TVET institutions and industry, poor institutional capacity, and ineffective access for marginalized or vulnerable populations. The current state of the Bhutanese TVET system illustrates that many of these same issues exist within it. Several issues unique to Bhutan also exist. TVET reform seeks to address these issues and to do so within the country’s unique Gross National Happiness development model. In this context, the following key issues emerged from across the findings of this study. They will need attention as Bhutan embarks on the reform process.

5.1 Building Broad-based Institutional Capacity

The findings of this study show widespread self-reported needs among institutional stakeholders

for strengthened capacity to manage a reformed TVET system. This reported need crosses all types of institutional stakeholders. Only half of senior TVET administrators and relevant Ministry staff reported having confidence in their current knowledge and skills for managing the TVET system. Other stakeholders held an even lower level of confidence in these officials. Institutional staff responsible for recruiting TVET trainees felt somewhat more confident in their own abilities with 61% reporting confidence in their ability to recruit trainees effectively. Staff that provide advising and counselling reported very low confidence in their abilities with only 25% reported such confidence. Lastly, while no quantitative data are available, the focus group discussion with trainers also illustrated that they feel they lack teaching skills and are forced to learn them on the job.

What is particularly notable in the findings is that the already low confidence among these institutional stakeholders in their skills decreases much further when asked specifically asked about carrying out their respective roles in relation to women and PWD. This was particularly evident among recruitment and advising staff. Working with people with disabilities represents a particular challenge. The vast majority of recruiting and advising staff as well as trainers reporting little or no confidence in effectively responding to the needs of PWD.

Given that no category of institutional stakeholder – senior TVET officials, Ministry officials, recruitment staff, advisory/counselling staff, trainers – reported widespread confidence in their capacities illustrates the significant breadth to which capacity building needs to occur in the TVET reform process. Moreover, the depth of capacity building is also significant given the specific challenges of working with women and PWD. Yet the fact that institutional stakeholders themselves report the need to strengthen their own capacity represents a good foundation on which to build as push-back to reform from within TVET institutions is less likely. Nonetheless, comprehensive capacity building interventions will need to be designed and implemented across all institutional roles if reform is to be successful.

5.2 Shifting Perspectives on TVET

Perspectives on TVET across the multiple stakeholders involved in this study demonstrate that focusing reform efforts on strengthening institutional capacity is not enough to fully transform the TVET system. Shifting mindsets on the desirability of TVET as an education option with good employment prospects is necessary. On the one hand, community members generally have high support for TVET with 86% supporting it, which is a good foundation for the reform process to build on. Yet this figure is based on only around 36% of these respondents having meaningful knowledge of what TVET involves. On the other hand, perspectives of youth represent a greater challenge. Youth under 18, exactly those who would be making tertiary education decisions, were the least likely in the Community Survey to support TVET as an education option. The focus group discussions illustrated that this extends to some TVET trainees and graduates themselves. Their descriptions of their training as “blue collar” education and as the last resort when other education options were not possible suggests that when faced with other options, youth may be more likely to choose them over TVET. Even some participants in the FGD with TVET trainers demonstrated

this notion that they are working in a field that is not respected. The process of reforming TVET will therefore benefit by changing such mindsets, particularly among youth. Shifting people’s understanding of what TVET involves for the 4th Industrial Revolution will be key to successfully doing so. Understanding the digital nature of 4IR and the cutting edge TVET training needed to respond to it will help shift perspectives beyond notions of less desirable blue-collar work. Doing so will be critical if the reform of TVET programming is to be accompanied by greater numbers of youth being drawn to technical education.

5.3 Gender Equality and TVET Reform

Increasing the attraction of TVET to youth is one key issue. A further one is the need to ensure this includes young Bhutanese women. The equitable socio-economic pillar of Gross National Happiness pillar requires this. The findings from this study, however, demonstrate the issue of gender equality is complex in Bhutan generally and in TVET in particular. Overall, Bhutan’s ranking of 126 out of 146 countries in the Global Gender Gap Report of 2022 illustrates a clear issue with gender inequality. This inequality cuts across all four dimensions of the gender gap index, including economic participation (ranked 126), educational attainment (121), health and survival (125) and political empowerment (125). For TVET in particular, the GPI average of 0.44 from 2015-2020 across all TVET institutions shows this inequality extends to participation in technical education.

Within this broader context, the findings demonstrate two issues at play that appear contradictory on the surface. First, respondents in the Community Survey reported high levels of support for women’s participation in TVET and for promoting gender equality. Eighty-three percent of women in the survey reported that they believe TVET to be a viable education pathway for females. Men (82%) and respondents who preferred not to state their sex (83%) felt similarly. Support for TVET as a means to promote women’s equality was also high at 74.3%. Less than a quarter of respondents, 22.3%, felt TVET was more appropriate for males than females and 86% agreed women are just as likely as men to complete a TVET program.

These positive self-reported attitudes to gender equality are paralleled by examples of successful Bhutanese action in practice. The low average GPI for TVET institutions from 2015-2020 (0.44) stands in stark contrast to the GPI for higher secondary school (classes XI-XII). Past action by the Royal Government of Bhutan to improve education access for girls has resulted in an average GPI of 1.06 from 2015-2019 in higher secondary school (Department of Technical Education, 2021). A GPI of 1.03 indicates a disparity in favour of females. Positive community attitudes to women’s access to TVET opportunities exist in parallel to successful past action to increase education access for girls.

The second issue that emerges from the data complicates this picture. Positive attitudes and past action on gender equality exist alongside the evident reality of gendered societal expectations of women’s domestic and employment roles. Support may exist for women’s access to TVET, but women are still expected to take on domestic duties and gendered employment roles at the same

time. Vulnerable women reported in one FGD that while TVET is an opportunity all would like to pursue, cultural expectations that they are responsible for domestic work hampers their ability to take up this opportunity. Moreover, almost 64% of female TVET graduates in the tracer study reported challenges in finding employment. Female graduates in several FGDs further reported being shifted into non-technical roles once they secure employment in response to customers’ perceptions of technical work being only for men.

Overall, a challenging situation therefore exists. Both a willingness and support for taking action on gender equality within TVET exists, but it paradoxically resides beside societal norms that negatively gender women’s roles in the domestic and work spheres. This is a complex gender context for the process of TVET reform. It represents both an opportunity and a challenge. It is an opportunity as it shows an enabling environment exists for addressing gender inequality in accessing TVET. It is a challenge as it also shows that improving access to TVET is still paired with contrasting norms that can inhibit women from using their access to education free from gendered attitudes about women in the home and workplace. Providing women with the asset of a TVET education is therefore not the main issue; enabling them to use their agency to successfully employ this asset in the work world is. If Bhutan’s TVET system is to be a GNH TVET system that contributes to equitable socio-economic development, addressing women’s assets and agency are both essential in the reform process.

5.4 Opportunities for People with Disabilities

A GNH TVET system that promotes socio-economic equity and inclusion of vulnerable populations must also provide opportunities for PWD. TVET can offer a potentially effective vehicle for providing PWD an educational avenue that leads to meaningful employment. The findings show that if TVET reform in Bhutan is to pursue this, it faces significant obstacles paired with a notable opportunity. A clear obstacle is shifting societal mindsets on PWD and employment. Providing better access to TVET programs may provide PWD with technical skills, but a further step is needed to convince society, and employers in particular, that technical work is appropriate for PWD. Current mindsets on PWD being helpless and not appropriate for technical work need to change if making TVET accessible to PWD is to be successful. Education opportunities that lead to blocked employment opportunities will simply raise and then dash expectations of PWD, further marginalizing them. Similar to the situation with women, TVET reform therefore needs to focus on more than making TVET programming more accessible for PWD. Addressing societal and employer attitudes on PWD will be critical for reform to be successful. Yet the findings further show that this will be a challenge. In particular, the deeply rooted notion of karma within Bhutanese society represents a potential barrier to taking meaningful action on disability issues. TVET reform will need to develop a strategy for taking action on accessibility that accounts for notions of karma. Ongoing engagement with disability-related civil society organizations in Bhutan needs to be central to this process.

In sharp contrast to the obstacle that exists within societal attitudes towards PWD is the

perspective of PWD themselves. A full 94% of PWD in the Community Survey view TVET as a viable education option. Participants in the FGD involving people with disabilities also showed enthusiasm for TVET. Of particular interest is the role entrepreneurship can play. Focus group participants clearly felt, based on existing experience, that PWD will be more successful if they develop entrepreneurship skills alongside technical skills, enabling them to open their own businesses thereby circumventing potentially negative attitudes of employers. Designing entrepreneurship training for PWD as a standard component TVET programs should therefore be considered a critical reform intervention for making the TVET system more inclusive.

At the same time, entrepreneurship education at the tertiary level in Bhutan has historically been poor (GNH Commission, 2019). Within TVET institutions in particular, limited entrepreneurship training among all trainees has resulted in only 21% of trainees developing a meaningful business plan. More broadly, just over half of graduates, 54%, reported being satisfied with the quality of entrepreneurship support programs provided by their TVET institutions. Revising and implementing effective entrepreneurship training generally, and for PWD in particular, is therefore necessary to better support all trainees in successfully transitioning to income generating activities post-graduation.

It should be noted that this study also found that the challenge of improving TVET access for PWD is accompanied by a methodological issue related to collecting data on disability in the TVET sector. It is widely recognized that using a binary “yes/no” question on disability is not very useful as it conceptualizes disability as a static state, ignoring its potentially dynamic complexity. The binary question also likely leads to underreporting of disability. The Washington Group of questions is considered more effective as they better capture a broad range of functioning from mild to severe.

Bhutan’s disability prevalence rate is officially reported as 2.1% as of 2017 (National Statistics Bureau, 2018). The rate was calculated by the National Statistics Bureau using the Washington Group short set of questions. Data collected for this study found a greater rate of disability in both the Key Stakeholders Survey and Community Survey when again using the Washington Group short set of questions. The rate of disability in the Key Stakeholders Survey was a surprising 12.82% with women’s rate significantly higher than men (21% vs 9.26%). This survey included the entire population of key stakeholders, so the higher disability figure is simply a reflection of this particular population rather than being representative of any broader population.

The case of the Community Survey is more interesting. When designing the survey, three disability experts were consulted, including two in North America and one in Bhutan. Two of these three concurred that the Washington Group questions should be used. The third suggested that using the binary “yes/no” question would not be a problem in the Bhutanese context. Based on this input, it was decided to use both methods in the survey and compare the results. The binary question resulted in 4.35% of respondents reporting a disability. The Washington Group short set questions resulted in 5.17% reporting some kind of disability. It is interesting that the binary

question yielded a rate that is closer to the official rate. Again, the Community Survey did not use a random sample so the results cannot be readily generalized to the Bhutanese population, and the Washington Group of questions is widely viewed as superior to the binary question. At the same time, however, there were cases where survey respondents were unclear on why so many questions were being asked about disability when using the Washington Group short set of questions, which includes seven questions, representing about a fifth of the entire questionnaire. The potential for confusion over the intent of the questionnaire, with further potential implications for the reliability of respondents’ answers, is an issue when using the Washington Group set of questions.

Overall, however, it is recommended that the collection of TVET data within the TVET system continue to use the Washington Group short set of questions as part of its methods as this is an international best practice. This should be accompanied by regular consultation with PWD and other relevant stakeholders, however, in future design of data collection tools and the actual collection of disability-related data to ensure its relevance to the Bhutanese context.

5.5 Environmental Sustainability as a Foundation

Central to the reform of the TVET system using a Gross National Happiness framework is the incorporation of sustainability. Promoting ecological resilience within the system is a foundation for sustainable economic growth. Ensuring the TVET system itself has a sustainable ecological footprint and that it is generating graduates with the skills and knowledge needed for green jobs is therefore a key focus of reform. Two issues stand out in the findings. First, industry partners’ satisfaction with TVET graduates’ ability to fill labour market needs in an environmentally responsive manner illustrated a notable difference between partners’ satisfaction generally versus their satisfaction when asked specifically about the environmentally responsive character of graduates’ abilities. When asked the more general question, 63.16% of partners were satisfied with graduates’ abilities to fill labour market needs in Bhutan. This drops to 52.64% when the question is qualified to include graduates’ abilities to fulfil labour market needs in an environmentally responsive manner.

Second, TVET officials, including civil servants and senior TVET administrators at each TVET institution, reported on their level of confidence in managing a reformed TVET system that is inclusive of vulnerable populations and environmentally responsible. Half of these officials reported confidence in managing an inclusive and environmentally responsible TVET system. When these two characteristics of the TVET system are asked about separately, however, a significant gap emerged. Only 50% of officials report confidence in managing inclusivity while 70.59% report confidence in managing an environmentally responsible TVET system. This greater confidence may be a reflection of the country’s longstanding focus on environmental sustainability. Bhutan was the first country to become carbon negative and has achieved longstanding conservation success with over 51% of the country designated as protected and over 70% forested (Forest Resources Management Division, 2016). As a domain of GNH, ecological

diversity and resilience has a long history as a policy priority.

Bhutan’s commitment to sustainability, TVET officials’ confidence in managing a system that is environmentally responsible, and industry partners’ attunement to the need to strengthen graduates’ sustainability competencies represents a potential strength that the reform process can build on. Foregrounding the environmental component as a part of TVET reform can draw on existing enthusiasm and help promote champions of reform at the institutional level.

5.6 Differences across TTIs and IZC

Part of the TVET reform process will involve interventions at the level of TVET institutions and employees within these institutions. Policy reform is also a component of the larger reform process. This will involve the training of TVET trainers in curriculum design, pedagogy and entrepreneurship; revising national policies; reforming student recruitment and advising procedures; leadership training for officials across the system; and establishing industry partnerships across all TTIs and IZC. In light of these intended interventions for the entire TVET system, the findings from this study illustrate that the nature of the two institutional components within the system, Technical Training Institutes and Institutes of Zorig Chusum, are very different. Pedagogical techniques are different with one rooted in tradition (IZC) and the other in need of modernizing (TTIs). The nature of industry partnerships further diverges as fewer relevant companies exist to partner with IZC than TTIs. Societal perspectives are also very different, with much more positive attitudes towards IZC given their role in teaching skills that preserve Bhutanese culture.

The reform process will need to take this difference into account. It will likely require qualitatively different interventions in the two types of institutions. Interventions with TTIs will benefit from drawing on cutting edge technology, both in terms of content and teaching methods, consistent with the needs of 4IR. IZC, in contrast, will benefit from reform interventions that further strengthen and consolidate the traditional methods that underlie zorig chusum. Yet, the findings also show that the how “traditional” is understood needs to be taken into account. Multiple IZC trainees and graduates in the FGDs discussed their preference for learning about traditional arts and crafts through more current teaching methods and through using updated technology; the use of technology was not seen as a threat to traditional arts and crafts but rather a new and improved way of creating them. Central to the reform of IZC programming will be the need to think through how technology can be used effectively to enhance traditional culture. The TVET reform process will need to engage in this dialogue if it is to successfully bridge the preservation of traditional culture and student expectations of how traditional culture might evolve in a globalized world.

5.7 Bridging the Local and the Global

The need to think through how current technology might infuse IZC programming reflects a larger GNH issue. A unique characteristic of GNH is its rooting in a foundation of traditional

Bhutanese cultural values and practices. At the same time, results from multiple FGDs in this study demonstrated that an overwhelming preference among graduates and trainees is for a TVET system that is firmly influenced by global practices and trends in terms of curriculum content, machinery, and employment opportunities.

The Key Stakeholders Survey explored the connections between GNH, local Bhutanese values, and globalization in the context of TVET. Respondents were asked to what degree they agree that TVET education in Bhutan should incorporate Bhutanese values, draw upon international practices, and incorporate GNH. All three garnered similar results. Just over 87% of key stakeholder respondents agreed or strongly agreed that TVET should draw on international practices. The incorporation of local Bhutanese values into TVET was supported by 83.54%, and 84.81% agreed or strongly agreed that TVET should incorporate GNH. The last GNH question was also included in the Community Survey. A similar 84.11% of community respondents agreed or strongly agreed that TVET should incorporate GNH principles.

This current situation represents an interesting challenge for the reform process. How should TVET reform incorporate and balance GNH and its foundation in local Bhutanese values and practices with the demand for international best practices? How can the two be best integrated in a manner that is complementary rather than oppositional? This balancing of Bhutanese values with the best aspects of globalization is, in general, a common challenge in Bhutan (see for example Walcott, 2011; Schroeder, 2018). For TVET reform, it will require an intentional implementation approach that infuses decision-making at all levels of reform: policy, curriculum and pedagogy.

5.8 Responding to the Risk of Potential Capacity Drain

An immediate challenge related to balancing the local and the global is currently playing out in Bhutan. Indeed, the current character of the Bhutanese economy represents a potential external risk to TVET reform. According to participants in the focus group with industry partners, technical jobs in the economy remain low paying. Graduates in the tracer study identified low wages as a key reason for dissatisfaction with their employment. Government officials stated in their focus group that entrepreneurship, as an employment alternative, does not currently have an effective policy framework to support its growth. A reformed TVET system may therefore generate graduates with the necessary competencies to contribute to the Bhutanese economy but in the absence of good paying jobs or an effective policy context for entrepreneurial activities, they may choose to find employment abroad.

This situation already appears to be occurring in Bhutan to an alarming degree. While 2021 saw a dip in Bhutanese immigration to Australia, 2022 experienced what one government participant in a FGD termed “Australian fever.” Approximately 1.5% of Bhutan’s population moved to Australia in the 11 months preceding May 2023 alone (Qiu & Sharma 2023). Almost 3.5 % of the entire Bhutanese civil service voluntarily resigned over a 12-month period in 2021-2022, with most of these believed to have emigrated to Australia (Lamsang, 2022). Should this migration continue in

the longer term, there is a significant risk that many TVET graduates will leave Bhutan given the lack of well-paying job opportunities. The fact that every single graduate in the FGDs confirmed their interest in working in Australia or elsewhere suggests the risk to the TVET sector is very real. In essence, the TVET reform process could achieve its desired outcome of an effectively reformed system generating highly skilled graduates for the 4th Industrial Revolution only to have the risk of emigration undermine the influence of these TVET graduates on the Bhutanese economy. While increased emigration will provide individual Bhutanese with good employment opportunities elsewhere, Bhutan’s economy will lose out. While addressing this emigration risk is largely out of the scope of the TVET reform process, it is critical that the Royal Government of Bhutan address it in a meaningful way if the TVET reform process is to reach its full potential.

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