



Challenges of TVET Institutions in Generating Competent Female Graduates and their Employment: A Case Study in Sylhet Division

Mr Md Abu Naser Mojumder
Assistant Professor (CSE)
Sylhet Engineering College

Mr Nayan Kumar Nath
Lecturer (CSE)
Sylhet Engineering College

Mr Md Lysuzzaman
Lecturer (CSE)
Sylhet Engineering College



Directorate of Technical Education
Technical and Madrasah Education
Division Ministry of Education

Declaration

We hereby certify that the authors are responsible for the work. The entire study, in whole or in part, has never been submitted as a research proposal previously. The work that has been done since this research program's acceptance led to the paper's content. The research was adequately prepared by adhering to all ethics protocols and norms.

Mr Md Abu Naser Mojumder
Assistant Professor (CSE)
Sylhet Engineering College

Mr Md Lysuzzaman
Lecturer (CSE)
Sylhet Engineering
College

Mr Nayan Kumar Nath
Lecturer CSE)
Sylhet Engineering College

Acknowledgment

We would like to express our gratitude to **Dr Md Omar Faruque**, Additional Secretary and director general of the Directorate of Technical Education (DTE), as this study would not have been possible without his kind cooperation. It has been a great honor and privilege to work with DTE.

We would also like to thank **Engr Md Aktaruzzaman**, Director (Planning and Development), DTE, and **Engr Md Jaynal Abden**, Director (Admin), DTE, for their kind cooperation and encouragement, which assisted us in completing this study.

We are grateful to **Dr Khondaker Golam Moazzem**, Research Director, CPD, for his leadership and ongoing monitoring, as well as for providing vital information and help to finish the research. His continual advice and willingness to share his enormous knowledge helped us deeply comprehend this study and its manifestations and complete the specified tasks on time.

We want to thank **Ms Shahela Parvin**, Attached Officer (Research Cell), DTE, **Ms Madina Akter**, Attached Officer (Research Cell), DTE, and **Mr Tamim Ahmed**, Senior Research Associate, CPD, for their kind support and assistance in helping us finish our project successfully.

Our gratitude and appreciation also go to **Mr Abdur Rouf**, Principal of Sylhet Engineering College, and our colleagues for establishing the project, as well as those who have freely assisted us with their skills.

List of Abbreviation

BANBEIS	Bangladesh Bureau of Educational Information and Statistics
BTEB	Bangladesh Technical Education Board
FGD	Focus Group Discussion
GoB	Government of Bangladesh
HPI	Habiganj Polytechnic Institute
ILO	International Labor Organization
KII	Key Informant Interview
SME	Small and Medium Enterprise
MoU	Memorandum of Understanding
MPI	Moulovibazar Polytechnic Institute
SDG	Sustainable Development Goal
SPI	Sylhet Polytechnic Institute
SPSS	Statistical Package for Social Sciences
TVET	Technical Vocational Education and Training
UNDP	United Nations Development Programme

Table of Contents

<i>ABSTRACT</i>	6
SECTION 1: INTRODUCTION	7
SECTION 1.1 Background	7
SECTION 1.2 Statement of the problem	7
SECTION 1.3 Rationale of the study	7
SECTION 1.4 Objectives of the study	8
SECTION 2: LITERATURE REVIEW	9
SECTION 2.1 TVET scenario in Sylhet and worldwide.....	9
SECTION 2.2 Challenges of low enrolment of TVET.....	9
SECTION 2.3 Challenges of generating competent female graduates in TVET.....	10
SECTION 3: METHOD OF THE STUDY	12
SECTION 4: AN OVERVIEW OF THE SURVEYED RESPONDENTS	14
SECTION 4.1 Overview of surveyed students.....	14
SECTION 4.2 Overview of instructors reached.....	15
SECTION 4.3 Overview of industry experts reached.....	16
SECTION 5: DATA ANALYSIS	17
SECTION 5.1 Motivation for enrolment at TVET.....	17
SECTION 5.2 Reasons of female low enrolment at TVET in Sylhet region.....	17
SECTION 5.3 Challenges for generating female graduate at TVET in Sylhet region.....	27
SECTION 5.4 Challenges for female low employment at TVET in Sylhet region.....	30
SECTION 5.5 Other challenges faced by instructor in Sylhet region.....	31
SECTION 6: CONCLUSION & RECOMMENDATIONS	33
SECTION 6.1 Conclusion.....	33
SECTION 6.2 Policy Implication of the Research.....	33
SECTION 6.3 Recommendations.....	33
<i>References</i>	35
<i>Appendix</i>	37

ABSTRACT

This paper aims to investigate the challenges faced by female graduates of Technical and Vocational Education and Training (TVET) programs in acquiring competency in the Sylhet division. Additionally, it examines the institutional shortcomings in providing competent graduates and identifies the barriers faced by female TVET graduates when entering the job market in the same region. The study employs a qualitative research approach, utilizing interviews and surveys to gather data from TVET institutions, graduates, and employers. The study finds a number of challenges such as lack of financial ability, transport facility, accommodation facility, security issues, a higher distance of institution etc that impede female students' enrolment, competency and employment. The recommendations include increasing awareness-raising activities through collaboration among government officials, technical educators, religious leaders, mass media, and social media to raise awareness of girls' TVET education. Additionally, allocating a higher budget for TVET sectors, expanding scholarship programs and incentives for female students, and improving transport facilities were suggested to address institutional lacking.

Section 1

INTRODUCTION

1.1 Background

In this era of globalisation, technical and vocational education is crucial for survival. A nation can develop economically and technologically by producing skilled labour through technical and vocational education. Technical and vocational education and training (TVET) includes training in both occupations and means of subsistence, education, and skill development. The importance of educating girls in TVET cannot be overstated to achieve sustainable development goals (SDGs). Educated women can better make health-related decisions for themselves and their children.

1.2 Statement of the problem

Given the fact that without empowering women, a country cannot make expected progress, the government of Bangladesh has, over the years, undertaken many initiatives in women's education. As such, progress can be observed in the area of women's enrolment in school and college. For example, according to World Bank, secondary school enrolments for girls increased from 39% in 1998 to 67% in 2017. However, despite this progress, the true empowerment of women remains uncertain as the technical education sector, which is still viewed as a non-mainstream education sector, sees limited women enrolment. Bangladesh has 2180 private and 309 public Technical and Vocational (Independent) institutions. In public and private institutions, the total number of teachers is 36,745, whereas the number of female teachers is 7133, which is 19.4% of total teachers (according to our conducted survey). In public and private Technical and Vocational (Independent) institutions, the total number of students is 762,108; female students are 188,109, which is 24.6% of the total students. Some of the common challenges for female students in getting admitted to TVET include financial constraints, sexual harassment, early marriage, childbirth during the course of study, inadequate educational facilities/unqualified lecturers etc. (according to international journal of vocational and technical education).

Women in Bangladesh are already found to be lagging behind in terms of attaining technical jobs which require higher practical skills. Hence, if the lower enrolment of women students in TVET continues, both the employment and wage gap, in technical sectors, between men and women will keep increasing, eventually hindering women empowerment prospects in Bangladesh.

1.3 Rationale of the study

Although many studies have been undertaken targeting uncover the reasons behind this, few studies considered identifying the challenges in two dimensions: challenges for women in getting admitted to TVET and challenges for women in getting jobs after they graduate from TVET. Moreover, no study has been found that investigated this issue targeting the Sylhet region. Women empowerment in Sylhet needs special attention because it is said to have bright prospects in the SME sector; usually women in Bangladesh are highly concentrated in the SME sector. Because of the good inflow of remittance, the region is also experiencing higher investments, creating job opportunities in different sectors. At the moment, there are three public polytechnics in Sylhet Division. These are Sylhet Polytechnic Institute, Moulovibazar Polytechnic Institute, and Habiganj Polytechnic Institute. However, similar to the national scenario, female students enrol in these institutes more than their male counterparts. In these three polytechnic institutes, there are 7571 students. Among them, 847 are female, which is only 11.1% of all students but overall, in Bangladesh, women make about 23% of the TVET

institution. Also, out of 98 total teachers, only 16 are female teachers; that is only 16.2%. Therefore, it is necessary to find out the reason for low female enrolment in the TVET sector and their employment in the Sylhet region.

1.4 Objectives of the study

In view of the aforementioned context, we are interested in identifying obstacles behind their low enrollment in TVET in the Sylhet division and learning about the work situation and difficulties faced by female diploma engineers who graduated from the polytechnic institute of the Sylhet Division in this context. Although this study focuses on female diploma engineers at polytechnic institutes in the Sylhet Division, it is representative of the same industry and geographic region across the entire nation. The specific objectives of this study include:

- (a) To analyse the challenges that TVET female graduates are facing in the process of acquiring competency in the Sylhet division;
- (b) To examine the institutional lacking of providing competent graduates in Sylhet division;
- (c) To identify the witnesses of female TVET graduates entering the job market in the Sylhet division; and
- (d) To provide recommendations based on the findings.

Section 2

LITERATURE REVIEW

The research on TVET institutions' difficulties in producing competent female graduates and placing them in employment are examined. It aims to connect analyses of theoretical research from other academics' investigations. The percentage of women who enrol in undergraduate technical education programs is affected by a confluence of governmental, educational, social, and family factors (Ayonmike et al., 2014). Improving female student participants in the Philippines by Misola (2010). It shows how the female is empowered in TVET Education. Alongside female enrolment, their competency is also a key consideration of our research.

2.1 TVET scenario in Sylhet and worldwide

According to BANBEIS Report 2021, female enrolment in Bangladesh was 27.13%, Polytechnic 16.80%, TSC 19.98%, and TTC 34.27%. But according to world statistics, female enrolment in world TVET was 42.5%. Women's participation in education is on the rise worldwide; In tertiary education, enrolment is increasing faster for women than for men. (UN: TA3: Education - World's Women 2020).

The institutional database shows that girls' participation in technical education was extremely low compared to that of boys. Statistical report 2021 published by BANBEIS shows that girls' participation in technical education in Sylhet division was only 9%, and 8% of the teachers were female teachers. But as the importance of technical education has increased, and the participation of girls has increased as the number of educational institutions has increased, the expected technical education has not yet attracted girls.

2.2 Challenges of the low enrolment of TVET

Despite the geographical, political, economic, socio-cultural, and linguistic differences, the challenges identified for the enrolment of girls in technical and vocational education and training are quite similar. Many past studies in the country and abroad have found the challenges for low participation of girls in technical and vocational education and training, such as state/government challenges, education institutional challenges, family challenges, societal challenges, sociocultural challenges, employment challenges, etc.

2.2.1 Factors (gender, family status, home location) influence the enrolment of a female student in TVET

Opwora (2014) has shown in his study that most male students prefer Engineering and technological courses, and very few female students prefer engineering courses (Opwora, 2014). He also showed that most of the enrolled female students come from the middle-class and rural areas. Lack of social acceptance for women to work alongside men. Socio-cultural barriers and constraints, attitudes, and sex stereotyping by parents promote the view that technical jobs and training programs are the exclusive preserve of males (Islam, 2014).

2.2.2 Institutional challenges of the low enrolment of TVET

Previous research has identified some educational institution problems with the participation of girls in technical and vocational education and training. Infrastructural problems, especially hostel facilities, Sanitary facilities for girls, are one of them (Ali, 2015, Islam, 2014; Oluniyi et al., 2015), and Poor facilities: machines, tools, and equipment (Oluniyi et al., 2015), and training materials (S Ali, 2015). Lack of qualified teachers is one of the main problems of TVET institutions, e.g., Ali, 2015; Oluniyi et al., 2015. And another main problem is an industry-institute linkage (Ali, 2015).

2.2.3 State barriers to low female student enrolment in TVET

Previous research has shown that there are many state or governmental challenges to girls' participation in technical and vocational education and training. Although these challenges are somewhat different due to geographical, political, and economic reasons, their main points were almost the same. Lack of proper amenities and infrastructural materials had equally not helped out in boosting the participation of women in technical and vocational education programs (Ediaghonya et al., 2012). Islam (2014) holds that in Bangladesh, One of the biggest obstacles to TVET is a shortage of funding, which renders it challenging to acquire modern equipment, update it frequently, recruit qualified assessors and trainers, support them in updating their skills, purchase the top training facilities, instruments, and technology for practical training etc.

2.2.4 Family challenges of the low enrolment of female students in TVET

Female students tend to face their main problems usually from the family. Economic problems, especially parental poverty and parental perception of costs/benefits of girls' education Obstacles to girls' education (BANBAIS-2015; Oluniyi et al., 2015; Ayonmike et al., 2014). Religious barriers and child marriage are considered barriers to women's education (Ayonmike et al., 2014; Oluniyi et al., 2015).

2.2.5 Socio-cultural challenges of low enrolment of female student in TVET

Among the challenges of the low enrolment of females in TVET, socio-cultural barriers are the most significant. The poor image status of TVET in society is that it is considered a second-class job, and TVET is only for the lowest class and a last resort option for youth and for people of low intelligence, low achievers, and low-status occupation (Akipotohwo et al. 2016; Islam, 2014; Oluniyi et al., 2015). According to a (BANBEIS, 2021) report, female students face problems inside and outside the home, and most village parents agree with it, and some urban parents disagree with it. Early in school life, female students usually receive barriers from their community. The female student pointed out that eve teasing, negligence of girls' education from community leaders, social superstitions, and religious misconceptions were the main challenges for low enrolment in TVET.

2.3 Challenges of Generating competent female graduates in TVET

Competencies are measurable or observable knowledge, skills, abilities, and other characteristics critical to job performance. Competencies can vary depending on the job and the level of responsibility, and they are often used to assess and evaluate the performance of employees. Some examples of competencies include communication skills, problem-solving ability, technical expertise, teamwork, leadership, and adaptability. By developing and enhancing their competencies, individuals can improve their performance and increase their chances of success in their careers.

Most TVET programs now employ a key concept of competency-based education and training (CBET). It promotes the programs' quality and ensures their sustainability in today's dynamically complex learning and working environment. Consistent with the rationale behind TVET, CBET's prime focus is on lifelong learning, holistic and integrated pedagogy, whole-person development, multi-skilling, flexibility, and a world-class workforce (Harris et al., 1995). Several studies on skills development issues have been accomplished which intended to identify skills gaps (BBS, 2015b), construct youth skills profiles (Ahmed et al., 2012), explore the challenges of skills development initiatives (Newaz et al. 2013), evaluate the impact of skills program (Bhattacharjee et al., 2016; Rahman et al., 2017) and so on. Despite challenges, TVET no doubt has labour market potential and encompasses the ability to facilitate economic growth, reverse poor labour supply and underperformance, and minimize unemployment and

underemployment through the delivery of employability skills. Moreover, TVET fosters gender equality campaigns across policy documents (Bakar, 2011).

Rahman et al. (2013) analyse the trends, motivators, and barriers affecting the involvement of women in Bangladesh. Their primary conclusions were as follows: a) Education and resources positively impact women's participation in self-employment. The proportion of young children and male earners has a detrimental impact. Lack of resources is favourably correlated with women working part-time while having a small kid, being married, the number of male earners, and education being adversely correlated. All variables had the same impact on the proportion of women in paid employment, with the exception of education, which has a positive impact.

Numerous studies have been done on female enrolment and employment in various nations around the world, depending on those nations or individual viewpoints. However, Bangladesh has seen a small number of studies on this subject. Hasan et al. (2022) analyse the difficulties in producing competent graduates in the government polytechnic institutes of the Sylhet Division, while Hasan et al. (2021) examined the difficulties and solutions in enrolling female students in TVET in the Bangladeshi district of Jashore. However, no such research is available regarding female TVET graduates' enrolment and employment. In our study, we will discuss the variables that influence the employment situation for women and the challenges they face in developing their skills.

Section 3

METHOD OF THE STUDY

The study has been conducted using mix method. Both primary and secondary data have been collected. All four districts of Sylhet division have been included in the study. We have focused on three polytechnic institutions in this region. Survey has been conducted with students of these polytechnic institutions. Focus Group Discussions (FGDs) has been conducted with teachers. KIIs have been conducted with various industrial officials. In our study, we have utilized purpose sampling as a means of selecting and collecting data. Purpose sampling allows us to carefully choose samples that are directly relevant to our research objectives. By employing purpose sampling, we ensure that the collected data is representative and aligned with the specific goals of our study.

Primary Survey: A survey has been conducted on students from three polytechnic institutes in the Sylhet region to find out their perceptions regarding female students' barriers to low enrolment and low employment. For our survey, we have selected 111 students from three polytechnics. We have chosen 54 from Sylhet Polytechnic Institute, 19 from Moulovibazar Polytechnic Institute, and 38 from Habiganj Polytechnic Institute. Among them, 71 are female, and 40 are male. Purposive sampling was used to pick the number of female students since we wanted to select mostly female students and only a few male pupils from three (03) polytechnic institutes.

Focus Group Discussions (FGDs): Focus Group Discussions (FGDs) have been conducted with teachers. We have randomly selected 32 teachers from three polytechnic institutes in the Sylhet division for FGDs.

Key Informant Interviews (KIIS): Key informant interviews have been conducted with various industrial officials to understand female student skill requirements. We have selected five industrial officials from Sylhet, Moulvibazar, and Habiganj.

Table -3.1: The overall summary of the methodology

Research Design and Types	Mixed Method
Research Region	<u>03 Polytechnic Institutes in Sylhet division</u> 1.Sylhet Polytechnic Institute 2.Moulovibazar Polytechnic Institute 3.Habiganj Polytechnic Institute
Sources Of Data, Population, and Sample Size (148)	<ol style="list-style-type: none"> 1. Students of Polytechnic Institutions in Sylhet division <ol style="list-style-type: none"> a) Sylhet Polytechnic Institute=54 b) Moulovibazar Polytechnic Institute = 19 c) Habiganj Polytechnic Institute=38 2. Teachers of Polytechnic Institutions in Sylhet division <ol style="list-style-type: none"> a) Sylhet Polytechnic Institute=13 b) Moulovibazar Polytechnic Institute = 11 c) Habiganj Polytechnic Institute=08 3. Industry Employer of Sylhet division=5 4. Documents Review
Sampling Technique	Purposive Sampling

Research Design and Types	Mixed Method
Data Collection Tools	<ol style="list-style-type: none"> 1. Teachers And Female Students = Structured Questionnaires 2. Industry Employer = Structured Questionnaires
Data Collection Technique	<ol style="list-style-type: none"> 1. Face To Face 2. Survey
Data Analysis and Processing	SPSS

Questionnaires have been used for data collection. Questionnaires have been added in the appendix part in this paper. Three sections make up the questionnaires. The population's name, gender, status, and other identifying characteristics are provided in the first section. The second section includes a number of remarks about the labour market potentials of polytechnic institutions in line with descriptive rating scales that detail the difficulties and institutional deficiencies at polytechnic institutes. SPSS (Statistical Packages for Social Scientists) software has been used for the data analysis of this study. Responses from section B of the questionnaires range from 5 to 1. Numeric rating scale is as follows: Strongly Agree = 5, Agree = 4, Not sure =3, Disagree (D) = 2, strongly Disagree =1. Analysing through SPSS software, we can know the percentages of the population's responses to every research question.

Section 4

AN OVERVIEW OF THE SURVEYED RESPONDENTS

4.1 Overview of Surveyed Students

In our research, we have chosen students from three Polytechnic Institutes in the Sylhet division to fulfill our objective. We have selected 111 pupils where we have chosen 34.2% from Habiganj Polytechnic Institute (HPI), 17.1% from Moulvibazar Polytechnic Institute (MPI), and 48.6% students from Sylhet Polytechnic Institute (SPI) randomly. Among 111 students, we randomly selected 64% female and 36% male, as shown in table-4.1.1. The number of female students have been selected employing purposive sampling where we wanted to select as many as female students with a few male students.

Table 4.1.1: Overview of the sample distribution of three Polytechnic (N = 111)

Category	Item	Frequency (%)
Institute wise	Habiganj Polytechnic Institute (HPI)	34.2
	Moulvibazar Polytechnic Institute (MPI)	17.1
	Sylhet Polytechnic Institute (SPI)	48.6
Gender wise	Male	36.0
	Female	64.0

Source: Primary data collected from three Polytechnic Institutions in Sylhet division (2023).

We find the overall mean income of a student's family of three Polytechnic Institute in Sylhet Division is Tk 22,818, which is very low comparing the current situation. The family income of Habiganj Polytechnic Institute (HPI) students is also very low as their mean income is 18,684. According to the findings from the FGDs, it appears that the lower socioeconomic status of families, as reflected in their income levels, is a potential factor influencing the limited participation in the TVET sector.

Table 4.1.2: Overview of the mean income of female students' families (N = 111)

Category	Item	Mean Income (Tk)
Overall		22,818
Institute wise (Mean Taka)	Habiganj Polytechnic Institute (HPI)	Overall -18,684
		Male-18,666
		Female-18,750
	Moulvibazar Polytechnic Institute (MPI)	Overall -26,944
		Female-26,944
	Sylhet Polytechnic Institute (SPI)	Overall -24,351
Male-29,400		
Female-23,204		
Gender wise (Mean Taka)	Male	17,350
	Female	16,257

Source: Primary data collected from three Polytechnic Institution in Sylhet division (2023).

Another significant factor that perhaps contributing to the low enrolment of female students in TVET institutes within the Sylhet division is the issue of distance. Through discussions with students from three Polytechnic Institutes, it became evident that surveyed female students face

challenges in gaining admission to remote TVET institutes. Instead, they predominantly secure admission in the nearest TVET institute available.

Table 4.1.3: Overview of institution distance from student’s home (N = 111)

Category	Item	Mean Distance (Km)
Overall		52
Institute wise (mean km)	Habiganj Polytechnic Institute (HPI)	Overall -97
		Male-106
		Female-64
	Moulvibazar Polytechnic Institute (MPI)	Overall -63
		Female-63
		Overall -14
	Sylhet Polytechnic Institute (SPI)	Male-53
		Female-5

Source: Primary data collected from three Polytechnic Institution in Sylhet division (2023).

4.2 Overview of Surveyed Instructors

As previously said, we gathered information from 32 instructors and teachers from three polytechnic institutes, with 21% coming from HPI, 34.4% from MPI, and 43.8% from SPI. These samples have a male-to-female ratio of 81.3% to 18.3% (Table 4.2.1)

Table 4.2.1: Overall distribution of sample (N = 32)

Category	Item	Frequency (%)
Institute wise	Habiganj Polytechnic Institute (HPI)	21.9
	Moulvibazar Polytechnic Institute (MPI)	34.4
	Sylhet Polytechnic Institute (SPI)	43.8
Gender wise	Male	81.3
	Female	18.8

Source: Primary data collected from three polytechnic institutes in Sylhet division (2023)

In our survey, we find the overall mean years of experience of instructors of three Polytechnic Institute in Sylhet Division is 9 years, and Female instructors (11 years) are more experienced than males (9 years), which indicates we can get valuable data and opinions from them (table-4.2.2).

Table 4.2.2: Mean years of experience of Instructors (N = 32)

Category	Item	Mean (in years)
Overall		9.0
Institute wise	Habiganj Polytechnic Institute (HPI)	9.0
	Moulvibazar Polytechnic Institute (MPI)	8.0
	Sylhet Polytechnic Institute (SPI)	10.0
Gender wise	Male	9.0
	Female	11.0

Source: Primary data collected from three polytechnic institutes in Sylhet division (2023)

Table 4.2.3: Mean years of experience for teachers of Habiganj Polytechnic Institute

Item	Male	Female	Overall
Mean years of experience (in years)	6.0	12.0	9.0

Source: Primary data collected from HPI in Sylhet division (2023)

As our research is primarily focused on females, we can obtain more pertinent information and opinions from them in the case of HPI (Table 4.2.3), where on average female instructors have more experience (12.0) than male instructors (6.0).

Table 4.2.4: Mean years of experience for teachers of Moulvibazar Polytechnic Institute

Item	Male	Female	Overall
Mean years of experience (in years)	9.0	8.0	8.5

Source: Primary data collected from MPI in Sylhet division (2023)

A noteworthy situation is the fact that women have twice as much experience as men on average. In contrast to HPI, where male teachers have slightly more expertise than female instructors and their average years of experience are 9 and 8, this situation is the opposite for MPI (Table 4.2.4).

Table 4.2.5: Mean years of experience for teachers of Sylhet Polytechnic Institute (SPI)

Item	Male	Female	Overall
Mean years of experience (in years)	10.0	15.0	12.5

Source: Primary data collected from SPI in Sylhet division (2023)

In the case of SPI (Table 4.2.5), the situation is remarkably similar to HPI; the mean number of years of experience for female instructors is more than that of their male co-workers, which is ten years for men and 15 years for women.

4.3 Overview of Surveyed Industry Experts

We have selected 05 pupils as industry experts. The men outnumber females by a 1:4 ratio among the respondents. Most of the respondents are from Sylhet and Moulvibazar, and roughly 20% originate from Habiganj.

Section 5

DATA ANALYSIS

5.1 Motivation for enrolment at TVET

According to Table 5.1.1, nearly one in every two students is driven by their parents to accept themselves. In the case of listening to their parents, the male percentage is 55%, and the female percentage is more than 45%. The table also shows that students on the rural side, such as those in Habiganj, are more likely to believe their parents' remarks. Both male and female students support much of their own choice. Relatives inspire female students in 32.5% of cases, while male students are motivated by relatives in almost half of cases.

Table 5.1.1: Who Motivated students to get themselves admitted to TVET? (N = 111)

Item	Overall (% of cases)	Male (% of cases) (N=40)	Female (% of cases) (N=71)	SPI (% of cases) (N= 54)	MPI (% of cases) (N= 19)	HPI (% of cases) (N= 38)
Parents	49.1	55	45.7	38.9	44.4	65.8
Brothers/Sisters	11.8	10.0	12.9	14.8	16.7	5.3
Relatives	17.3	32.5	8.9	9.3	-	36.8
Own willing	35.4	47.5	28.6	37.1	33.3	34.2
Friends	9.1	15.0	5.7	3.7	5.6	18.4
Teacher	4.5	2.5	5.7	7.4	5.6	-
Social/Mass Media	2.7	5.0	1.4	5.6	-	-
Others	2.7	5.0	1.4	3.7	5.6	-

Source: Primary data collected from three Polytechnic Institution in Sylhet division (2023).

5.2 Reasons for low female enrolment at TVET in Sylhet region

5.2.1 Student's Perception

There are too many barriers both male and female students face in getting admitted to TVET. Based on the survey, we found that the main barrier to getting admitted to TVET Institute is a lack of financial abilities. Table 5.2.1.1 shows this is the barrier for 81.1% of students overall, 58.8% at Sylhet Polytechnic Institute, 100% at Moulvibazar Polytechnic Institute, and 91.2% at Habiganj Polytechnic Institute. Another barrier to low female enrolment is pressure for early marriage at Moulvibazar Polytechnic Institute. They also shared 11.3% of other issues and challenges with us. This percentage for females is 28.6%. In addition, another key barrier to getting admitted into TVET is uncertainty regarding their employment future. According to a few surveyed students, they do not know their future carrier in the TVET sector.

Table 5.2.1.1: Types of barriers (location wise) faced in getting admitted in TVET in Sylhet division surveyed student's perception (N= 111)

Item	Overall (% of cases)	SPI (% of cases) (N= 54)	MPI (% of cases) (N= 19)	HPI (% of cases) (N= 38)
Parents were not positive	5.7	-	-	8.8
Lack of financial abilities	81.1	58.8	100.0	91.2
Pressure for early marriage	1.9	-	50.0	-
Pressure for entering job market skipping study	1.9	5.9	-	-
Others	11.3	35.3	-	-

Source: Primary data collected from three Polytechnic Institution in Sylhet division (2023).

From table 5.2.1.2, we found 87.5% of male and 71.4% of females faced the barrier of lack of financial abilities to admit to TVET institute. This implies that on a relative scale, financial issues are a big barrier for male students than their female counterparts.

Table 5.2.1.2: Types of barriers (Gender wise) faced in getting admitted in TVET in Sylhet division surveyed student's perception (N= 111)

Item	Male (% of cases) (N=40)	Female (% of cases) (N=71)
Parents were not positive	9.4	-
Lack of financial abilities	87.5	71.4
Pressure for early marriage	-	4.8
Pressure for entering job market skipping study	3.1	-
Others	-	28.6

Source: Primary data collected from three Polytechnic Institution in Sylhet division (2023).

Institutional Challenges in surveyed students' observation:

In our survey of three polytechnic institutes in Sylhet division, 93.6% of students and 90% of female students assume that there is a shortage of individual institutes for female students (Table 5.2.1.3). According to DTE, 50 Govt. polytechnic institutes are in Bangladesh. Among them, 4 Govt. Women's polytechnic institutes: Chattogram Mohila Polytechnic Institute, Dhaka Mohila Polytechnic Institute, Khulna Mohila Polytechnic Institute and Rajshahi Mohila Polytechnic Institute.

Table 5.2.1.3: Types of challenges (institutional) for low female enrolment in TVET in Sylhet division surveyed student's perception (N = 111)

Item	Overall (% of cases)	SPI (% of cases) (N= 54)	MPI (% of cases) (N= 19)	HPI (% of cases) (N= 38)	Male (% of cases) (N=40)	Female (% of cases) (N=71)
Shortage of individual institutes for the female students	93.6	90.7	88.9	100.0	100.0	90.0
Inadequate scholarship scheme and incentive	78.9	72.2	61.1	97.3	87.2	74.3
Limited availability of higher studies opportunities	72.5	50.0	83.3	100.0	87.2	64.3
Insufficient sanitary facilities in your institute	64.2	63.0	88.9	54.1	46.2	74.3
No Industry institute linkage with your Institute	71.6	75.9	88.9	56.8	69.2	72.9
Inadequate Job opportunity available near to own home	55.0	70.4	72.2	10.8	17.1	75.7
Lack of required learning material (textbooks, Multimedia Projector, Smart Board, Internet)	50.5	64.8	16.7	43.2	51.3	50.0
Methods of teaching do not help you to be self-confidence	45.9	22.2	5.6	78.4	61.5	37.1
Inadequate accommodation/hostel facilities	80.7	88.9	38.9	59.5	59.0	92.9

Source: Primary data collected from three Polytechnic Institution in Sylhet division (2023).

Another challenge is the inadequate scholarship schemes and incentives. Most of the student's family is so poor. They are not able to pay the teaching cost of those students. So, scholarship schemes and incentives are important to bear their teaching cost. But 78.9% of students and 74.3% of female students assume that female scholarship schemes and incentives are inadequate. Besides this, 87.2% of male students think so.

In general education, there are so many opportunities to get higher studies. But in our survey, 72.5% of students and 64.3% of female students of three polytechnic institutes think higher education opportunities are limited in the TVET sector.

Sanitary facilities are not available in all educational institutes; besides this, it is alarming for female students. 74.3% of female students of three polytechnic institutes of Sylhet division and 88.9% of students of Sylhet Polytechnic institute show that insufficient sanitary facilities exist in their institute.

Industry institute linkage is essential to make the student competent in the job market. Here, 28.4% of students of all three polytechnic institutes indicate that there are available Industry institute linkage with their Institute. We talked with them; they answered last semester, they went to the industry to fulfil their diploma course. But 71.6% of students say there is no Industry institute linkage with their Institute, which is high for all three polytechnics, 75.9% in Sylhet Polytechnic Institute, 88.9% in Moulvibazar Polytechnic Institute and 56.8% in Habiganj Polytechnic Institute.

Another main challenge for females of that polytechnic institute is inadequate accommodation/hostel facilities. Overall, 80.7% of students and 92.9% of female students are facing inadequate accommodation/hostel facilities in their institution in Sylhet division. (Table 5.2.1.3).

Surveyed Students Individual Challenges:

Security concerns pose a significant obstacle to the enrollment of female students in the TVET sector within the Sylhet division. According to a survey conducted among students, particularly focusing on female participants, 69.7% of the respondents identified security issues as a major reason for the low enrollment of females in TVET programs. This concern is particularly pronounced in rural areas, such as the Habiganj Polytechnic Institute, where the percentage rises significantly to 97.3%. Furthermore, the survey revealed that 92.3% of male students believe that there are security challenges for female students outside their homes.

Females are not interested in going far to get a job. But there are no available jobs near their home. 75.5% of female students say there are Inadequate Job opportunities available near to own homes.

Table 5.2.1.4: Types of challenges (individual) for female enrolment in TVET in Sylhet division surveyed student's perception (N = 111)

Item	Overall (% of cases)	SPI (% of cases) (N= 54)	MPI (% of cases) (N= 19)	HPI (% of cases) (N= 38)	Male (% of cases) (N=40)	Female (% of cases) (N=71)
Parents/families are not able to bear the educational cost of faraway TVET institutions	33.0	42.6	38.9	16.2	10.3	45.7
Parents are not eager to spend money for your educational expenditure	22.0	7.4	44.4	32.4	20.5	22.9
Obstacle to attend classes regularly due to distance	65.1	57.4	72.2	73.0	76.9	58.6
Security problems outside the home	69.7	63.0	33.3	97.3	92.3	57.1

Face any fear of threat and sexual harassment	60.6	48.1	22.2	97.3	84.6	47.1
I do not feel interested to learn	11.0	9.3	77.8	5.4	5.1	14.3

Source: Primary data collected from three Polytechnic Institutions in Sylhet division (2023).

In our survey, we find all Govt. In Polytechnic institutes, 54.3% of female students' Parents/families can bear the educational cost of faraway TVET institutions and 77.1% of female students' Parents are eager to spend money for students' educational expenditure. But due to other challenges, female student enrolment is low in TVET institutions in Sylhet division which are discussed above and shown in summary in table-5.2.1.4.

5.2.2 Perception of instructors

The respondent (N = 32) opinions were taken for considered twenty-eight liker items statement related to state, institutional, family, socio-cultural and employment factors of low enrolment and challenges of competent female graduates in TVET as Polytechnic institutes at Sylhet Division in Bangladesh such as shortage of individual institute for the female students, Poor funding of vocational-technical education programs, poor scholarship scheme and incentive for TVET female students, responses range was namely: strongly disagree (1), disagree (2), neutral (3), agree (4) and strongly agree (5). Respondents were given the best opinions that suited them. The following decisions have been made in the case of data analysis and results. There are too many obstacles for students, particularly female students, to enrol in TVET institutions. While 83% of female instructors believe there is a shortage of individual institutes for female students, only 50% of male instructors disagree with this assumption in our survey of three polytechnic institutes in the Sylhet division. With the exception of HPI, study participants noted that the remaining institutions were viewed as moderate barriers to female students' enrollment and competency acquisition in TVET at the Sylhet division. However, the majority of these institutes' average female instructors (83%) concur that a lack of individual institutes is a major factor in the enrollment of women and the challenges they face in achieving competency.

Table 5.2.2.1: Perception on “shortage of individual institute for Female students”

	Overall Frequency (%) (N=32)	Male Teachers (%) (N=26)	Female Teachers (%) (N=06)	SPI (%) (N=13)	MPI (%) (N=11)	HPI (%) (N=08)
Strongly Disagree	0.0	0.0	0.0	0.0	0.0	0.0
Disagree	50.0	57.7	16.7	85.7	36.4	0.0
Not sure	0.0	0.0	0.0	0.0	0.0	0.0
Agree	37.5	26.9	83.3	7.1	36.4	100.0
Strongly agree	12.5	15.4	0.0	7.1	27.3	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Primary data collected from three polytechnic institutes in Sylhet division (2023)

It should be emphasized that, on average, practically all HPI instructors (100%) believe individual institution shortages are the underlying problem, whereas SPI professors (85.7%) share the opposite opinion. There are some female polytechnic institutes in Bangladesh, according to the FGD, with instructors at the time. But these institutions have high enrolment rates and dropout rates. (Table 5.2.2.1)

Adequate funding for programs in vocational-technical education is another issue. On average, 53.1% of instructors believe that TVET sectors have enough funding, with 50% female and 53.1% of male instructors believing that TVET has enough funding opportunities. Except for HPI (71.4% of study participants disagree with it), the remaining factors were cited as moderate challenges for enrolling and developing the skills of female students in TVET at Sylhet division due to insufficient funding in TVET sectors. While instructors from other institutes view this problem as moderate (SPI 64.3% agree, MPI 54.5% agree), instructors from HPI believe that inadequate funding in TVET sectors is one of the causes. At the time, FGD with instructors' observation was that although the government has launched some projects to provide funding for TVET institutes. Still, these are inadequate to encourage female students to admit to TVET institutions (Table 5.2.2.2).

Table 5.2.2.2: Perception on “adequate funding in vocational-technical education programs”

	Overall Frequency (%) (N=32)	Male Teachers (%) (N=26)	Female Teachers (%) (N=06)	SPI (%) (N=13)	MPI (%) (N=11)	HPI (%) (N=08)
Strongly Disagree	0.0	0.0	0.0	0.0	0.0	0.0
Disagree	40.6	38.5	50.0	35.7	27.3	71.4
Not sure	0.0	0.0	0.0	0.0	0.0	0.0
Agree	53.1	53.8	50.0	64.3	54.5	28.6
Strongly agree	6.3	7.7	0.0	0.0	18.2	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: primary data collected from three polytechnic institutes in Sylhet division (2023)

Although the government has launched some projects to provide funding for TVET institutes, these are not sufficient to encourage female students to be admitted to TVET institutions, according to the instructors' observations at the time of the focus group discussion (Table 5.2.2).

Like students, the instructors also see the inadequate scholarship programs and incentives as a barrier to women's enrolment in TVET. The majority of the students' families are extremely struggling. They are unable to cover the pupils' tuition costs. So, scholarship programs and incentives are crucial to cover their tuition costs. 53.1% of instructors in general and 66.7% of female instructors believe that the female scholarship program and incentive are insufficient. Except for SPI (35.7% inadequate), study participants commented that the remaining factors were considered serious barriers to enrolment and competency acquisition for female students in TVET at the Sylhet division due to insufficient scholarship programs and incentives for female students in TVET sectors. (Table 5.2.2.3)

Table 5.2.2.3: Are scholarship schemes and incentives for female students inadequate?

	Overall Frequency (%) (N=32)	Male Teachers (%) (N=26)	Female Teachers (%) (N=06)	SPI (%) (N=13)	MPI (%) (N=11)	HPI (%) (N=08)
Highly adequate	0.0	0.0	0.0	0.0	0.0	0.0
Adequate	25.0	23.1	33.3	35.7	18.2	14.3

	Overall Frequency (%) (N=32)	Male Teachers (%) (N=26)	Female Teachers (%) (N=06)	SPI (%) (N=13)	MPI (%) (N=11)	HPI (%) (N=08)
Not sure	0.0	0.0	0.0	0.0	0.0	0.0
Inadequate	53.1	50.0	66.7	35.7	54.5	85.7
Poor	21.9	26.9	0.0	28.6	27.3	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Primary data collected from three polytechnic institutes in Sylhet division (2023)

While instructors from other institutes view this problem as serious, SPI instructors believe that insufficient scholarship programs and incentives in the TVET sectors are not the primary causes. At the time of the FGD with the instructors, it was noted that despite the government's efforts to provide scholarships and other incentives for female TVET students, these initiatives were insufficient to draw female students to TVET institutions.

The insufficient admission quota for female students at those polytechnic institutes is another major issue for female students. Overall, 70.9% of instructors and 83.3% of female instructors believe that the insufficient admission quota for female students in TVET sectors is one of the challenges for enrolling and developing competency of female students in TVET at Sylhet division. However, the majority of female instructors concur that this is one of the primary causes rather than men. It should be emphasized that whilst SPI instructors (50%) see the problem as moderate, MPI instructors (81.8%) and HPI instructors (100%) see the problem as significant.

Table 5.2.2.4: Is there an adequate percentage (%) of female students admitted?

	Overall Frequency (%) (N=32)	Male Teachers (%) (N=26)	Female Teachers (%) (N=06)	SPI (%) (N=13)	MPI (%) (N=11)	HPI (%) (N=08)
Enough	0.0	0.0	0.0	0.0	0.0	0.0
Sufficient	18.8	19.2	16.7	35.7	9.1	0.0
Not sure	3.1	3.8	0.0	0.0	9.1	0.0
Insufficient	71.9	69.2	83.3	50.0	81.8	100.0
Poor	6.3	7.7	0.0	14.3	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Primary data collected from three polytechnic institutes in Sylhet division (2023)

During the FGD with the instructors, they noted that while DTE and TEC have policies for female quotas for TVET institutes, they are insufficient to stimulate the admission of female students (Table 5.2.2.4).

For female enrolment and competency acquisition, proper planning is a crucial concern. Participants in our study noted that, with one exception, the remaining issues were viewed as modest and related to female students' ability to enrol in and complete TVET programs at the Sylhet division due to effective planning and monitoring of gender equality in TVET sectors. Overall, 55% of teachers, on average, and 66.7% of female instructors disagree with this position. However, 71.4% of HPI instructors are happy with how gender equality is being planned for and monitored. However, professors from other institutions are not happy with the current procedure. While the government has taken some steps to monitor planning and adequate monitoring of gender equality of TVET institutes, these steps are insufficient to attract

female students to admission to TVET institutions, according to instructors at the time of the FGD (Table 5.2.2.5).

Table 5.2.2.5: Perception on “proper planning and adequate monitoring for gender equality”

	Overall Frequency (%) (N=32)	Male Teachers (%) (N=26)	Female Teachers (%) (N=06)	SPI (%) (N=13)	MPI (%) (N=11)	HPI (%) (N=08)
Strongly agree	6.3	7.7	0.0	14.3	0.0	0.0
agree	37.5	38.5	33.3	28.6	27.3	71.4
Not sure	0.0	0.0	0.0	0.0	0.0	0.0
disagree	37.5	30.8	66.7	35.7	54.5	14.3
Strongly disagree	18.8	23.1	0.0	21.4	18.2	14.3
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Primary data collected from three polytechnic institutes in Sylhet division (2023)

Religious superstition and fundamentalism are also factors among parents, as they are unwilling to send their female children to study far away from their homes. In our study, more than 70% of instructors commented that it is one of the significant enrolment challenges in acquiring competency for female students at TVET in the Sylhet division. Notably, 57.1% of instructors in HPI thought it was a more serious issue than other polytechnics (Table 5.2.2.6).

Table 5.2.2.6: Perception on “religious issues discourage parents not to send her girl faraway TVET institution”.

	Overall Frequency (%) (N=32)	Male Teachers (%) (N=26)	Female Teachers (%) (N=06)	SPI (%) (N=13)	MPI (%) (N=11)	HPI (%) (N=08)
Strongly Disagree	6.3	7.7	0.0	7.1	0.0	14.3
Disagree	15.6	15.4	16.7	14.3	27.3	0.0
Not sure	3.1	3.8	0.0	7.1	0.0	0.0
Agree	40.6	46.2	16.7	50.0	36.4	28.6
Strongly agree	34.4	26.9	66.7	21.4	36.4	57.1
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Primary data collected from three polytechnic institutes in Sylhet division (2023)

Lack of awareness among parents, especially village people, about TVET is a significant issue as 60% of participants and 70% of female instructors commented that the rest considered moderate challenges of enrolment and acquiring competency of female students in TVET at Sylhet division due to unawareness of People/parents, especially village people/parents. At the time of FGD, instructors' observation was that although perception is now changing, the overall scenario is not favourable to encourage female students to admit to TVET institutions. (Table 5.2.2.7)

Table 5.2.2.7: Perception on “People/parents, especially village people/parents aware of TVET”

	Overall Frequency (%) (N=32)	Male Teachers (%) (N=26)	Female Teachers (%) (N=06)	SPI (%) (N=13)	MPI (%) (N=11)	HPI(%) (N=08)
Strongly Disagree	21.9	15.4	50.0	7.1	18.2	57.1
Disagree	37.5	38.5	33.3	42.9	27.3	42.9
Not sure	0.0	0.0	0.0	0.0	0.0	0.0
Agree	21.9	23.1	16.7	14.3	45.5	0.0
Strongly agree	18.8	23.1	0.0	35.7	9.1	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Primary data collected from three polytechnic institutes in Sylhet division (2023)

Due to social issues and a lack of awareness, parents are not interested in bearing educational expenses. In our research, above 60% of participants and almost 100% of female instructors commented it is a severe issue for enrolment and acquiring competency of female students in TVET at Sylhet division due to the lack of eagerness of Parents to expend money for educational expenditure for female students in TVET sectors. 100% of instructors from HPI opine that the lack of eagerness of Parents to pay money for educational costs for female students in TVET sectors is a significant cause. In contrast, instructors from other institutes regard this issue as moderate. At the time of FGD with instructors, their observation is that although the government has launched some programmes to raise awareness for parents, these are not adequate to attract parents for female students to admit their children in TVET institutions (Table 5.2.2.8).

Table 5.2.2.8: Perception on “parents eager to expend money for educational expenditure for female students”

	Overall Frequency (%) (N=32)	Male Teachers (%) (N=26)	Female Teachers (%) (N=06)	SPI (%) (N=13)	MPI (%) (N=11)	HPI(%) (N=08)
Strongly Disagree	12.5	11.5	16.7	7.1	27.3	0.0
Disagree	50.0	42.3	83.3	57.1	27.3	71.4
Not sure	3.1	3.8	0.0	0.0	9.1	0.0
Agree	28.1	34.6	0.0	28.6	27.3	28.6
Strongly agree	6.3	7.7	0.0	7.1	9.1	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Primary data collected from three polytechnic institutes in Sylhet division (2023)

Social dignity is another crucial issue for our country. In our study, 62.6% of instructors commented that it is a serious cause, but 83.3% of female instructors thought that this is not a serious issue. It is to be noted that above 50% of instructors from MPI express their view that it is not a serious issue, but instructors from other polytechnics consider it a major issue. The

majority of female instructors consider this issue more severe than their male counterparts. At the time

Table 5.2.2.9: Perception on 'lower social dignity about TVET affect student and her family'

	Overall Frequency (%) (N=32)	Male Teachers (%) (N=26)	Female Teachers (%) (N=06)	SPI (%) (N=13)	MPI (%) (N=11)	HPI (%) (N=08)
Strongly Disagree	0.0	0.0	0.0	0.0	0.0	0.0
Disagree	34.4	23.1	83.3	14.3	45.5	57.1
Not sure	3.1	3.8	0.0	7.1	0.0	0.0
Agree	43.8	50.0	16.7	42.9	45.5	42.9
Strongly agree	18.8	23.1	0.0	35.7	9.1	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Primary data collected from three polytechnic institutes in Sylhet division (2023)

FGD with instructors' observation is that although the government has launched some programmes to raise parents' awareness, these are inadequate to attract parents for female students to admit their children in TVET institutions (Table 5.2.2.9).

Table 5.2.2.10 demonstrates that 51.1% of the instructors do not intend to resign from their jobs, and only 25% have some intention to do so, but none firmly agree to do so. However, 50% of females are unsure of their position.

Table 5.2.2.10: Do the teachers have any plans to leave this position?

	Overall Frequency (%) (N=32)	Male Teachers (%) (N=26)	Female Teachers (%) (N=06)	SPI (%) (N=13)	MPI (%) (N=11)	HPI (%) (N=08)
No Desire	6.3	7.7	0.0	7.1	0.0	14.3
Have minimal intent	43.8	46.2	33.3	50.0	27.3	57.1
Not sure	25.0	19.2	50.0	14.3	36.4	28.6
Have intent	25.0	26.9	16.7	28.6	36.4	0.0
Possess a firm intention	0.0	0.0	0.0	0.0	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Primary data collected from three polytechnic institutes in Sylhet division (2023)

Almost 92% of teachers agreed that there is a lack of TVET machines and tools in their institutions, and no one strongly disagreed that there are no shortages, with only 6.3% believing that there are none.

Table 5.2.2.11: Is there a lack of TVET equipment and instruments in the institution?

	Overall Frequency (%) (N=32)	Male Teachers (%) (N=26)	Female Teachers (%) (N=06)	SPI (%) (N=13)	MPI (%) (N=11)	HPI (%) (N=08)
Sufficient	0.0	0.0	0.0	0.0	0.0	0.0
No lacking	6.3	7.7	0.0	7.1	9.1	0.0
Not sure	3.1	3.8	0.0	7.1	0.0	0.0
Have lacking	71.9	69.2	83.3	57.1	81.8	85.7
Enough lacking	18.8	19.2	16.7	28.6	9.1	14.3
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Primary data collected from three polytechnic institutes in Sylhet division (2023)

5.3 Challenges for generating female graduates at TVET in Sylhet region

5.3.1: Perception of instructors

Industry institute linkage is essential to make the student competent in the job market. Here 46.9% of instructors and 50% of female instructors of all three polytechnic institute mark that there is available Industry institute linkage with their institutes. We talked with them; they answered last semester, they go to the industry to fulfil their diploma course. But 71.4% of instructors from HPI and 42.9% of instructors say there is inadequate Industry institute linkage with their Institute, but 90.9% of instructors from MPI said that they have adequate Industry linkage with their institute. At the time of FGD with instructors, their observation was that although the government has taken necessary steps to create Industry institute linkage for TVET institutes, these are still inadequate to encourage female students to admit to TVET institutions (Table 5.3.1.1).

Table 5.3.1.1 Perception on “proper Industry institute linkage with institution”

	Overall Frequency (%) (N=32)	Male Teachers (%) (N=26)	Female Teachers (%) (N=06)	SPI (%) (N=13)	MPI (%) (N=11)	HPI (%) (N=08)
Strongly Disagree	0.0	0.0	0.0	0.0	0.0	0.0
Disagree	37.5	34.6	50.0	42.9	9.1	71.4
Not sure	0.0	0.0	0.0	0.0	0.0	0.0
Agree	46.9	46.2	50.0	21.4	90.9	28.6
Strongly agree	15.6	19.2	0.0	35.7	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Primary data collected from three polytechnic institutes in Sylhet division (2023)

Guidance and career counselling for students are also major issues. In our study, 78.1% of participants and 80.7% of male and 66.7% of female instructors commented that inappropriate vocational guidance and career counselling in their institutes discourage female students from admitting to TVET. 57.1% Instructors from HPI express the opposite view. At the time of FGD with instructors, their observation is that there are few arrangements of vocational guidance

and career counselling exist in their institution, but lacking resources and policy is not adequate (Table 5.3.1.2).

Table 5.3.1.2: Perception on “vocational guidance and career counselling in your institutes below standard”

	Overall Frequency (%) (N=32)	Male Teachers (%) (N=26)	Female Teachers (%) (N=06)	SPI (%) (N=13)	MPI (%) (N=11)	HPI (%) (N=08)
Strongly Disagree	3.1	3.8	0.0	0.0	9.1	0.0
Disagree	12.5	7.7	33.3	0.0	0.0	57.1
Not sure	6.3	7.7	0.0	7.1	9.1	0.0
Agree	62.5	61.5	66.7	71.4	72.7	28.6
Strongly agree	15.6	19.2	0.0	21.4	9.1	14.3
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Primary data collected from three polytechnic institutes in Sylhet division (2023)

Here 65.6% of the surveyed instructors believe that challenges exist at the institutions in producing competent graduates, and in Moulovibazar, this ratio is 90.9%, with 50% female teachers.

Table 5.3.1.3 Do the institutions face difficulties in producing qualified graduates?

	Overall Frequency (%) (N=32)	Male Teachers (%) (N=26)	Female Teachers (%) (N=06)	SPI (%) (N=13)	MPI (%) (N=11)	HPI (%) (N=08)
No difficulty	0.0	0.0	0.0	0.0	0.0	0.0
No difficulty	15.6	11.5	33.3	14.3	0.0	42.9
Not sure	18.8	19.2	16.7	21.4	9.1	28.6
Having difficulties	50.0	50.0	50.0	35.7	90.9	14.3
Have greater difficulties	15.6	19.2	0.0	28.6	0.0	14.3
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Primary data collected from three polytechnic institutes in Sylhet division (2023)

According to Table 5.3.1.4, over 75% of surveyed instructors believe that learning resources are insufficient for students, and 83% of female instructors agreed that the problem exists.

Table 5.3.1.4 Are there insufficient educational resources (Multimedia Projector, Smart Board, Internet, and Computer/Laptop) at the institution?

	Overall Frequency (%) (N=32)	Male Teachers (%) (N=26)	Female Teachers (%) (N=06)	SPI (%) (N=13)	MPI (%) (N=11)	HPI (%) (N=08)
More Sufficient	3.1	3.8	0.0	7.1	0.0	0.0
Sufficient	21.9	23.1	16.7	7.1	27.3	42.9
Not sure	0.0	0.0	0.0	0.0	0.0	0.0
Insufficient	43.8	34.6	83.3	28.6	54.5	57.1
More insufficient	31.3	38.5	0.0	57.1	18.2	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Primary data collected from three polytechnic institutes in Sylhet division (2023)

There is a mixed picture in the teachers' perspectives on instructional approaches. 50% of the teachers agree, and 47.1% disagree that their teaching techniques are flawed, while the ratio of male and female instructors is nearly equal.

Table 5.3.1.5 Do the teaching strategies have any flaws?

	Overall Frequency (%) (N=32)	Male Teachers (%) (N=26)	Female Teachers (%) (N=06)	SPI (%) (N=13)	MPI (%) (N=11)	HPI (%) (N=08)
More suitable	9.4	11.5	0.0	14.3	9.1	0.0
Suitable	40.6	46.2	16.7	57.1	18.2	42.9
Not sure	3.1	3.8	0.0	0.0	9.1	0.0
Flawty	40.6	30.8	83.3	21.4	63.6	42.9
Have greater flaws	6.3	7.7	0.0	7.1	0.0	14.3
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Primary data collected from three polytechnic institutes in Sylhet division (2023)

5.3.2 Perception of industry leaders

In our research, KII is conducted with industry experts and the following barriers are found to generate competent female graduates:

TVET curriculum is not up to date: The curriculum must be up to date with the labour market in order to obtain employment. In our survey, we found that 80% of industry experts believe the curriculum is irrelevant to the job market.

No contributions of the private sector: The private sector's contribution is an important development issue. From the industry representatives' perception, we found that the private sector and employers are not contributing to developing TVET.

Absence of lab class evaluation: To make competent female graduates, the institution or department must invite related industry officials to assess lab classes or field workshops. But

in our survey result, we found a totally opposite result. The institute has taken no action to solicit industry experts to evaluate the lab classes and field workshops.

Insufficient industry-institute linkage: Our study discovered poor linkage between industry and institute. But 80% of the industry experts agree to give internship offers to female students at their workplace.

5.4 Challenges for low employment for female graduates at TVET in Sylhet region

5.4.1: Perception of Instructors

Another main challenge for female TVET students is less opportunity to get technical jobs than their male counterparts. Overall, 87.5% of instructors and 83.4% of female instructors express their view that due to fewer Technical Job fields for females compared with male counterparts, they are unwilling to admit TVET. At the time of FGD with instructors, their observation was that although the government has launched some programmes to eradicate this problem, it needs time to solve (Table 5.4.1.1).

Table 5.4.1.1: Perception on “less Technical Job field for female compared with male counterparts affect”

	Overall Frequency (%) (N=32)	Male Teachers (%) (N=26)	Female Teachers (%) (N=06)	SPI (%) (N=13)	MPI (%) (N=11)	HPI (%) (N=08)
Strongly Disagree	0.0	0.0	0.0	0.0	0.0	0.0
Disagree	12.5	11.5	16.7	14.3	9.1	14.3
Not sure	0.0	0.0	0.0	0.0	0.0	0.0
Agree	62.5	61.5	66.7	64.3	81.8	28.6
Strongly agree	25.0	26.9	16.7	21.4	9.1	57.1
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Primary data collected from three polytechnic institutes in Sylhet division (2023)

Students of TVET want to get a job according to their related field. But there are limitations of subject/technology-wise job scope. In our 53.1% instructors and 66.7% instructors commented that the Challenges of Enrolment and acquiring competency of female students in TVET at Sylhet division are due to Limitations of Technology/subject-wise job scope. But instructors from individual institutes express their view as moderate. At the time of FGD with instructors, their observation is that although the government has launched some programmes to solve this problem, it needs time (Table 5.4.1.2).

Table 5.4.1.2: Perception on “Limitations of Technology/subject wise job scope”

	Overall Frequency (%) (N=32)	Male Teachers (%) (N=26)	Female Teachers (%) (N=06)	SPI (%) (N=13)	MPI (%) (N=11)	HPI (%) (N=08)
Strongly Disagree	9.4	7.7	16.7	7.1	9.1	14.3
Disagree	34.4	38.5	16.7	35.7	36.4	28.6
Not sure	3.1	3.8	0.0	7.1	0.0	0.0

Agree	37.5	30.8	66.7	14.3	54.5	57.1
Strongly agree	15.6	19.2	0.0	35.7	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Primary data collected from three polytechnic institutes in Sylhet division (2023)

Professional training among training enhance an instructor's capability. Although it is not directly related to enhancing female competency, it is also a factor. In our study, 70.1% of participants and 83.3% of female instructors commented that there is a limited scope of Professional training. At the time of FGD with instructors, their observation is that although the government has launched some programmes to solve this problem, it needs time (Table 5.4.1.3).

Table 5.4.1.3: Perception on “Professional training (pedagogy, subjective) sufficient for instructors”

	Overall Frequency (%) (N=32)	Male Teachers (%) (N=26)	Female Teachers (%) (N=06)	SPI (%) (N=13)	MPI (%) (N=11)	HPI (%) (N=08)
Strongly Disagree	28.1	26.9	33.3	21.4	45.5	14.3
Disagree	50.0	50.0	50.0	50.0	36.4	71.4
Not sure	3.1	3.8	0.0	0.0	0.0	14.3
Agree	9.4	11.5	0.0	14.3	9.1	0.0
Strongly agree	9.4	7.7	16.7	14.3	9.1	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Primary data collected from three polytechnic institutes in Sylhet division (2023)

5.4.2 Perception of industry leaders

Various industries do not agree to MoU between different industries and the institutions for female graduates. However, if there were any MoU between different industries and the institutions for female graduates, it would be easy to get a job after completing their diploma. A similar scenario exists in the case of female employees' workplace security difficulties; with KII, we find 40% believing there is a problem and 40% believing there isn't. and the remaining 20% are neutral.

5.5 Other Challenges faced by instructors in the Sylhet region

Satisfaction of instructors with their current status is not a direct issue, but it indirectly affects the competency of female students. 53.1% of instructors and 61.5% of male instructors are unsatisfied with their current job status. At the time of FGD with instructors, their observation is that although the government has launched some steps to solve this problem, it is inadequate to attract instructors for teaching (Table 5.5.1).

Table 5.5.1: Perception on “instructors dissatisfied at teaching profession”

	Overall Frequency (%) (N=32)	Male Teachers (%) (N=26)	Female Teachers (%) (N=06)	SPI (%) (N=13)	MPI (%) (N=11)	HPI (%) (N=08)
--	------------------------------	--------------------------	----------------------------	----------------	----------------	----------------

Strongly Disagree	3.1	3.8	0.0	7.1	0.0	0.0
Disagree	15.6	15.4	16.7	7.1	18.2	28.6
Not sure	28.1	19.2	66.7	14.3	27.3	57.1
Agree	37.5	42.3	16.7	42.9	45.5	14.3
Strongly agree	15.6	19.2	0.0	28.6	9.1	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Primary data collected from three polytechnic institutes in Sylhet division (2023)

A considerable percentage of instructors are comfortable with their teaching and performing tasks, with 83.3% of female teachers agreeing and 73% of male teachers agreeing. Only 9.4% strongly disagree, and 12.5% disagree, for a total of 21.9% (Table 5.5.2).

Table 5.5.2: Do they feel comfortable performing their job and teaching?

	Overall Frequency (%) (N=32)	Male Teachers (%) (N=26)	Female Teachers (%) (N=06)	SPI (%) (N=13)	MPI (%) (N=11)	HPI (%) (N=08)
Greater uncomfortable	9.4	11.5	0.0	14.3	9.1	0.0
Uncomfortable	12.5	11.5	16.7	21.4	9.1	0.0
Not sure	3.1	3.8	0.0	7.1	0.0	0.0
Cosy	71.9	69.2	83.3	50.0	81.8	100.0
Much more cosy	3.1	3.8	0.0	7.1	0.0	0.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Primary data collected from three polytechnic institutes in Sylhet division (2023)

Almost 90.6% of teachers believe that student-teacher relationships are adequate, where the ratio of female teachers is 100%. However, only 34.6% of male teachers strongly agreed with this viewpoint, whereas the female number is quite high which is 50% (Table 5.5.3)

Table 5.5.3: Strong relationship between student – teacher

	Overall Frequency (%) (N=32)	Male Teachers (%) (N=26)	Female Teachers (%) (N=06)	SPI (%) (N=13)	MPI (%) (N=11)	HPI (%) (N=08)
Very poor relationship	3.1	3.8	0.0	0.0	9.1	0.0
Poor relationship	3.1	3.8	0.0	7.1	0.0	0.0
Not sure	3.1	3.8	0.0	7.1	0.0	0.0
Good relationship	53.1	53.8	50.0	50.0	36.4	85.7
Strong relationship	37.5	34.6	50.0	35.7	54.5	14.3
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: Primary data collected from three polytechnic institutes in Sylhet division (2023)

Section 6

CONCLUSION & RECOMMENDATIONS

6.1 Conclusion

The study examined the current level of girls' participation in technical and vocational education and training in the Sylhet division and the barriers to this participation, and how to overcome them. It also provided a brief description of the girls' employment. Finally, a number of recommendations have been made for those involved in technical and vocational training that will help increase the inclusion of girls and their participation in the workforce.

6.2 Policy Implication of the research

The research on the challenges of TVET institutions in generating competent female graduates and their employment in the Sylhet Division has several policy implications. These policy implications can guide policymakers, educational institutions, and relevant stakeholders in developing strategies and interventions to overcome the challenges identified in the research and foster the generation of competent female graduates in TVET programs, leading to improved employment opportunities and gender equality in the Sylhet Division.

6.3 Recommendations

The following suggestions to potential government/state, educational institutions, female students, educators, guardians, engineering employers, and policymakers are based on the study's findings. We have divided this recommendation into short-term and long-term basis. Consequently, we suggest the following:

6.3.1 Short term recommendations

Increase awareness-raising activities: Given that our study finds that there is a lack of awareness among mass people, including females, regarding TVET, it implies that the existing awareness-raising activities are insufficient. In this connection, government officials, technical educators, technical instructors, religious leaders, mass media, and social media must work together to raise awareness of girls' TVET education among people from all walks of life, including parents.

Allocate a higher budget: According to our research, TVET sectors require a suitable budget. The expansion of technical and vocational education and training requires an adequate budget and an expanded scholarship program and incentive for TVET female students.

Improve transport facilities: According to our research, TVET sectors need a proper budget for transportation because the majority of institutions lack sufficient student transportation options, and many institutions simply lack any student transportation options.

Allocate a higher budget in scholarship program and incentive for TVET female: Our research indicates that TVET sectors need a sufficient budget, a broadened scholarship program, and incentives to encourage TVET female students.

Setting up career guidance & counselling cell: Our research finds that there is a lack of proper carrier guidance and counselling for students, especially female students. For girls to receive the proper career assistance, career guidance cells must be established in every educational institution, and teachers must be assigned in this regard. Proper monitoring should be done.

Enhance industry and institution collaboration: Our study finds that there is a lack of proper linkage between industry and institution collaboration. Governments must encourage industrial

groups to participate in TVET by offering incentives, subsidizing apprenticeship pay, and supporting the stipend program in order to improve collaboration between educational institutions and companies.

Create opportunity in Higher education for female students: Our study finds that there is a lack of adequate opportunities in Higher education for TVET female students. It is necessary to give girls enough opportunity for higher education, especially postgraduation, and to boost the number of girls admitted to technical and vocational programs.

Create job sectors for TVET students: From our study finds that there is an inadequate opportunity for jobs for TVET students after completion of their program. To boost up, female technical education facilities, factories, and industries must be built in sufficient numbers around the country so that females from adjacent communities can attend school and find employment.

Create technology/subjectwise job sectors: Our study finds inadequate technology/subject wise job opportunities for TVET students after completing their program. The scope of technical jobs, particularly in the technology/subject area, must be expanded.

Modernize the curriculum: Our study finds that the curriculum of TVET is not modernized enough to meet industry demand. It should regularly be modified to be fit for factories and industries in keeping with new technologies.

Allocation of quotas for female students: Our study finds an inadequate allocation of quotas for females. It is suggested that regional quotas for female students be established, the proportion of females admitted into technical and vocational programs be increased, and those girls be given enough opportunities for higher education.

Ensuring enough security for female students: From our study finds that there are lacking adequate security for female graduates. Security in the workplace and TVET institutions should be improved. Educational institutions and industries should implement strict security measures such as access control, CCTV cameras, and emergency response systems to ensure the safety of female students and employees

6.3.2 Long-term recommendations

Monitoring Gender equality: From our study finds that there is lacking gender equality in every sphere of life. To ensure gender equality in every aspect of society, the government and respected institutions need to be planned for and adequately monitored.

Increasing accommodation facilitates for female: Our survey reveals that there are insufficient accommodations for female students. Governments should create the required facilities to house female students in order to secure female enrollment.

Foster Leadership and Empowerment: Foster leadership and empowerment skills in female students through leadership training, mentorship, and participation in extracurricular activities. This can help build confidence, promote teamwork, and provide personal growth and development opportunities.

Establishment of Postgraduate institution: Enhance post-graduate study opportunities for female TVET graduates after completing their studies at graduate institutions in Bangladesh.

Impose strict steps to stop child marriage: In order to eliminate child marriage, the law governing it must be effectively implemented, and awareness among parents must be increased through social media and print and television media.

References

- Ahmed, M., Hossain, M. A., Kalam, M.A & Ahmed, K. S.(2012). Skills development in Bangladesh: Enhancing the youth skills profile. Dhaka: Campaign for Popular Education.
- Akpotohwo, C. F., Philemon, S. W. and Ogeibiri, C. (2016). Constraints and Strategies for female enrolment in vocational technology education in Niger Delta University, Beyelsa state, Nigeria. *International journal of education benchmarking (IJEB)*, 5(3), 74-80.
- Ali,M. S.,(2015) Challenges and Priorities of TVET system in Bangladesh,Bangladesh-Korea Technical Training Centre (BKTTC, Dhaka)
- Ayonmike, C.S. &Shirley, M. (2014). Factors affecting female participation in technical education programme: A study of Delta state university, Abraka, *Journal of education human development.3* (3), 227-240.
- Bakar, A. R. (2011). Preparing Malaysian Youths for the World of Work: Roles of Technical and Vocational Education and Training (TVET). Malaysia University Putra Malaysia Press.
- BANBEIS (2015): Traditional and Cultural Barrier of Female Education in Secondary Schools.
- BANBEIS (2021). Bangladesh education statistics 2021. Dhaka: Bangladesh Bureau of Educational Information and Statistics, Ministry of Education. Government of the People's Republic of Bangladesh.
- BBS. (2015b) Labour force survey Bangladesh 2013. Dhaka: Bangladesh Bureau of Statistics, Ministry of Planning, Government of the People's Republic of Bangladesh
- BBS. (2017) Quarterly labour force survey, Bangladesh: 2015-2016. Dhaka: Bangladesh Bureau of Statistics, Ministry of Planning, Government of the People's Republic of Bangladesh.
- Bhattacharjee, A.&Kamruzzaman, M. (October 2016). Towards employability and better livelihood: An evaluation of BRAC's skills development initiative. Skill Development Working Paper Series No. 1. Dhaka: BRAC Research and Evaluation Division.
- Harris, R., Guthrie, H., Hobart, B. & Lundberg, D.,(1995).*Competency-based Education and Training: between a rock and a whirlpool*, Melbourne(Macmillan Education Australia)
- Hasan, M. R. & Rahman, M. A., (2021) Enrolment of female students in TVET at Jashore district in Bangladesh: challenges and remedies. A research work financed by Directorate of Technical Education Technical and Madrasah Education Division Ministry of Education. (Financial year: 2020-21)
- Hasan,M. A.,& Hasan, M. T.,(2022). Challenges in Producing Competent Graduates in Government Polytechnic Institutes of Sylhet Division. A research work financed by Directorate of Technical Education Technical and Madrasah Education Division Ministry of Education.(Financial year:2021-22)
- Islam,M. N.(2014).Challenges of Technical and Vocational Education and Training (TVET) in Bangladesh. Bureau of Manpower Employment and Training.
- Misola,N. K.,(2010).Improving the participants of female student in Philippines' Gender, Vocational Training and Employment. UNESCO-UNEVOC International Centre for Technical and Vocational Education and Training

- Newaz, M. T, Faruquee, M. &Farha, S.(2013). Vocational education and training in Bangladesh: Why it is not working? *International Journal of Research Studies in Education*, 2(4), 29-40.
- Oluniyi, A., Itohan, O. J., Garba, B.,(2015).Strategies for Enhancing Females Participation in Technical, Vocational Education and Training (TVET) in Nigeria. *Advances in Social Sciences Research Journal*,2(4),110-120.
- Opwora,M. C.,(2014).*Influences on gender disparity in tvet enrolment: a comparison of engineering and business courses in kenya*, PhD thesis, University of Newcastle, Australia.
- Rahman, R. I. and Islam, R. (October 2013) Female labour force participation in Bangladesh: trends, drivers and barriers. ILO Asia- Pacific Working Paper Series.
- United Nations:TA3: Education - World's Women 2020 .

Appendix-A

Student

Questionnaires for female student in TVET

This research is carried out by the help of Research & Knowledge Management Cell. Directorate of Technical Education, Agargaon, Dhaka. To find out Challenges of TVET Institutions in Producing Competent Female Graduates and their Employment: A case study in Sylhet Division this research is very important.

That's why a report is how to Challenges of TVET Institutions in Producing Competent Female Graduates and their Employment: A case study in Sylhet Division in Bangladesh. As a present student of technical education Cordial cooperation is expected in this data collection (Research & Knowledge Management Cell)

N.B.: This information will be used only for research purpose for Challenges of TVET Institutions in Producing Competent Female Graduates and their Employment: A case study in Sylhet Division only. Your name and address will be kept in secret.

Time: 45 Minutes

1. Name of the student:
2. Address
3. E-mail
4. Phone
5. GPA of JSC/SSC/CGPA of diploma in engineering / Other subject

JSC	SSC	CGPA	others

6. Distance of the institute from your home: _____miles

7. Your family in come: _____ (Tk / month)

8. Who influence you to admit here?

- Parents
- Brothers/Sisters
- Relatives
- Own willing
- Friends
- Teacher
- Social Media
- Mass media
- Myself
- Others (please specify)

9. Why did you admit here?

- For My future career

- Quick employment
- To get higher salary
- For higher studies
- To get better skill
- Do not know

10. Do you believe Job opportunities are available for female student after completing TVET?

YES NO Not Sure

11. Did you face difficulty in getting admitted to the TVET?

YES NO

12. If yes, what kind of difficulty you faced in getting admitted to the TVET?

- a) Parents were not positive.
- b) Lack of financial abilities.
- c) Pressure for early marriage.
- d) Pressure for entering job market.
- e) Pressure from relatives.
- f) Others

13. Various types of challenges for low enrolment of female student in TVET are mentioned below. Please give your opinion

SL NO.	Evaluation topics	YES	NO
1.	Shortage of individual institute for the female students		
2.	Inadequate scholarship scheme and incentive.		
3.	Limited availability of higher studies opportunities		
4.	Teachers conduct practical work regularly		
5.	Sufficient sanitary facilities in your institute		
6.	Industry institute linkage		
7.	Parents/family able to bear educational cost of faraway TVET institutions		
8.	Parents eager to spend money for your educational expenditure		
9.	Obstacle to attend classes regularly due to distance		
10.	Security problem outside the home		
11.	Face any fear of threat and sexual harassment		
12.	Institutes provide friendly Quality TVET education		

13.	Adequate Job opportunity available near to own home		
14.	Teachers address the latest technology in practical class		
15.	Feel interest to learn		
16.	Lack of required learning material (textbooks, Multimedia Projector, Smart Board, Internet)		
17.	Parents contribute to the purchase of additional training materials		
18.	Methods of teaching help you to be self-confidence		
19.	Abide by rules and regulation in your institution		
20.	Adequate accommodation/hostel facilities		

14. Did you know students faced problems after enrolment?

- Hostel facilities.
- Lab facilities
- Sexual Harassment
- Lack of transport facilities

15. Did you think female TVET faced more difficulties compare to male?

YES NO

16. Which are the preferred area of education of female students?

- a) _____
- b) _____
- c) _____

17. Do you think lack of campaigning for admission is a reason for female recruitment?

YES NO

18. What percentage (%) of female graduates dropped during the course studies?

Ans: _____

19. Which technical courses are better equipped at your institution?

20. Which technical courses are poorly equipped at your institution?

21. Which courses have better job opportunities?

- a) _____

b) _____

22. What is the probable salary for an entry-level female employee?

a) _____

b) _____

23. Which sector have better job offer for female graduates?

a) _____

b) _____

24. Is the Sylhet region developed with necessary employment opportunities?

YES NO

25. Do the female graduates need to migrate for searching job?

YES NO

26. What are the preferred area for searching jobs?

a) _____

b) _____

c) _____

27. Is there any barrier for female for migration to a new place to look for job?

YES NO

28. If yes, which are the barriers?

a) _____

b) _____

c) _____

29. Which weakness affect most to get a job for a female graduate from the Polytechnic?

a) _____

b) _____

c) _____

30. Which area of improvement required in the course curriculum to get better opportunities for jobs?

a) _____

b) _____

c) _____

31. What kind of jobs are preferred by female?

a) Govt.

b) Private sector

c) NGO

d) Others

32. If you have a chance, do you like to switch from Polytechnique to other subjects?

YES NO

33. If yes, which are your preferred subjects?

a) _____

b) _____

c) _____

34. Average how many applicants need to drop before getting a final offer for a job?

Ans: _____

35. Which are the area where female graduates are discriminated over male graduates in getting a job?

a) _____

b) _____

c) _____

Appendix-B

Teacher

Questionnaires for instructors/teachers in TVET

This research is carried out by the help of Research & Knowledge Management Cell. Directorate of Technical Education, Agargaon, Dhaka. To find out Challenges of TVET Institutions in Producing Competent Female Graduates and their Employment: A case study in Sylhet Division this research is very important.

That's why a report is how to Challenges of TVET Institutions in Producing Competent Female Graduates and their Employment: A case study in Sylhet Division in Bangladesh. As a present student of technical education Cordial cooperation is expected in this data collection (Research & Knowledge Management Cell)

N.B.: This information will be used only for research purpose for Challenges of TVET Institutions in Producing Competent Female Graduates and their Employment: A case study in Sylhet Division only. Your name and address will be kept in secret.

Time: 45 Minutes

6. Name of the Instructor:

7. Address :

8. E-mail :

9. Phone:

10. How many years you are working as a teacher?

6. Duration of this Technology/Course

(N.B: If you are general teacher please skip question no 7, question no 7 is only for

Institution head/principal)

7. A. Teacher

Total teacher	Female teacher	Total vacant

7. B. Present student

Name of the technology/course	Total student	Female student	Total seat

8. Various types of challenges for low enrolment of female student in TVET are mentioned below. Please give your opinion

S.L NO.	Evaluation topics	Strongly Disagree	Disagree	Undecided	Agree	Strongly agree
1.	Shortage of individual institute for the female students					
2.	Adequate funding of vocational technical education programs					
3.	Adequate scholarship scheme and incentive.					
4.	Percentage (%) of admission quota for female student is sufficient					
5.	Planning and adequate monitoring of gender equality					
6.	Industry institute linkage					
7.	Due to religious issue, parents don't want to send her girl faraway TVET institution					
8.	People/parents specially village people/parents aware about TVET					
9.	Parents eager to expend money for educational expenditure for female students					

10.	TVET social dignity for student and her family is Low					
11.	Appropriate vocational guidance and career counseling in your institutes					
12.	Technical Job field for female compare with male counterparts is low					
13.	Limitations of Technology/subject wise job scope					
14.	Professional training (pedagogy, subjective) is sufficient					
15.	Satisfied at teaching profession					
16.	Plan to switch this job					
17.	Challenges do exist at the institutions in generating competent graduates					
18.	Learning materials shortage for every student? (Multimedia Projector, Smart Board, Internet, Computer/Laptop)					
19.	Faults in teaching methods					
20.	Feel comfortable to teach and perform duties					
21.	Enough time to prepare your class lesson					
22.	Properly use teaching aids at the time of teaching					
23.	Strong relationship between student – teacher					
24.	Lacking's of TVET machines and tools in your institution					

9. How many training you receive so far?

10. What types of training you receive?

a) _____

b) _____

c) _____

11. Which trainings are required for you?

a) _____

b) _____

c) _____

12. How much time students spend for lab-based activities in a week?

Ans: _____ hrs

Appendix-C

Industry Expert

Questionnaires for industry professionals in TVET

This research is carried out by the help of Research & Knowledge Management Cell, Directorate of Technical Education, Agargaon, Dhaka. To find out Challenges of TVET Institutions in Producing Competent Female Graduates and their Employment: A case study in Sylhet Division this research is very important.

That's why a report is how to Challenges of TVET Institutions in Producing Competent Female Graduates and their Employment: A case study in Sylhet Division in Bangladesh. As a present student of technical education Cordial cooperation is expected in this data collection (Research & Knowledge Management Cell)

N.B.: This information will be used only for research purpose for Challenges of TVET Institutions in Producing Competent Female Graduates and their Employment: A case study in Sylhet Division only. Your name and address will be kept in secret.

1. Name:

2. Address :

3. E-mail :

4. Phone:

5. How many years you are working?

6. Various types of challenges for low enrolment of female student in TVET are mentioned below. Please give your opinion

SL NO.	Evaluation topics	Strongly Disagree	Disagree	Undecided	Agree	Strongly agree
1.	Female graduates qualified enough to meet the industry demand					
2.	Equipment's in laboratory meet the available demand in the labor market					
3.	Institutes communicate and coordinate with the private sector or any industry for female graduates					
4.	Contributions of the private sector and employers in developing the curriculum					
5.	Institution or department invite related industry officials for assessing lab classes or field workshop for female graduates					
6.	MoU between different industries and the institutions for female graduates					
7.	Security for female employee in Workplace/job place are adequate					
8.	Curriculum match with job market					

7. What kind of qualities are you looking for among a prospective employee?

a) _____

b) _____

c) _____

8. Why female graduates do not have these qualities?

a) _____

b) _____

c) _____

9. Will you offer a similar package to a female job seeker if she has the same quality or that of a male job seeker?

YES NO

10. If not, why will you not offer that?

a) _____

b) _____

c) _____

11. Are you interested to offer internship for female TVET students at your workplace?

YES NO

12. If no, why?

a) _____

b) _____

c) _____

13. How can better linkage between employer and institute be established?

a) _____

b) _____

c) _____