

**Why is student enrollment in women's polytechnic institutes declining? An exploratory  
study**

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## DECLARATION

We hereby certify that Md. Rakibul Hasan, Deputy Project Director of the Accelerating and Strengthening Skills for Economic Transformation (ASSET) Project, Directorate of Technical Education, Technical and Madrasa Education Division, Ministry of Education, along with Arifa Parvin, Chief Instructor (Tech/Electromedical) at Dhaka Mohila Polytechnic Institute, and S. M. Tahmid Sadik, Instructor (Tech/Electronics) at Rajshahi Mohila Polytechnic Institute, conducted the investigation presented in this action research under the supervision of Dr. Khondaker Golam Moazzem, Research Director at the Centre for Policy Dialogue (CPD), Dhaka, Bangladesh.

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**DEDICATION**

DEDICATED TO

OUR WONDERFUL PARENTS

WHO BROUGHT ME IN TO THIS NICE WORLD

AND

OUR FAMILY

WHO SACRIFICE FOR THIS STUDY

## **ACKNOWLEDGEMENT**

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## ABSTRACT

*The enrollment of female students in women's polytechnic institutes has been declining, causing concerns about the future of these institutions. To address this issue, this exploratory study aimed to identify the factors responsible for the declining enrollment and the problems faced by female students in these institutes, and to suggest strategies for improvement. The study used a mixed-methods approach, collecting data from 311 respondents, including principals, teachers, current students, and previous students of women's polytechnic institutes, using questionnaires, interviews, and focus group discussions. The findings indicate that social stigma towards technical education, skill gaps among teachers and students, poor quality of practical classes, lack of quality education, limited hostel facilities, low stipend, limited job opportunities for girls, financial crisis of student families, lack of higher education facilities, and low interest in engineering are the main factors responsible for the declining enrollment of female students. The study recommends improving hostel facilities, enhancing subject-based practical classes and transportation facilities, providing financial support to female students, improving teaching and learning environments, introducing a quota system for admission and job placements, and providing online classes from expert teachers or role models to enhance female enrollment in women's polytechnic institutes. The findings and recommendations of this study are useful for policymakers, educational institutions, and other stakeholders to improve the enrollment and retention of female students in women's polytechnic institutes, promoting gender equity and empowering women in technical education.*

### **Keywords**

*Diploma in engineering, women's polytechnic institutes, declining enrollment, female student enrollment strategies etc*

## **LIST OF ABBREVIATION**

**BANBAIS: Bangladesh Bureau of Educational Information and Statistics**

**BBS: Bangladesh Bureau of Statistics.**

**BMET: Bureau of Manpower Employment and training**

**BTEB: Bangladesh Technical Education Board.**

**CBT&A: Competency Based Training and Assessment**

**DPP: Development Project Proposal**

**DTE: Directorate of Technical Education**

**HRM: Human Resource Management.**

**ICT: Information and Communication Technology.**

**ILO: International Labour Organization**

**MoU: Memorandum of Understanding.**

**NGO: Non-Government organization's**

**NSDC: National Skills Development Council**

**NSDP: National Skills Development Policy 2011**

**NTVQF: National Technical and Vocational Qualification Framework**

**SDG: sustainable development goal**

**TTTC: Technical Teachers Training College.**

**TVET: Technical and Vocational Education and Training.**

**UCEP: Under Privileged children's Educational Programs**

**VTTI: Vocational Teachers Training Institute**

**WB: World Bank.**

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## **SECTION ONE**

### **INTRODUCTION OF THE STUDY**

#### **1.1 Introduction**

Women's polytechnic institutes have been established to provide vocational education and training to women in various fields of engineering, technology, and other technical trades. These institutes have been playing a crucial role in empowering women and increasing their participation in the workforce. However, in recent years, there has been a decline in the enrollment of female students in these institutes. This decline is a cause of concern as it affects not only the education and career prospects of women but also the overall development of society. Therefore, it is important to identify the factors responsible for this decline and the problems faced by female students enrolling in women's polytechnic institutes. This study aims to explore the reasons for the declining enrollment of female students in women's polytechnic institutes and identify the problems faced by female students enrolling in these institutes. Additionally, the study will propose strategies that can be implemented to improve female students' enrollment in women's polytechnic institutes. The findings of this study will be useful for policymakers, educators, and other stakeholders in developing effective strategies and policies to encourage female students to enroll in women's polytechnic institutes and to address the challenges faced by them.

## 1.2 Statement of the problem

Women polytechnics play a vital role in diploma-level Technical Education in Bangladesh. Girls in women's polytechnics face various institutional and non-institutional problems. All these problems have some are in general and some specific problems. Due to which female polytechnics are not able to attract the desired level of students. The purpose of this exploratory study is to investigate the declining enrollment of female students in women's polytechnic institutes in Bangladesh. Despite the country's efforts to promote gender equality and increase female participation in technical education, enrollment rates in women's polytechnic institutes have been decreasing in recent years. This research aims to identify the factors responsible for this decline, the problems faced by female students enrolling in these institutes, and the strategies that can be taken to improve female students' enrollment in women's polytechnic institutes. By exploring these issues, this study aims to provide valuable insights into how the barriers to female participation in technical education can be addressed, and how the educational system can better support the aspirations and career goals of female students in Bangladesh.

**Table 1.1: List of Women Polytechnic institute in Bangladesh**

SL NO	Name of the Women Polytechnic institute	Division	Institute types
1	Dhaka Mohila Polytechnic Institute	Dhaka	Government
2	Chattogram Mohila Polytechnic Institute	Chattogram	Government
3	Khulna Mohila Polytechnic Institute	Khulna	Government
4	Rajshahi Mohila Polytechnic Institute	Rajshahi	Government

**Source: DTE**

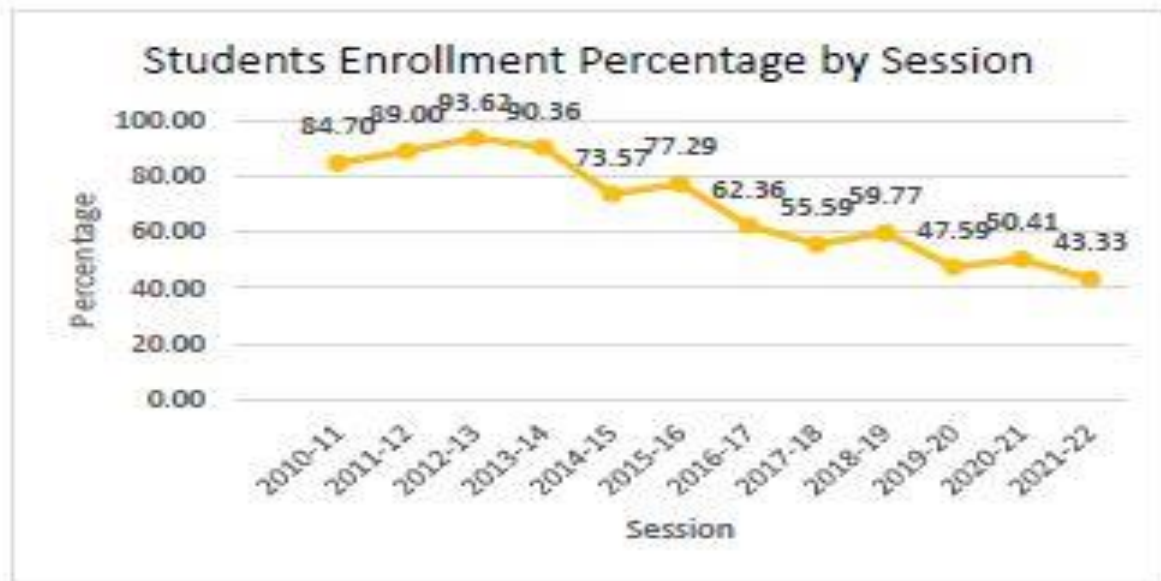
### **1.3 Objective of the Study**

To achieve the research goals, three research objectives were identified and addressed. The purpose of conducting research is to answer specific questions and gain insights into a particular topic or phenomenon. Researchers often formulate research objectives that guide their investigations towards achieving their research goal. In this case, the research goal has been identified, and three research objectives have been developed to guide the research process.. By addressing these objectives through data collection and analysis, researchers can draw meaningful conclusions and contribute to the body of knowledge on the subject. Therefore, fulfilling these three research objectives is essential for achieving the research goal.

- ❖ To identify the factors are responsible for students declining in women’s polytechnic institutes in Bangladesh.
- ❖ To identify the problems faced by the female students enrolling in women’s polytechnic institutes in Bangladesh.
- ❖ To identify the **strategizes** that should be taken towards improving students' enrollment in women’s polytechnic institutes in Bangladesh.

### **1.4 Scenario of enrollment in diploma level education of women polytechnics.**

There are above five hundred (500) polytechnic institutes in Bangladesh both government and non-government. Among them, there are only 04 government women's polytechnic institutes in Bangladesh located in four divisions Dhaka, Khulna, Chattogram, and Rajshahi in Bangladesh. There is more women's polytechnic institute in the establishment going on in Government's favor. It is significant that there is no women's polytechnic institute in the private sector. In the case of Bangladesh, especially in women's polytechnic institutes in Bangladesh enrollment is reduced in recent years compared to General Polytechnics. There is more women's polytechnic institute are on the establishment process.



*Fig. 1.1 Student declining in Women polytechnic in Bangladesh*

**Source:** Developed by the Authors from the collected preliminary data of women polytechnics in Bangladesh.

#### 1.4. Purpose and Research Questions of the study

During the course of the research, the participants were questioned about the contexts or situations that have commonly impacted their experiences as female students in a women's polytechnic institute in Bangladesh. To be more specific, the study was guided by the following research questions:

1. What factors are responsible for students declining in women's polytechnic institutes in Bangladesh?
2. What are the problems faced by the female students enrolling in women's polytechnic institutes in Bangladesh?
3. What are the strategies that should be taken towards improving female students' enrollment in women's polytechnic institutes in Bangladesh?

## **SECTION TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

Women's participation in technical education is crucial for economic development and gender equality. Despite progress in recent years, women's enrollment in technical education programs, particularly in women's polytechnic institutes, is declining in many countries, including Bangladesh, Pakistan, Nigeria, and Oman. This exploratory study aims to identify the factors responsible for the declining enrollment of female students in women's polytechnic institutes and propose strategies to improve their enrollment.

Several studies have highlighted the factors responsible for the declining enrollment of female students in technical education programs, including cultural norms and attitudes towards women's education and employment (Ahmed & Sultana, 2015; Kabeer, 2011; Rahman & Rahman, 2017), lack of family support (Ahmed & Sultana, 2015; Kabeer, 2011; Rahman & Rahman, 2017), inadequate facilities and resources (Ahmed & Sultana, 2015; Rahman & Rahman, 2017), gender discrimination and harassment (Ahmed & Sultana, 2015; Kabeer, 2011; Rahman & Rahman, 2017), financial constraints (Ahmed & Sultana, 2015; Rahman & Rahman, 2017), limited job opportunities (Akter, 2019; Ahmed & Sultana, 2015), and academic motivation (Akter, 2019; Rahman & Rahman, 2017).

Studies have also identified specific challenges faced by female students enrolling in women's polytechnic institutes, including limited access to information technology and computer labs (Khan, 2015), inadequate hostel facilities (Al-Harthy, Al-Hinai, & Al-Maamari, 2017), lack of

role models and mentors (Raj, 2017), gender stereotypes (Ezeji, 2020), and language barriers (Gumus, 2019).

To improve female students' enrollment in women's polytechnic institutes, various strategies have been proposed, such as providing scholarships and financial assistance (Haque, 2017; Al-Maamari & Al-Harthy, 2019), increasing awareness among families and communities about the benefits of technical education (Khan, 2015), improving the quality of education and facilities (Raj, 2017), providing mentorship and career counseling (Gumus, 2019), and creating a supportive and inclusive learning environment (Ezeji, 2020).

## **2.2 Factors in the declining enrollment of female students in technical and vocational education.**

Despite variations in geography, politics, economics, socio-culture, and language, the obstacles hindering the enrollment of girls in technical and vocational education and training exhibit striking similarities. Extensive research conducted both nationally and internationally has identified common factors contributing to the low participation of girls in these fields. These factors encompass government-related barriers, institutional obstacles, familial influences, societal issues, socio-cultural hurdles, and limited employment prospects.

Female students who choose to enroll in women's technical educational institutes often face unique challenges associated with their gender. The literature highlights several key issues:

**Gender Bias and Stereotypes:** Female students in technical education frequently encounter gender bias and stereotypes. They often face discouragement and are perceived as less capable or interested in technical fields (Khan, 2015). Gender stereotypes, dictating predefined roles for men and women, further hinder female students from pursuing careers in male-dominated fields (Raj, 2017).



**Lack of Support Networks:** Female students in technical education may lack the necessary support networks to navigate the challenges of their educational and professional lives. Limited access to female role models, mentors, and peers who can provide guidance and support creates an additional obstacle (Haque, 2017).

**Socio-cultural Norms:** Socio-cultural norms and expectations pose challenges for female students in technical education. In certain societies, women are expected to prioritize family responsibilities over education and career aspirations (Khan, 2015). Cultural barriers, such as dress codes, gender segregation, and gender-based violence, may also impede their progress (Raj, 2017).

**Discrimination and Harassment:** Female students in technical education may face discrimination and harassment from peers, faculty, and employers. They may be subjected to sexual harassment, gender-based violence, and exclusion from crucial opportunities (Haque, 2017).

**Financial and Logistical Barriers:** Financial and logistical barriers can impede female students' access to education and training opportunities. For instance, they may lack transportation or the financial resources to afford tuition and fees (Raj, 2017).

**Limited Access to Resources:** Female students in technical education may have limited access to resources such as technology, laboratory equipment, and textbooks, which hampers their learning and professional development (Gumus, 2019).

**Language Barriers:** In certain countries, technical education may be conducted in a language that is not the native language of female students. This creates a significant barrier to learning and necessitates additional language support (Al-Harthy et al., 2017).

**Limited Career Advancement Opportunities:** Gender discrimination in the workplace can restrict women in technical education from accessing career advancement opportunities. Consequently, they may experience limited upward mobility and lower pay compared to their male counterparts (Haque, 2017).

**Family Responsibilities:** Female students in technical education may face challenges related to family responsibilities. Cultural expectations that prioritize domestic duties over education and career aspirations make it difficult for them to pursue technical education (Gumus, 2019).

**Lack of Confidence:** Societal messages discouraging women from pursuing technical fields can result in a lack of confidence among female students in technical education. This self-doubt may make them reluctant to take on challenging projects (Ezeji, 2020).

**Unwelcoming Learning Environment:** Female students in technical education may feel unwelcome in a learning environment dominated by male students and faculty. This can lead to feelings of isolation and a lack of motivation to continue their studies (Al-Maamari & Al-Harthy, 2019).

**Lack of Awareness:** Female students in technical education may lack awareness of the opportunities and benefits associated with pursuing a technical education. Consequently, they may exhibit a lack of interest

Addressing these challenges will require a comprehensive and collaborative effort by educators, policymakers, and civil society organizations. This may involve creating safe and supportive learning environments for female students, increasing access to female role models and mentors, and implementing policies that promote gender equality in education and training.

### **2.3. Problems faced by the female students enrolling in women's polytechnic institutes**

Women's polytechnic institutes play a crucial role in providing technical education to female students. However, the enrollment process for these institutes is fraught with challenges. This literature review aims to explore the difficulties faced by female students during their enrollment in women's polytechnic institutes.

One of the significant problems encountered by female students is social stigma and family pressure. In many Indian families, there is a belief that girls should not pursue technical education and instead focus on marriage (Jassal, 2019). Moreover, the social stigma attached to girls studying in co-educational institutes makes it challenging for them to enroll in women's polytechnic institutes.

Another hurdle is the lack of infrastructure and resources. Many women's polytechnic institutes suffer from inadequate facilities such as laboratories, libraries, and equipment (Deka, 2020). This scarcity negatively impacts the learning process and diminishes the overall quality of education.

Gender bias and discrimination also plague female students during their enrollment. Technical fields are dominated by male students, resulting in discriminatory behavior from both fellow students and faculty members (Meenakshi & Priya, 2019). Such biases erode self-esteem and hinder academic performance.

A lack of job opportunities is another concern for female students in women's polytechnic institutes. Companies often prefer male candidates, limiting employment prospects for female students (Pandey & Tandon, 2019). Additionally, insufficient industry exposure and internship

opportunities provided by women's polytechnic institutes further restrict job prospects for female students.

Safety and security issues also pose significant challenges. Female students often have to travel long distances to reach their institutes, making them vulnerable to harassment and violence (Chakraborty & Bhattacharya, 2020). Inadequate security measures within the institutes compound the risk of sexual harassment and assault.

The absence of female role models in technical fields is another obstacle. The underrepresentation of women makes it difficult for female students to find mentors who can inspire and guide them (Sahu & Mishra, 2019). This dearth of role models negatively affects motivation and self-confidence.

Financial constraints pose a significant challenge for many female students. High fees and expenses associated with technical education may be unaffordable for some families, limiting enrollment in women's polytechnic institutes (Saikia & Das, 2020). Furthermore, the lack of scholarships and financial aid specifically targeted at female students hampers their access to technical education.

A lack of support systems exacerbates the difficulties faced by female students. Many students from rural areas struggle to adapt to the urban environment and the institute's culture (Kumar & Mishra, 2021). Insufficient support systems, such as counseling services and mentorship programs, negatively impact mental health and academic performance.

Cultural and language barriers further impede female students from different backgrounds. Minority students often face challenges in communicating and integrating with the dominant culture of the institute (Jain & Kaur, 2018). Moreover, the absence of language support and study materials in their native language affects their learning process.

Economically disadvantaged female students may also lack access to technology, hindering their enrollment in women's polytechnic institutes (Rathi & Sharma, 2020). Insufficient access to computers, the internet, and other technological resources adversely affects their learning experience and preparedness for the job market.

In conclusion, the enrollment process for female students in women's polytechnic institutes is riddled with various challenges, including social stigma, lack of infrastructure and resources, gender bias and discrimination, limited job opportunities, safety concerns, absence of role models, financial constraints, lack of support systems, cultural and language barriers, and inadequate access to technology. Addressing these issues is crucial to promote gender equality and enhance the enrollment of female students in technical education

#### **2.4. Strategies to enhance female enrolment**

Women Polytechnic Institutes (WPIs) are crucial educational institutions that provide technical and vocational education to women. However, despite the growing demand for skilled female workers in the global job market, the enrolment of women in WPIs remains low. This literature review examines various strategies implemented to enhance female enrolment in WPIs, with a specific focus on developing countries.

One effective strategy is the implementation of awareness campaigns. These campaigns utilize different media platforms such as television, radio, newspapers, social media, and billboards to highlight the significance of technical education for women and the advantages of attending WPIs. For example, a study conducted in Pakistan demonstrated that an awareness campaign resulted in a 45% increase in female enrolment in WPIs (Hussain & Ali, 2015).

Providing financial support, such as scholarships, is another effective approach. Many young women from disadvantaged backgrounds are unable to afford WPI education due to financial constraints. Offering scholarships can help overcome this barrier. A study in India found that

providing scholarships led to a 22% increase in female enrolment in WPIs (Jain & Mittal, 2019).

Gender-sensitive policies play a crucial role in enhancing female enrolment. These policies ensure that WPIs provide a safe and supportive environment for female students. Measures addressing sexual harassment, providing gender-segregated facilities, and ensuring equal opportunities for women attract and retain female students. A study in Nigeria revealed that gender-sensitive policies resulted in a 30% increase in female enrolment in WPIs (Oyeyinka & Ogunsanwo, 2018).

Having female role models and mentors is instrumental in inspiring and motivating female students to pursue technical education. Female faculty members and alumni can serve as role models and mentors. A study conducted in Bangladesh indicated that female role models and mentors led to a 20% increase in female enrolment in WPIs (Zaman & Begum, 2017).

Improving access to information and communication technology (ICT) is particularly important in developing countries. Providing female students with computers, internet access, and other ICT resources helps bridge the gender gap in technical education. A study in Ethiopia showed that providing access to computers resulted in a 25% increase in female enrolment in WPIs (Molla & Moreno, 2019).

Addressing cultural and social barriers is another critical aspect. These barriers often discourage women from pursuing technical education. Strategies like cultural sensitivity training, community engagement, and awareness campaigns can help overcome these obstacles. A study in Ghana demonstrated that addressing cultural and social barriers led to a 40% increase in female enrolment in WPIs (Agyemang & Kusi-Mensah, 2016).

Collaboration with industry can significantly enhance female enrolment by providing practical experience and exposure to the job market. Industry partnerships also ensure that WPIs offer training that meets the demands of the labor market. A study in Malaysia revealed that collaboration with industry resulted in a 35% increase in female enrolment in WPIs (Zaini, Mohamed, & Ishak, 2020).

Addressing language barriers is crucial, particularly in countries where technical education is delivered in a language that is not the first language of female students. Providing language training and delivering technical education in the local language can enhance female enrolment. A study in Cambodia found that addressing language barriers led to a 30% increase in female enrolment in WPIs (Talib & Pillay, 2019).

Providing scholarships and financial aid to female students is effective in overcoming financial barriers and encouraging them to pursue technical education. A study in India showed that providing financial aid resulted in a 20% increase in female enrolment in WPIs (Dhru).

In conclusion, enhancing female enrolment in WPIs requires a multi-pronged approach. Awareness campaigns, financial support, gender-sensitive policies, and role models and mentors can all play a crucial role in attracting and retaining female students in WPIs. It is important for policymakers and educators to recognize the importance of women's education and take steps to remove barriers to women's enrolment in technical and vocational education.

## **2.5. Conceptual framework of the study**

The study's conceptual framework serves as a guide to explore the reasons behind declining student enrollment in women's polytechnic institutes. It highlights potential factors, theories, and contextual factors that are relevant to the research. By utilizing this framework, the study aims to gain insights into the factors influencing the decline and to examine theories that can explain this phenomenon. Additionally, the framework takes into account the contextual factors

that may impact student enrollment, providing a comprehensive understanding of the research topic. Ultimately, the conceptual framework serves as a roadmap for the study, directing the research process and aiding in the analysis and interpretation of the findings.

Research objectives were identified and addressed, focusing on understanding the reasons behind the decline in student enrollment, exploring factors influencing enrollment decisions, and identifying strategies to address the decline. Research questions were formulated to investigate the factors contributing to the decline in student enrollment, the perceptions and influences on students' enrollment decisions, and potential strategies for reversing the decline.

Key concepts and variables included student enrollment, women's polytechnic institutes, and factors influencing enrollment decisions such as societal attitudes, career prospects, financial aid availability, and curriculum relevance.

The relationships and connections between the decline in enrollment and factors like societal attitudes, gender biases, financial aid, and curriculum relevance were explored.

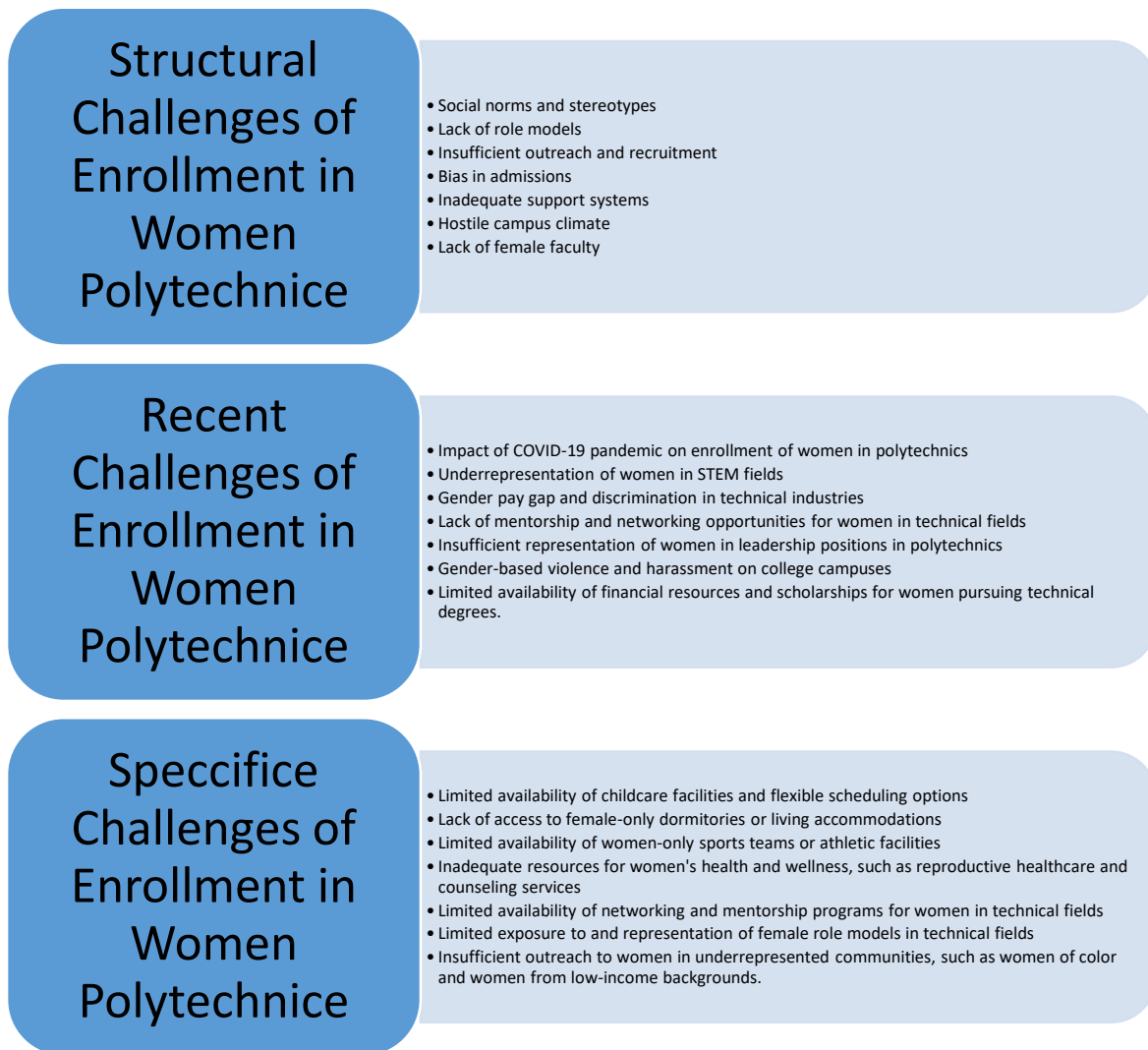
Theoretical frameworks used included gender and education theories, motivation and decision-making theories, and institutional theory to provide insights into the influence of societal norms, perceptions, and institutional factors on student enrollment.

Assumptions were made about the importance of understanding factors behind declining enrollment and the influence of societal attitudes, financial considerations, and educational perceptions on enrollment decisions.

Contextual factors considered included socio-cultural factors such as gender roles and expectations, economic factors like job opportunities and financial constraints, and educational policies including curriculum relevance and availability of financial aid.

Based on the above theoretical frame work the Conceptual frame work of the study as follows.





*Fig. 2.1 Conceptual frame work of the study developed by Authors*

## **SECTION THREE**

### **METHODOLOGY**

#### **3.1. Introduction**

This section consists of research method, research design, research instrument/tools, population and sampling procedure, data collection and analysis technique etc. to fulfill the target objectives of the research.

#### **3.2. Research design**

The study combines qualitative and quantitative methods to explore the current trends of student enrollment and employment of student in women polytechnic institute in Bangladesh, Challenges of enrollment and employment, etc. Quantitative Data has been collected from women polytechnic teachers, student and qualitative data collected from principal. expert and from document reviews.

#### **3.3 Strategy of inquiry**

This research has been conducted through a mixed method of survey research design, where both quantitative and qualitative data have been collected. For the quantitative research, survey questionnaires have been used to collect both primary and secondary data to gain in-depth knowledge by eliciting participants' previous knowledge, experiences, opinions, and observations regarding the three research questions. Qualitative data has been collected through open-ended questions and eight focus group discussions.

#### **3.4. Source of data**

The objectives of the first research question, which investigated the factors that influence female students towards enrolling in women's polytechnic institutes in Bangladesh, have been met through a combination of four data sources. These sources include principals, teachers, current and previous students of women's polytechnic institutes, and document reviews.

Similarly, the objectives of the second research question, which explored the problems faced by female students enrolling in women's polytechnic institutes in Bangladesh, have been achieved through a combination of four data sources, which include principals, teachers, current and previous students of women's polytechnic institutes, and document reviews.

Lastly, to fulfill the objectives of the third research question, which examined the strategies that can be taken to improve female students' enrollment in women's polytechnic institutes in Bangladesh, the researchers collected data from the same four data sources as mentioned above, along with document reviews.

### **3.5 Population, Sample and Sampling**

To meet the objectives of the research the targeted populations are

- Principals of women polytechnic institutions
- Teachers of women polytechnic institutions
- Current Student of polytechnic institute
- Previous Student of women polytechnic institute
- Document reviews

Considering the time constraint, the research study has opted to utilize Random and Purposive Sampling methods exclusively. These sampling techniques were chosen based on their suitability for the research objectives and the available timeframe.

#### **3.5.1 Current Student Sample and Selection Procedure**

The following formula is used to calculate the size of the research required sample for definite population:

$$n = N / (1 + (N-1) / (N * e^2))$$

Where:

n = Sample size

e = Error margin (4-5)

Population, N=4000 (Present student of Women Polytechnics).

Based on the sample estimation formula, a sample size of 200 students was determined for the study. The selection of the current students was carried out using a random sampling strategy.

### 3.5.2 Other respondents and sample selection procedure

**Table: 3.3. Sample size and sampling**

Data Source	Sample Size	Sampling	Selection criteria
Principals of women polytechnic institutions	04	Purposive sampling	Government Women institute 04
Teachers of women polytechnic institutions	40	Purposive sampling	10 Teachers of Each women polytechnic
Present Student of women polytechnic institute	200	Simple random sampling	50 student of each women polytechnic student
Present women Student of polytechnic institute (Nearest)	44	Purposive sampling	11 Women student of Each nearest polytechnic. of women polytechnics.
Previous Student of women polytechnic institute	40	Purposive sampling	10 Previous student of each women polytechnic student
Total	328		

The study employed appropriate sampling techniques to collect data from different sources related to women's polytechnic institutions. The sample size, sampling method, and selection criteria for each data source are provided in Table 3.3. For the first data source, which involved principals of women polytechnic institutions, a purposive sampling method was utilized. Four principals were selected based on the specific criterion of being from government women institutes. Similarly, the second data source focused on teachers of women polytechnic institutions, and a purposive sampling method was used. The sample included 40 teachers, with 10 teachers chosen from each women polytechnic institution. The third data source involved present students of women polytechnic institutions, and a simple random sampling method was employed. A sample size of 200 students was selected, with 50 students from each women polytechnic institution. This ensured an equal chance of selection for each student. Lastly, the fourth data source comprised present women students from the nearest polytechnic institutes to the researchers. Purposive sampling was used, resulting in a sample size of 44 women

students, with 11 students from each nearest polytechnic institution of women polytechnics. Overall, the total sample size for all four data sources was 328 individuals

### **3.6. Research instruments/tools**

The research has utilized semi-structured questionnaires, open ended questionnaires and documentary reviews as instruments for data collection. The questionnaires were developed based on a review of previous literature related to female Enrollment by the researcher. The tools/instruments used for data collection from different sources include semi-structured questionnaires for principals of women's polytechnic institutions, focus group discussions for teachers and student of women's polytechnic institutions, and semi-structured questionnaires for current and previous female students of women's polytechnic institutes.

### **3.7 Data collection techniques**

After pre-testing all the research questionnaires, the data **has been** collected after the approval of the review panel of the research and knowledge management cell. Direct question answer and interview method **has been** used for data collection and other questions answers will be collected following the research rules. A data collector will be appointed for data collection and appropriate training will be provided regarding data collection

### **3.8 Data analysis techniques**

Quantitative data will be entered through computer SPSS software and qualitative data will be analyzed manually and quantitative and qualitative data will be combined and published by analyzing the processed results. If necessary, the data will be analyzed using a combination of both quantitative and qualitative methods. Quantitative data will be analyzed through descriptive statistics and descriptive data will be analyzed qualitatively centering on the themes and concepts derived from the research objectives and field data.

## SECTION FOUR

### RESPONDENTS GENDER, DEMOGRAPHIC POSITION, FAMILY MEMBER INCOME SOURCE, AND EDUCATION QUALIFICATION

#### 4.1. Introduction

This section of the research analysis and interpretation focuses on analyzing the demographic characteristics of the study respondents, including gender, family condition, demographic position, income source, and education qualification etc. The study aimed to understand the factors that may affect female students' enrollment and retention in women's polytechnic institutes, which have been experiencing declining enrollment. Analyzing these factors provided important insights into designing gender-sensitive policies and programs to promote gender equity in technical education and skill development.

#### 4.2. Respondent Gender Information

**Table: 4.1 Participant's Gender information**

SN	Respondent Type	Responses		
		N	Male	Female
1	Principals of women polytechnic institutions	4	3	1
2	Teachers of women polytechnic institutions	40	32	12
3	Present Student of women polytechnic institute	193	0	193
4	Present women Student of polytechnic institute (Nearest)	40	0	40
5	Previous Student of women polytechnic institute	34	0	34
	Total	311	35	276
		100%	11%	89%

**Source: compiled by the authors**

Table 4.2 provides information on the gender distribution of the respondents in the study. The table lists five respondent types, including principals of women polytechnic institutions, teachers of women polytechnic institutions, present students of women polytechnic institutes, present women students of polytechnic institutes nearest to the researchers, and previous students of women polytechnic institutes.

For the principals of women polytechnic institutions, there were four respondents, out of which three were male and one was female. Among the 40 teachers of women polytechnic institutions who responded, 32 were male and 12 were female.

All 193 present students of women polytechnic institutes who participated in the study were female. Among the present women students of polytechnic institutes nearest to the researchers, all 40 respondents were female.

For the previous students of women polytechnic institutes, there were 34 respondents, and all of them were female.

In total, there were 311 respondents, out of which 276 were female, and 35 were male. This indicates that the study had a predominantly female sample, with 89% of the respondents being female and only 11% being male.

### **4.3. Respondent Demographics Information**

Table 4.2 presents the participant's demographics information categorized by divisions in the research study. The table provides a breakdown of the number of participants and the corresponding percentages for each division.

A total of 231 participants were included in the study. The divisions represented in the sample include Barishal, Chattagram, Dhaka, Khulna, Mymensingh, Rajshahi, and Rangpur.

Among the participants, the division of Chattagram had the highest frequency, with 60 participants, accounting for 26% of the total sample. This was followed closely by Dhaka, with 57 participants, representing 25% of the sample.

The Khulna division also had a significant number of participants, with 59 individuals, comprising 26% of the total sample. Rajshahi had 39 participants, representing 17% of the sample.

The remaining divisions had a relatively smaller number of participants. Barishal and Mymensingh divisions had 5 participants each, accounting for 2% of the sample. Rangpur division had 6 participants, representing 3% of the total sample

In conclusion, the sample for this research study consisted of participants from various divisions in Bangladesh, with Chattagram, Dhaka, and Khulna having the highest number of participants. The distribution of participants across divisions provides insights into the representation and diversity of the sample population.

**Table: 4.2 Participant’s demographics information (Division wise)**

SN	Division	Frequency=N	N%
1	Barishal	5	2%
2	Chattagram	60	26%
3	Dhaka	57	25%
4	Khulna	59	26%
5	Mymensingh	5	2%
6	Rajshahi	39	17%
7	Rangpur	6	3%
		231	100%

**Source: compiled by the authors**

#### **4.4. Respondent Earning member Information**

This table shows the number and percentage of respondents based on the number of earning members in their family. Out of the total 227 respondents, 73.6% reported having one earning member in their family, while 14.5% had two earning members. Only a small percentage of respondents (5.7%) had three earning members, and even fewer had four (4.8%), five (.4%), or six (.4%) earning members in their family. Only one respondent reported having no earning



members in their family. The cumulative percentage column shows the proportion of respondents at or below a certain number of earning members. For example, 74% of the respondents had one or fewer earning members in their family, while 88.5% had two or fewer earning members. This information can be useful in understanding the financial situation of the respondents' families and how it may impact their ability to pursue education at a women's polytechnic institute.

**Table: 4.3 Respondent earning members in the family**

<b>Number of Earning member</b>	<b>Frequency</b>	<b>Percent</b>
0	1	.4%
1	167	73.6%
2	33	14.5%
3	13	5.7%
4	11	4.8%
5	1	.4%
6	1	.4%
Total	227	100.0

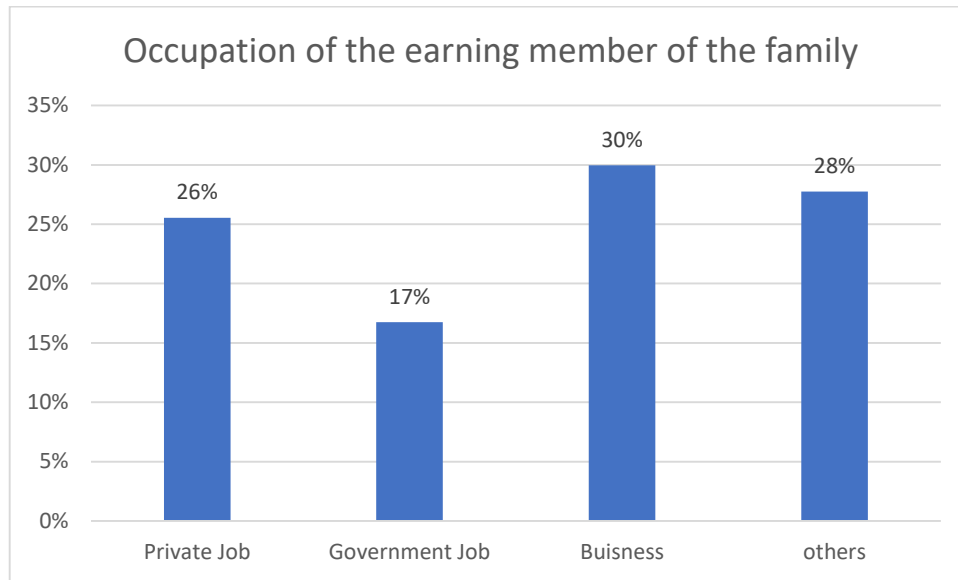
**Source: compiled by the authors**

#### **4.5. Respondent earning member Occupation of the family**

The given data provides information about the occupation of the earning member of the family, based on a sample size of 227 respondents. Out of the total sample, 26% respondents reported that the earning member of their family is engaged in a private job, 17% respondents reported that the earning member is engaged in a government job, and 30% respondents reported that the earning member is engaged in a business. The remaining 28% respondents reported that the earning member is engaged in some other occupation, which is not specified in the given data.

It can be inferred from the data that the majority of the earning members of the surveyed families are engaged in either a business or a private job. Only a smaller proportion of the

earning members are engaged in a government job or some other occupation. It is important to note that the data represents only a sample and not the entire population, hence the findings cannot be generalized to the entire population without further analysis.



*Fig. 4.1 Occupation of the earning members of the female student family.*

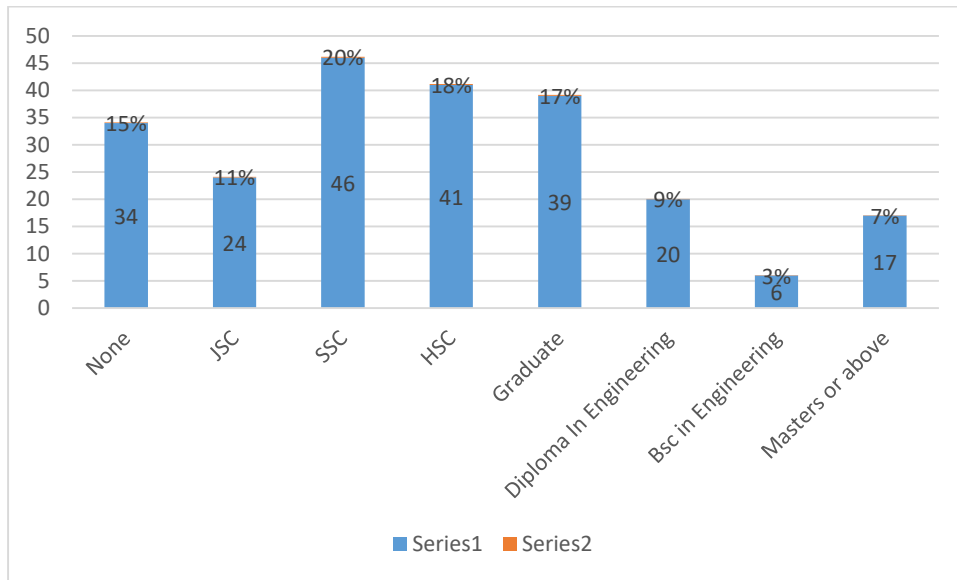
**Source: Compiled by the authors**

#### **4.6. Education qualification of the earning members of the female student family**

The fig 4.2 provides information on the educational qualifications of the earning members of the family in a certain survey. Out of the total 227 respondents, 34 (15%) of them have no educational qualification, 24 (11%) have completed JSC (Junior School Certificate), 46 (20%) have completed SSC (Secondary School Certificate), 41 (18%) have completed HSC (Higher Secondary Certificate), 39 (17%) have completed graduation, 20 (9%) have completed a Diploma in Engineering, 6 (3%) have completed BSc in Engineering, and 17 (7%) have completed a Master's degree or above.

The data shows that a significant number of earning members have completed some form of formal education, with the majority having completed up to SSC or higher. The proportion of respondents with higher educational qualifications, such as graduation and post-graduation, is

also notable. However, it is important to note that a considerable portion of the earning members, approximately 15%, have no formal education, which may impact their employment opportunities and earning potential.

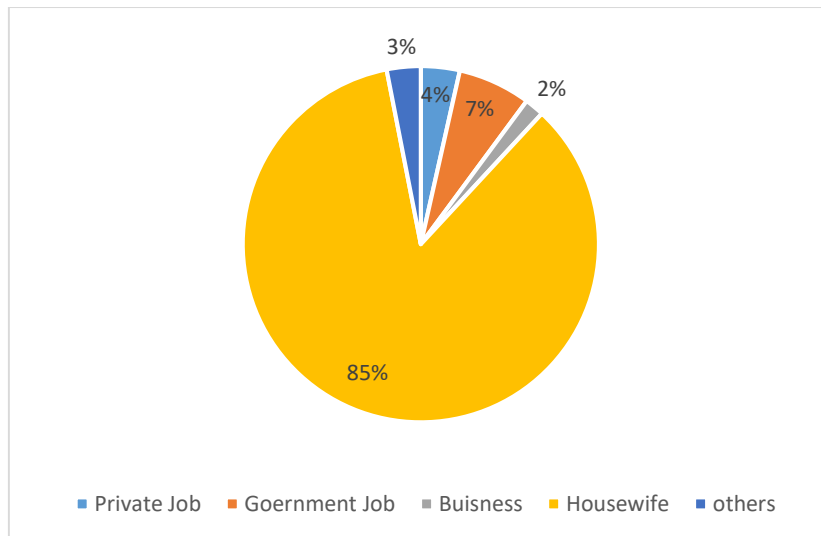


**Fig. 4.2 Education qualification of the earning members of the female student family.**

#### **4.7. Respondent female guardians' occupation**

The Figure shows the occupation of the female guardian of the family for a sample of respondents. Out of 227 respondents, 193 (85%) female guardians are housewives. 15 (7%) have a government job, and 8 (4%) are in a private job. 4 (2%) have a business, and the remaining 7 (3%) fall under the "others" category.

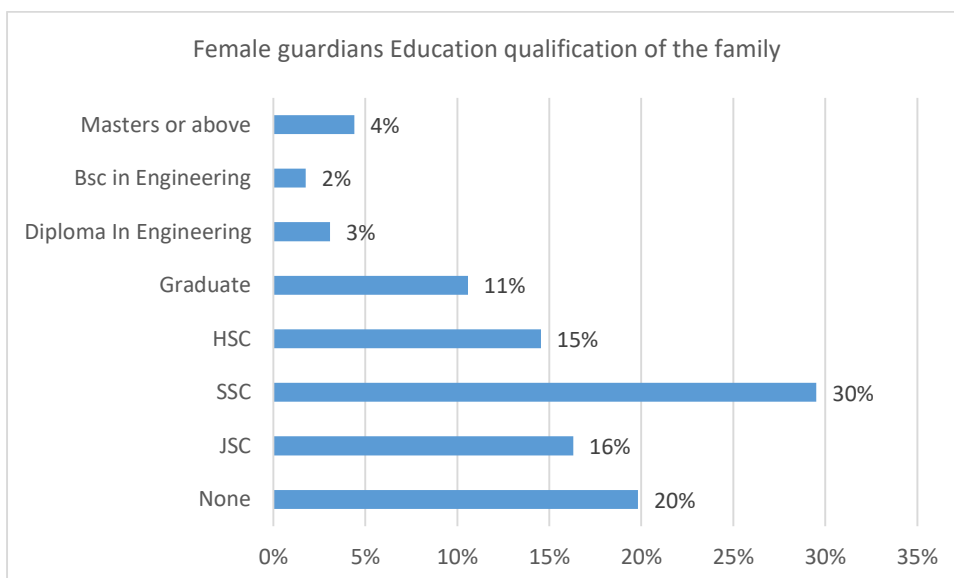
This Figure indicates that a vast majority of the female guardians in this sample are housewives, while a smaller proportion of them are employed outside the home. This information could be useful for policymakers and researchers interested in understanding the gender dynamics of the labor market and the role of women in the household economy.



**Fig. 4.3 Female guardian's occupation**

#### 4.8. Education qualification of the female guardians of the female student family

This data presents the educational qualifications of the female guardians of the families surveyed. In terms of educational qualifications, the highest percentage (30%) had completed SSC (Secondary School Certificate) followed by None (20%), HSC (Higher Secondary Certificate) with 15%, and JSC (Junior School Certificate) with 16%. Additionally, 11% of female guardians had completed their graduation, 3% had a Diploma in Engineering, 2% had a BSc in Engineering, and 4% had completed their Masters or above.



**Fig. 4.4 Female guardian's education qualification**

## SECTION FIVE

### **FACTORS ASSOCIATED WITH DECREASING FEMALE ENROLLMENT, PROBLEMS FEMALE STUDENTS FACE DURING ENROLLMENT, AND STRATEGIES TO ENHANCE FEMALE ENROLLMENT.**

#### **5.1. Introduction**

This section presents the findings of a study on the declining enrollment of female students in women's polytechnic institutes. Through surveys and interviews with students, faculty members, and educational administrators in different regions of Bangladesh, the study analyzed the factors responsible for the declining enrollment and the problems faced by female students during their enrollment. The analysis revealed several factors, including societal attitudes towards gender roles, lack of infrastructure and facilities, inadequate financial assistance, and limited job opportunities for female graduates in technical fields. The study also identified challenges faced by female students, such as gender bias, cultural and language barriers, and limited access to technology. To address these challenges and promote gender equity in technical education, the study proposed several strategies, including increasing awareness and outreach programs, providing scholarships and financial assistance, establishing mentorship programs, and improving infrastructure and facilities. The study emphasizes the need for gender-sensitive policies and programs to promote female students' enrollment and retention in women's polytechnic institutes. The findings highlight the need for concerted efforts from policymakers, educational institutions, and other stakeholders to promote gender equity in technical education and skill development.

## 5.2. Respondents’ opinions on various aspects related to their education, job opportunities, and preferences for their future.

The research findings are based on a survey of 227 respondents who were female students of Mohila Polytechnic. The survey was designed to evaluate their opinions on various aspects related to their education, job opportunities, and preferences for their future.

**Table: 5.1 Participant’s opinions on various aspects related to their education, job opportunities, and preferences for their future.**

N=227

Evaluation Topics	Answers	Frequency	Frequency%
Do you believe Job opportunities are available for female student after completing Diploma in Engineering	Highly Available	45	19.8%
	Moderately Available	78	34.4%
	Less Available	97	42.7%
	Not Available	7	3.1%
Was the Mohila Polytechnic Your Top Choice	Yes	198	87.2%
	No	29	12.8%
Where did You Plan to Attend?	Mohila Polytechnic	195	85.9%
	Another Polytechnic	20	8.8%
	General College	10	4.4%
	Vocational Institute / College	2	0.9%
How did you plan to pay for institute	Family	200	88.5%
	Stipend/Scholarships	13	5.8%
	Loans	0	0.0%
	Employment/Work	6	2.7%
	Other	7	3.1%
How do vote your polytechnic	Excellent	69	30.5%
	Good	88	38.9%
	Average	60	26.5%
	Fair	5	2.2%
	Poor	4	1.8%
How do you think the level of education at Mohila Polytechnic compares to other Polytechnic?	Better	150	66.1%
	Average	77	33.9%
	Worse	0	0.0%

Source: Compiled by Authors

The first evaluation topic was about job opportunities available for female students after completing a diploma in engineering. The findings show that a majority of respondents (77.1%) perceived job opportunities to be less or not available, while only a minority (19.8%) considered them highly available. This finding suggests that there may be some challenges for female graduates of engineering diplomas to find suitable job opportunities.

The second evaluation topic was about whether Mohila Polytechnic was the top choice for the respondents. The findings show that a large majority of respondents (87.2%) had selected Mohila Polytechnic as their top choice, while only a small minority (12.8%) had not. This finding suggests that Mohila Polytechnic is a popular choice among female students for pursuing a diploma in engineering.

The third evaluation topic was about the respondents' plans for attending Mohila Polytechnic or another institute. The findings show that most respondents (85.9%) had planned to attend Mohila Polytechnic, while only a small minority (4.4%) had planned to attend a general college. This finding suggests that female students have a strong preference for polytechnics over general colleges.

The fourth evaluation topic was about the respondents' plans for paying for their education. The findings show that most respondents (88.5%) had planned to pay for their education through family support, while a small minority (5.8%) had planned to use stipends or scholarships. This finding suggests that family support is the primary means of financing education for female students in this context.

The fifth evaluation topic was about the respondents' perceptions of Mohila Polytechnic. The findings show that a majority of respondents (69.4%) rated the polytechnic as excellent or good, while only a small minority (1.8%) rated it as poor. This finding suggests that female students are generally satisfied with the quality of education provided by Mohila Polytechnic.

The final evaluation topic was about how the respondents perceived the level of education at Mohila Polytechnic compared to other polytechnics. The findings show that a majority of respondents (66.1%) considered the level of education at Mohila Polytechnic to be better than other polytechnics, while a minority (33.9%) considered it average. This finding suggests that Mohila Polytechnic is perceived to be a better choice for female students seeking a diploma in engineering compared to other polytechnics.

Overall, the research findings suggest that female students have a strong preference for pursuing a diploma in engineering at Mohila Polytechnic and are generally satisfied with the quality of education provided by the institute. However, they may face challenges in finding suitable job opportunities after graduation.

### 5.3. Respondents’ opinions on influencing factors in women's polytechnic admissions

The research findings presented in Table 5.2 provide insights into the factors that influence women's decisions to enroll in polytechnics. The survey was conducted among 190 participants, and the responses were analyzed to identify the most influential factors in women's polytechnic admissions.

**Table: 5.2 Participant’s opinions on influencing factors in women's polytechnic admissions**

N=190				
Evaluation Topics		Responses		Percent of Cases
		frequency	Percent	
Which of the following influenced you in women polytechnic admissions?	Costing	30	8.3%	15.8%
	Stipend availability	34	9.4%	17.9%
	Reputation of the institute	69	19.0%	36.3%
	Campus Experience	33	9.1%	17.4%
	Location	39	10.7%	20.5%
	Communication with Admission Staff	10	2.8%	5.3%
	Advice from Family Member, Friend, Mentor	133	36.6%	70.0%
	Advice from A High School Counselor, Teacher	15	4.1%	7.9%

Source: Compiled by Authors

The first factor examined was the costing of polytechnics, and the findings indicate that only 8.3% of respondents considered it a significant factor in their decision-making process. This finding suggests that the cost of education is not a significant barrier for most women seeking admission to polytechnics.



The second factor examined was the availability of stipends, and the findings indicate that 9.4% of respondents considered it an influential factor. This finding suggests that stipend availability is a consideration for some women when deciding to enroll in polytechnics.

The third factor examined was the reputation of the institute, and the findings indicate that a significant majority of respondents (19.0%) considered it an influential factor in their decision-making process. This finding suggests that the reputation of the institute is an important consideration for women when choosing a polytechnic to enroll in.

The fourth factor examined was campus experience, and the findings indicate that 9.1% of respondents considered it an influential factor. This finding suggests that campus experience is not a significant factor for most women when deciding to enroll in polytechnics.

The fifth factor examined was the location of the polytechnic, and the findings indicate that 10.7% of respondents considered it an influential factor. This finding suggests that the location of the polytechnic is a consideration for some women when deciding to enroll.

The sixth factor examined was communication with admission staff, and the findings indicate that only 2.8% of respondents considered it an influential factor. This finding suggests that communication with admission staff is not a significant factor for most women when deciding to enroll in polytechnics.

The seventh factor examined was advice from family members, friends, or mentors, and the findings indicate that a significant majority of respondents (36.6%) considered it an influential factor in their decision-making process. This finding suggests that advice from family members, friends, or mentors is an important consideration for women when deciding to enroll in polytechnics.

The eighth and final factor examined was advice from high school counselors or teachers, and the findings indicate that only 4.1% of respondents considered it an influential factor. This finding suggests that advice from high school counselors or teachers is not a significant factor for most women when deciding to enroll in polytechnics.

Overall, the research findings suggest that the reputation of the institute and advice from family members, friends, or mentors are the most influential factors in women's decisions to enroll in polytechnics. Other factors such as costing, stipend availability, campus experience, location, and communication with admission staff are less important considerations. These findings may help polytechnics to better understand the factors that influence women's decisions to enroll and to develop strategies to attract more women to enroll in their programs.

#### 5.4. Respondents' opinions on technologies can be implemented in women's polytechnics

According to the respondents' opinions (Table: 5.2), all technologies listed in the table can be implemented in women's polytechnics. However, some technologies received more agreement than others. Computer Science and Technology, Electrical Technology, Civil Technology, Graphic Design Technology, Printing Technology, Computer Technology, Electro-Medical Technology, Electronics Technology and Food Technology received the highest levels of agreement, while Refrigeration and Air-Conditioning Technology had no response. It is important to note that the level of agreement may not necessarily reflect the actual feasibility or suitability of implementing a particular technology in a women's polytechnic. Other factors such as infrastructure, resources, and demand should also be taken into consideration.

**Table: 5.3 Participant's opinions on technologies can be implemented in women's polytechnics**

**N=271**

SN	Study	Strongly Agree	Agree	Total Agree (%)	Disagree	Strongly Disagree	Total Disagree (%)
1	Computer Science and Technology	87	32	95.9	3	1	4.1
2	Electrical Technology	68	49	95.9	3	1	4.1
3	Civil Technology	48	67	94.4	6	0	5.6
4	Graphic Design Technology	74	40	89	13	0	11
5	Printing Technology	9	64	87.5	26	3	12.5

6	Computer Technology	74	26	86.2	11	2	13.8
7	Electro-Medical Technology	35	54	83.2	16	1	16.8
8	Electronics Technology	29	58	82.8	17	0	17.2
9	Food Technology	64	42	82.8	19	2	17.2
10	Chemical Technology	17	69	78.2	22	2	21.8
11	Architecture	9	22	73.8	10	1	26.2
12	Ceramic Technology	4	62	68.8	24	5	31.2
13	Environmental Technology	27	39	61.6	39	2	38.4
14	Construction Technology	30	27	52.8	47	3	47.2
15	Civil (Wood) Technology	24	33	50	50	2	50
16	Glass Technology	19	30	48.5	51	1	51.5
17	Power Technology	13	34	44	56	4	56
18	Mechanical Technology	17	30	43.5	58	3	56.5
19	Automobile Technology	7	35	38.9	60	5	61.1
20	Mechatronics Technology	4	24	29.8	56	9	70.2
21	Refrigeration and Air-Conditioning Technology	8					

Source: Compiled by Authors

## 5.2. Respondents' opinion on students declining of women's polytechnic institutes in Bangladesh.

In this summary table:5.5, each evaluation topic is listed along with its corresponding frequency and percentage. The frequency represents the number of respondents who selected that particular evaluation topic, while the percentage represents the proportion of respondents out of the total number of participants. The research findings indicate that there are various factors that contribute to the declining student enrollment in women's polytechnic institutes in Bangladesh. The majority of the respondents (90.9%) believe that technical education is still looked down upon in society, which suggests a cultural bias against women pursuing technical education.

**Table: 5.4 Participant’s opinion on the causes of student decline of women polytechnics in Bangladesh**

**Total Respondent: 231**

SN	Evaluation Topics	Frequency	Percentage
1	Technical education is still looked down upon in society	210	90.9%
2	Skill gap teacher and student	205	88.7%
3	The quality of teachers in practical class is not good	204	88.3%
4	Lack of Quality Education	187	81.0%
5	Low Student hostel facilities	185	80.1%
6	Low stipend	172	74.5%
7	There are no/Limited job opportunities for girls	157	68.0%
8	Financial crisis of student family.	156	67.5%
9	Lack of higher education facilities	94	40.7%
10	Low Interest of engineering	89	38.5%

Source: Compiled by Authors

The second most commonly cited factor was the skill gap between teachers and students, with 88.7% of the respondents expressing concern about this issue. This could be indicative of a lack of proper training for teachers and inadequate resources for students to learn the necessary skills.

Furthermore, 88.3% of the respondents believed that the quality of teachers in practical classes was not good enough. This highlights the need for better teacher training and professional development programs to improve the quality of education in women's polytechnic institutes.

Other factors that were cited include a lack of quality education (81%), low student hostel facilities (80.1%), and low stipends (74.5%). These factors could contribute to a challenging learning environment that discourages potential students from enrolling in women's polytechnic institutes.

Financial crisis of student families (67.5%) and limited job opportunities for girls (68%) were also identified as significant factors affecting enrollment. This suggests that economic

considerations and social barriers are major impediments to women pursuing technical education.

Finally, the research findings indicate that the lack of higher education facilities (40.7%) and low interest in engineering (38.5%) are also contributing to declining student enrollment. These factors suggest that there is a need for greater investment in higher education and efforts to generate interest in technical education among women.

Overall, the findings of this study highlight the need for policy interventions and improvements in the quality of education, teacher training, infrastructure, and financial support and Employment Support to encourage more women to enroll in women's polytechnic institutes in Bangladesh.

During the focus group discussion (FGD), almost all participants agreed on the declining factors of women's polytechnics in Bangladesh

### **5.3. The opinions of research participants sought to identify the problems faced while studying students in women's polytechnic institutes in Bangladesh.**

In this summary table:5.5, each evaluation topic is listed along with its corresponding frequency and percentage. The frequency represents the number of respondents who selected that particular evaluation topic, while the percentage represents the proportion of respondents out of the total number of participants. The research findings indicate that female students enrolling in women's polytechnic institutes in Bangladesh face several problems. The top four problems identified by the respondents were inadequate hostel facilities for girls, a lack of subject-oriented practical classes, insufficient transportation facilities, and girls getting married during their studies. These issues were reported by 84.4%, 76.2%, 67.5%, and 67.1% of the respondents, respectively. Additionally, 13.8% of the respondents highlighted the lack of security for faraway students as a problem.

**Table: 5.5 Participant’s opinions on the student problems faced while studying in women's polytechnics in Bangladesh**

**Total Respondent: 231**

<b>SN</b>	<b>Evaluation Topics</b>	<b>Frequency</b>	<b>Percentage</b>
1	Hostel facilities for girls are less	195	84.4%
2	Lack of Subject-oriented practical class	176	76.2%
3	Lack of Transportation facilities	156	67.5%
4	Girls get married during their studies	155	67.1%
5	Lack of security of faraway student	109	47.2%

Source: Compiled by Authors

According to several principals of women's polytechnics in Bangladesh, there are some others' problems that female students face during their education. Apart from the declining enrollment rate, these problems include sexual harassment, inadequate education facilities, instructors lacking proper teaching skills, overcrowded classrooms, and gender-related issues. These factors contribute to the overall challenges that female students encounter in their pursuit of education in Bangladesh.

During the focus group discussion(FGD), almost all participants agreed on problems that female students face during their education of women's polytechnics in Bangladesh

#### **5.4. The opinions of research participants strategies that could be implemented to improve female students' enrollment in women's polytechnic institutes in Bangladesh**

The research findings indicate several strategies that could be implemented to improve female students' enrollment in women's polytechnic institutes in Bangladesh. In this summary table:5.6, each evaluation topic is listed along with its corresponding frequency and percentage. The frequency represents the number of respondents who selected that particular evaluation topic, while the percentage represents the proportion of respondents out of the total number of participants.

**Table: 5.6 Strategies that could be implemented to improve female students' enrollment in women's polytechnic institutes in Bangladesh**

**Total Respondent: 231**

SN	Evaluation Topics	Frequency	Percentage
1	Job placement support	213	92.2%
2	Improving hostel Facilities for every student	208	90.0%
3	Enhance soft skills and communication skills of women	205	88.7%
4	Increasing female Student stipend/Financial support	173	74.9%
5	Enhancing co-curricular activities	167	72.3%
6	Improving hostel management	166	71.9%
7	Improving Teaching Learning Environment	165	71.4%
8	Introducing a quota system for admission in various universities for students who have passed out of polytechnics	129	55.8%
9	It is better to give money for industrial attachment at the beginning	117	50.6%
10	Increasing the amount of industrial attachment	101	43.7%
11	A quota system for girls can be introduced in engineering jobs	95	41.1%
12	Online class arrange from expert teacher/role model etc.	80	34.6%
13	Naming the technologies in accordance with the core technology	38	16.5%

Source: Compiled by Authors

The most commonly suggested strategy was job placement support, with 92.2% of respondents indicating its importance.

Other important strategies include improving hostel facilities for every student (90%), enhancing soft skills and communication skills of women (88.7%), increasing female student stipend/financial support (74.9%), and enhancing co-curricular activities (72.3%).

Respondents also suggested improving hostel management (71.9%), improving teaching learning environment (71.4%), introducing a quota system for admission in various universities for students who have passed out of polytechnics (55.8%), and providing money for industrial attachment at the beginning (50.6%). Additionally, the respondents suggested increasing the amount of industrial attachment (43.7%), introducing a quota system for girls in engineering jobs (41.1%), online class arrangements from expert teachers or role models (34.6%), and naming the technologies in accordance with the core technology (16.5%).

These findings suggest that there is a need to provide better support to female students enrolling in women's polytechnic institutes in Bangladesh. Improving job placement support, hostel facilities, and providing financial support could encourage more female students to enroll in these institutes which are in line with the Previous researchers. Additionally, improving soft skills and communication skills, co-curricular activities, and the overall teaching and learning environment could help these students achieve success in their studies and future careers.

During the Focus Group discussion, almost all participants agreed on strategies that can be implemented to enhance enrollment in women's polytechnics in Bangladesh.



**SECTION SIX**  
**DISCUSSIONS OF FINDINGS, IMPLICATIONS, RECOMMENDATIONS**  
**AND CONCLUSIONS**

**6.1. Introduction**

This section of the research paper discusses the results obtained from the study's research questions and provides an analysis of previous researchers' opinions according to their literature reviews. It also includes the study's recommendations, limitations, and conclusions. The three research questions addressed in the study were analyzed, and the findings were discussed in detail. The section also highlights the recommendations for future research, limitations of the study, and concludes the study's main findings. Overall, this section provides a comprehensive understanding of the study's results and their implications.

**6.2. Survey on Female Students' Perspectives on Engineering Education and Job Opportunities: Insights from Mohila Polytechnic"**

The purpose of the research was to gather female students' opinions on various aspects related to their education, job opportunities, and preferences for their future. The findings were based on a survey of 227 respondents who were students of Mohila Polytechnic.

The research evaluated six topics, with the first topic being job opportunities available for female students after completing a diploma in engineering. The majority of respondents perceived job opportunities to be less or not available, indicating that there may be some challenges for female graduates of engineering diplomas to find suitable job opportunities.

The second topic evaluated whether Mohila Polytechnic was the top choice for the respondents. The research findings showed that Mohila Polytechnic is a popular choice among female

students for pursuing a diploma in engineering. The majority of respondents had selected Mohila Polytechnic as their top choice.

The third topic evaluated the respondents' plans for attending Mohila Polytechnic or another institute. The findings showed that female students have a strong preference for polytechnics over general colleges. Most respondents had planned to attend Mohila Polytechnic.

The fourth topic evaluated the respondents' plans for paying for their education. The research findings indicated that family support is the primary means of financing education for female students in this context.

The fifth topic evaluated the respondents' perceptions of Mohila Polytechnic. The majority of respondents rated the polytechnic as excellent or good, indicating that female students are generally satisfied with the quality of education provided by Mohila Polytechnic.

The final topic evaluated how the respondents perceived the level of education at Mohila Polytechnic compared to other polytechnics. The research findings showed that Mohila Polytechnic is perceived to be a better choice for female students seeking a diploma in engineering compared to other polytechnics.

In summary, the research findings suggest that female students prefer pursuing a diploma in engineering at Mohila Polytechnic and are generally satisfied with the quality of education provided by the institute. However, they may face challenges in finding suitable job opportunities after graduation.

### **6.3. Students declining issues of Women Polytechnic Institute in Bangladesh**

The students declining issues of Women Polytechnic Institute in Bangladesh suggest several challenges faced by students studying at the institute. One major issue is the lack of job opportunities for girls. This can be a demotivating factor for female students who aspire to pursue technical education. Additionally, the quality of teachers in practical classes is not good, which can affect the overall quality of education and skill development of the students.

Another issue is that technical education is still looked down upon in society. This societal attitude can impact the confidence and aspirations of students who choose to study technical courses. Moreover, there is a lack of higher education facilities, which can limit the options for students who wish to pursue further studies in their chosen field.

The skill gap between teachers and students is also a significant concern. This gap can result in a mismatch between the skills required by the industry and those possessed by the students. Further, there is a lack of quality education, which can affect the employability of the students.

Low stipends can be a financial burden for students who come from economically disadvantaged backgrounds. The low interest of students in engineering can be attributed to various factors, including the lack of job opportunities, poor quality of education, and societal attitudes towards technical education.

Additionally, student hostel facilities are inadequate, which can affect the overall well-being of the students. The financial crisis faced by the families of students can also be a significant concern, as it can affect the students' ability to continue their education.

Cultural biases against women pursuing technical education, low-quality education, and limited job opportunities as significant factors contributing to the declining enrollment of female students in technical education in line with the Previous literature review.

However, the research findings also highlight issues such as the skill gap between teachers and students, poor quality of practical classes, low-quality hostel facilities, low stipend, and financial crises of students' families, which are not specifically mentioned in the literature review. Nonetheless, both research findings and the literature review suggest that addressing these issues will require a collaborative effort by educators, policymakers, and civil society organizations to promote gender equality in technical education.

#### **6.4. Problems faced female enrolling in Women Polytechnic Institute in Bangladesh**

The problems faced by female students enrolling in Women Polytechnic Institute in Bangladesh are diverse and multifaceted. Lack of subject-oriented practical class, transportation facilities, and fewer hostel facilities for girls can discourage female students from enrolling in technical education. Additionally, girls getting married during their studies, lack of safety, and sexual harassment can create an unsafe learning environment, further discouraging female students from enrolling in Women Polytechnic Institute.

The low education facilities and instructors' lack of teaching skills are further hindering the quality of education, creating a crowded classroom, and creating gender-related problems. The lack of proper safety measures and inadequate hostel facilities for female students is also a significant concern that needs to be addressed.

To address these issues, the Women Polytechnic Institute in Bangladesh needs to implement policies and measures that provide safety and security to female students, such as introducing strict anti-sexual harassment policies and increasing the number of hostel facilities. The institute needs to enhance the quality of education and improve the teaching skills of instructors, which will also help to create a positive learning environment for female students.

The institute also needs to introduce policies that can provide financial support and job opportunities to female students, such as a quota system for girls in engineering jobs, increasing female student stipends/financial support, and job placement support. Additionally, the institute needs to focus on enhancing co-curricular activities, enhancing soft skills and communication skills of women, and introducing subject-oriented practical classes to attract more female students to enroll in technical education. Overall, addressing these issues can help to increase female enrollment in Women Polytechnic Institute in Bangladesh.

The literature review and the research findings identify social stigma as a problem faced by female students. In the literature review, it is mentioned that families in India believe that girls should not pursue technical education and should focus on getting married, while in the research findings, it is highlighted that girls getting married during their studies is a problem in Bangladesh. Both also mention the lack of infrastructure and resources as a problem. The literature review mentions the lack of laboratories, libraries, and equipment, while the research findings mention inadequate hostel facilities and a lack of subject-oriented practical classes. Safety and security concerns are also identified as a problem in both sources. The literature review highlights the risk of harassment and violence while traveling and the lack of proper security measures, while the research findings mention the lack of security for faraway students.

The literature review mentions gender bias and discrimination as a problem faced by female students, while the research findings do not explicitly mention it. Lack of job opportunities is mentioned in the literature review, but not in the research findings. Financial constraints and the lack of support systems are also mentioned in the literature review but are not identified as significant problems in the research findings. Cultural and language barriers and the lack of access to technology are not mentioned in the research findings.

Overall, the research findings and literature review agree on some of the challenges faced by female students in women's polytechnic institutes, but there are also some differences in the identified problems. It is important to address these challenges to promote gender equality and increase the enrollment of female students in technical education.

## **6.5. Strategies to increased female enrollment in Women Polytechnic Institute in Bangladesh**

The recommendations provided in the study can help address the declining enrollment of female students in Women Polytechnic Institutes in Bangladesh. It is evident from the findings that there are multiple factors contributing to this problem, including lack of job opportunities for girls, poor quality of teachers in practical classes, social stigma against technical education, and insufficient higher education facilities, among others.

The strategies suggested by the research participants can be effective in addressing these issues. Improving hostel facilities, enhancing soft skills and communication skills of women, and providing financial support can encourage more girls to enroll in Women Polytechnic Institutes. Increasing female student stipends and financial support can also help students from financially weaker backgrounds to continue their education. Introducing a quota system for admission in various universities for students who have passed out of polytechnics and engineering jobs can ensure equal opportunities for girls.

Enhancing co-curricular activities, improving hostel management, and improving teaching-learning environments can make the educational experience more enriching and engaging for female students. Online classes from expert teachers or role models can inspire and motivate girls to pursue technical education.

Overall, the strategies recommended by the study can be beneficial in increasing female enrollment in Women Polytechnic Institutes in Bangladesh. The implementation of these strategies requires the cooperation and support of various stakeholders, including the government, educational institutions, and the society at large.

## **6.6. Recommendation**

Based on the findings of the study, there are several recommendations that can be made to address the issues faced by female students at Women Polytechnic Institutes in Bangladesh.

Firstly, efforts should be made to improve job opportunities for female engineering diploma graduates, as the study found that a majority of respondents perceived job opportunities to be less or not available. This can be done by introducing a quota system for girls in engineering jobs and providing job placement support.

Secondly, there is a need to improve the quality of education and the skills of teachers, particularly in practical classes. This can be achieved by enhancing subject-based training for government polytechnic teachers, as well as increasing government and institutional support.

Thirdly, strategies should be developed to increase female enrollment in Women Polytechnic Institutes in Bangladesh. These can include introducing a quota system for admission in various universities for students who have passed out of polytechnics, enhancing co-curricular activities, and improving hostel facilities for every student.

Fourthly, measures should be taken to address safety concerns, including sexual harassment, lack of safety, and crowded classrooms. This can be done by enhancing hostel management and increasing female student stipends and financial support.

Overall, the recommendations aim to improve the quality of education and job opportunities for female students in Women Polytechnic Institutes in Bangladesh, and to address the various challenges and issues they face in pursuing their education and career goals.

## **6.7 Implications of the findings of the study**

The findings and recommendations of this study have significant implications for policymakers, educational institutions, and other stakeholders involved in promoting gender equity and empowering women in technical education. By identifying the factors responsible for declining enrollment and the challenges faced by female students in women's polytechnic institutes, this study provides valuable insights into the reasons behind the gender gap in technical education.

The study's recommendations offer actionable strategies that can be implemented to improve the enrollment and retention of female students in women's polytechnic institutes, such as enhancing subject-based skill training, improving hostel facilities, increasing financial support, introducing quota systems, and providing job placement support.

By implementing these recommendations, policymakers, educational institutions, and other stakeholders can create a more inclusive and supportive environment that promotes the participation and success of female students in technical education. Ultimately, these efforts can help address gender disparities in technical fields and contribute to the empowerment of women in the workforce and society as a whole.

## **6.8. Conclusion**

This study aimed to understand the reasons behind the decrease in female enrollment in women's polytechnic institutes and identify the challenges faced by female students in these institutions. The findings revealed several factors contributing to the decline, including societal attitudes, lack of awareness, and inadequate infrastructure. Additionally, the study identified challenges such as limited support, gender discrimination, and limited job prospects for female students. To address these issues and improve female enrollment, the study suggests implementing strategies like awareness campaigns, financial support, infrastructure



improvements, and promoting gender equality in these institutes. The study emphasizes the importance of policymakers, educators, and stakeholders taking effective measures to encourage female enrollment and overcome the challenges faced by female students. By fostering gender equality and inclusivity in technical education, we can empower women and contribute to societal development.

### **6.9 Limitations of the study**

The study was conducted solely in Women Polytechnics. If conducted separately, it could shed light on the challenges faced by female students in Bangladesh, their decline, and how to overcome specific issues. However, the study failed to provide an accurate representation of the entire Diploma in Engineering programs. Additionally, there were limitations such as inadequate data management systems in the TVET organizations, lack of research participants' perspectives, and limited time for more comprehensive research.

### **6.10. Recommendation for further research**

1. The study focused exclusively on issues related to declining enrollment of female students in Government Women Polytechnic Institutes in Bangladesh. However, in the future, this study could be extended to other courses and cover both male and female polytechnic students across Bangladesh.
2. Further investigation could be carried out to identify specific attractive facilities that could be increased to reduce the declining number of female students in Polytechnic institutes in Bangladesh.

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## Appendix A-Semi-Structured Questionnaires for Principal

**Research Title: Why is student enrollment in women's polytechnic institutes declining? : An exploratory study.**

**N.B.: This information will be used only for research purpose. Your name and address will be kept in secret completely.**

**Time: 30 Minutes**

**Principal Name:**

**Working years in this institution:**

**Institute Name: ..... Mohila Polytechnic Institute**

**Time:**

**Date:**

1. Is there a lack of campaigning for admission to women's polytechnics?

( মহিলা পলিটেকনিক গুলোতে ভর্তির ক্ষেত্রে প্রচারণার অভাব রয়েছে কি )

- Yes  
 No

2. If there is a lack of campaign, what type of campaign should be given importance at present? ( প্রচারণার অভাব থাকলে বর্তমান সময়ে কোন ধরনের প্রচারণায় গুরুত্ব দেয়া উচিত )

Media Type	Strongly Agree	Agree	Disagree	Strongly Disagree
Website				
YouTube				
Facebook				
Newspaper / Magazine				
Poster, Banner, Festoon				
TV Add				
Miking				
Others				

3. Why do you think female students are dropping out during studies?

( যে কারণে পড়াশোনা চলাকালীন ছাত্রীরা ঝরে পড়ছে বলে আপনি মনে করেন )

Reason	Very often	Often	Occasionally	Rarely	Never
For Marriage					
For Economic Condition					
For Low Job Demand					
For Subject's Hardness					
For Woman Security					

No Job facilities nearby					
Others					

4. Do the public consider women's polytechnics as government polytechnics? ( জনসাধারণ মহিলা পলিটেকনিক গুলোকে সরকারি পলিটেকনিক মনে করেন কি )
- Yes
- No
5. Is it necessary to add the word "Government" to women's polytechnics? ( মহিলা পলিটেকনিক গুলোর সাথে “সরকারি” শব্দটি যুক্ত করার দরকার আছে কি )
- Yes
- No
6. To what extent the semester-based subjects of respective technology meet the actual demand-based curriculum ( নিজ নিজ টেকনোলজির সেমিস্টারভিত্তিক বিষয়গুলো কতটা বাস্তব চাহিদাভিত্তিক কারিকুলাম সম্পন্ন )

Technology	Very Hard	Hard	Medium	Easy	Very Easy
Architecture Technology					
Civil Technology					
Computer Science and Technology					
Electrical Technology					
Electro-Medical Technology					
Electronics Technology					
Food Technology					

7. Teacher information
- Number of Total Post : \_\_\_\_\_
- Number of Working Teacher : \_\_\_\_\_
- Number of Vacancies : \_\_\_\_\_
8. If your organization is running short courses, write the name of the courses:

9. Semester wise student dropout rate (সেমিস্টার ভিত্তিক ছাত্রীদের ঝরে পড়ার হার) :

Semester	0-20%	21-40%	41-60%	61-80%	81-100%
8th					
7th					
6th					

5th					
4th					
3rd					
2nd					
1st					

10. Which of the following technologies can be implemented in women's polytechnics? ( মহিলা পলিটেকনিক গুলোতে নিম্নের কোন টেকনোলজি গুলো চালু রাখা যেতে পারে )

Architecture Technology	Strongly Agree	Agree	Disagree	Strongly Disagree
Automobile Technology				
Ceramic Technology				
Chemical Technology				
Civil (Wood) Technology				
Civil Technology				
Computer Science and Technology				
Computer Technology				
Construction Technology				
Electrical Technology				
Electro-Medical Technology				
Electronics Technology				
Environmental Technology				
Food Technology				
Glass Technology				
Graphic Design Technology				
Mechanical Technology				
Mechatronics Technology				
Power Technology				
Printing Technology				
Refrigeration and Air-Conditioning Technology				
Surveying Technology				
Telecommunication Technology				

11. Do you think the number of students can increase if the names of the technologies are written below with the main technology?

(টেকনোলজির সমূহের নামকরণ মূল টেকনোলজির সাথে নিম্ন লিখিতভাবে করলে ছাত্রসংখ্যা বাড়তে পারে বলে আপনি মনে করেন কি)

SL No	Main Technology	Proposed Technology name
1	Diploma in Civil Engineering	Diploma in Civil (Wood)Engineering Diploma in Civil (Construction)Engineering Diploma in Civil (Surveying)Engineering

		Diploma in Civil (Environmental)Engineering
2	Diploma in Electrical Engineering	Diploma in Electrical (Electro-Medical) Engineering Diploma in Electrical (Electronics) Engineering Diploma in Electrical (Telecommunication) Engineering Diploma in Electrical (Instrumentation and process control) Engineering Diploma in Electrical (Power) Engineering
3	Diploma in Mechanical Engineering	Diploma in Mechanical (Automobile) Engineering Diploma in Mechanical (Mechatronics) Engineering Diploma in Mechanical (Refrigeration and Air-Conditioning) Engineering
4	Diploma in computer Engineering	Diploma in computer (Graphic Design) Engineering Diploma in computer (Printing) Engineering Diploma in computer (Software) Engineering

Yes  No

If No, Please Explain:

12. Do you think naming technologies according to the above rules (28 no Questions) will create equal opportunities in the job market?

( উপরোক্ত নিয়ম অনুযায়ী টেকনোলজি সমূহের নামকরণ করলে চাকরির বাজারে সমান সুযোগ সৃষ্টি হবে বলে আপনি মনে করেন কি )

Yes  No

If No, Please Explain

13. In your institution which area do the students get more admissions?

( আপনার প্রতিষ্ঠানে কোন এলাকার ছাত্রীরা বেশি ভর্তি হয় )

Institute	Sadar Area %	Home District %	Nearest District %	Distant District %
Rajshahi Mohila Polytechnic Institute				
Dhaka Mohila Polytechnic Institute				
Khulna Mohila Polytechnic Institute				
Chittagong Mohila Polytechnic Institute				

14. Does your organization have enough of the following technology goods and equipment? ( আপনার প্রতিষ্ঠানের নিম্নোক্ত টেকনোলজির মালামাল ও যন্ত্রপাতি পর্যাপ্ত আছে কি )

Technology	Very Wealthy	Wealthy	Medium	Poor	Very Poor
Architecture Technology					
Civil Technology					



Computer Science and Technology					
Electrical Technology					
Electro-Medical Technology					
Electronics Technology					
Food Technology					

15. What is the number of residences in the hostel for female students in your institution? ( আপনার প্রতিষ্ঠান ছাত্রীদের জন্য হোস্টেলে আবাসিক সংখ্যা কত )

Institute	Total Student Seats in Your Institute (4 Years)	Total Seat Capacity in Hostel	Percentage (%)
Rajshahi Mohila Polytechnic Institute			
Dhaka Mohila Polytechnic Institute			
Khulna Mohila Polytechnic Institute			
Chittagong Mohila Polytechnic Institute			

16. Employment of Female Polytechnic Graduates

( মহিলা পলিটেকনিক হতে পাশকৃত ছাত্রীদের কর্মসংস্থান )

Job Type	1-10%	11-20%	21-30%	31-40%	41-50%	51-60%	61-70%	71-80%	81-90%	91-100%
Government Job										
Private Job										
Self-Employment (Entrepreneur)										
Jobless										
Higher education										

17. Demand of technologies employed in government jobs-

সরকারি চাকুরিতে নিম্নোক্ত টেকনোলজিগুলোর চাহিদা-

Technology	Very High	High	Medium	Low	Very Low
Architecture Technology					
Civil Technology					
Computer Science and Technology					
Electrical Technology					

Electro-Medical Technology					
Electronics Technology					
Food Technology					

### 18. Demand of technologies employed in Private jobs

(বেসরকারি চাকুরিতে নিয়োক্ত টেকনোলজিগুলোর চাহিদা)-

Technology	Very High	High	Medium	Low	Very Low
Architecture Technology					
Civil Technology					
Computer Science and Technology					
Electrical Technology					
Electro-Medical Technology					
Electronics Technology					
Food Technology					

### 19. Pass rate of female students in previous years (বিগত বছরগুলোতে ছাত্রীদের পাসের হার)-

Institute	Sadar Area %	Home District %	Nearest District %	Distant District %
Rajshahi Mohila Polytechnic Institute				
Dhaka Mohila Polytechnic Institute				
Khulna Mohila Polytechnic Institute				
Chittagong Mohila Polytechnic Institute				

### 20. What kind of extracurricular activities are running in your institution?

(আপনাদের প্রতিষ্ঠান কি কি ধরনের এক্সট্রা কারিকুলাম এক্টিভিটিস চালু আছে)

### 21. What is your opinion on the reason why the admission rate of students in women polytechnics is decreasing day by day

(মহিলা পলিটেকনিক গুলোতে শিক্ষার্থী ভর্তির হার দিনে দিনে কম হওয়ার কারণ বিষয়ে আপনার অভিমত)-

- There are no job opportunities for girls
- The quality of teachers in practical class is not good
- Technical education is still looked down upon in society
- Lack of higher education facilities
- Skill gap teacher and student
- Lack of Quality Education

- Low stipend
- Low Interest of engineering
- Student hostel facilities
- Financial crisis of student family.
- ....
- .....

22. What problems do students face in enrollment/admission in female polytechnics? মহিলা পলিটেকনিক গুলোতে শিক্ষার্থী এনরোলমেন্ট/ভর্তি এর ক্ষেত্রে কি কি সমস্যার সমস্যার সম্মুখীন হয়-

23. What problems do students face during their studies in women's polytechnics

(মহিলা পলিটেকনিক গুলোতে পড়াশোনা চলাকালীন সময়ে শিক্ষার্থীরা কি কি সমস্যার সম্মুখীন হয়)-

- Lack of Subject-oriented practical class
- Lack of Transportation facilities
- Hostel facilities for girls are less
- Girls get married during their studies
- Lack of Safety
- Sexual harassment
- low education facilities,
- instructors lack of teaching skills
- crowded classroom
- gender related problem
- .....
- .....
- .....

24. What is your opinion on increasing the enrollment rate of female polytechnics? (মহিলা পলিটেকনিক গুলোতে শিক্ষার্থী ভর্তির হার বাড়ানোর বিষয়ে আপনার অভিমত)-

- Introducing a quota system for admission in various universities for students who have passed out of polytechnics
- A quota system for girls can be introduced in engineering jobs

- Increasing the amount of industrial attachment
- Improving hostel Facilities for every student
- Improving hostel management
- Enhancing co-curricular activities
- Enhance soft skills and communication skills of women
- It is better to give money for industrial attachment at the beginning
- Naming the technologies in accordance with the core technology
- Online class arrange from expert teacher/role model etc.
- Increasing female Student stipend/Financial support
- Job placement support
- Improving Teaching Learning Environment
- .....
- .....
- .....

25. Is the enrolment of male students in polytechnic institutes declining; If not, what are the reasons behind it?

26. Which are the preferred areas/technology of education of female students?

27. Are you satisfied with the quality of education in women's polytechnics?  
( মহিলা পলিটেকনিক গুলোতে পড়ালেখার গুণগতমান নিয়ে আপনি সন্তুষ্ট কিনা)

Yes  No

If No, Please Explain:

## Appendix B-Present student of Women polytechnic

**Research Title: Why is student enrollment in women's polytechnic institutes declining? An exploratory study.**

**N.B.: This information will be used only for research purpose. Your name and address will be kept in secret completely.**

**Time: 30 Minutes**

1. Name of the student (নাম) :
2. Gender (লিঙ্গ) :  Male (পুরুষ)  Female (মহিলা)
3. Address (ঠিকানা): Upazila: \_\_\_\_\_ District: \_\_\_\_\_
4. E-mail (ইমেইল) :
5. Phone (ফোন) :
6. How many earning members in the family? (পরিবারে উপার্জনক্ষম সদস্য কতজন)
7. Occupation of the earning member of the family (পরিবারের উপার্জনক্ষম সদস্যর পেশা)
9. Educational qualification of the earning member of the family  
(পরিবারের উপার্জনক্ষম সদস্যর শিক্ষাগত যোগ্যতা)
9. Occupation of female guardian of the family (পরিবারের নারী অভিভাবকের পেশা)
10. Educational qualification of female guardian of the family  
(পরিবারের নারী অভিভাবকের শিক্ষাগত যোগ্যতা)
11. Do you believe Job opportunities are available for female student after completing Diploma in Engineering (তুমি কি মনে কর পড়ালেখা শেষ করার পরে মেয়েদের জন্য চাকরির সুযোগ যথেষ্ট)?
  - Highly Available
  - Moderately Available
  - Less Available
  - Not available
12. Was the Mohila Polytechnic Your Top Choice?
  - Yes
  - No
13. Where did You Plan to Attend?
  - Mohila Polytechnic
  - Another Polytechnic

- General College
- Vocational Institute / College

14. How did you plan to pay for institute? Check all that apply

- Family
- Stipend/Scholarships
- Loans
- Employment/Work
- Other

15. Which of the following influenced you in women polytechnic admissions (মহিলা পলিটেকনিক ভর্তির ক্ষেত্রে নিচের কোনগুলো আপনাকে প্রভাবিত করেছে) ((You can choose multiple answer))

- Costing
- Stipend availability
- Reputation of the institute
- Campus Experience
- Location
- Communication with Admission Staff
- Advice from Family Member, Friend, Mentor
- Advice from A High School Counselor, Teacher

16. How do you vote your polytechnic?

- Excellent
- Good
- Average
- Fair
- Poor

17. How do you think the level of education at Mohila Polytechnic compares to other Polytechnic?

Better                      Average                                            Worse                     

18. How satisfied were you with the following-?

Description	Satisfied	Not Satisfied
Communication with Admission Staff-		
Communication with teacher from own Technology-		
Email Communication-		
Social Media Communication-		
Own Institute Website-		

The way you found out you were admitted-		
--	--	--

19. Please rate the following factors in terms of how important they were in deciding where you would attend

Factors	Not Important	Somewhat Important	Important	Very Important	Critically Important
Reputation or ranking of program					
Reputation or ranking of Institute					
Diversity of students, faculty, or community					
Geographic location					
Post-graduation employment opportunities					
Family or personal considerations					
Curricular emphasis, program structure, or faculty scholarship					
Tuition or cost of attendance					
Support service or program (student parent center, diversity program, disability resources, etc.)					
Other					

20. Which of the following technologies can be implemented in women's polytechnics? (মহিলা পলিটেকনিক গুলোতে নিম্নের কোন টেকনোলজি গুলো চালু রাখা যেতে পারে)

Architecture Technology	Strongly Agree	Agree	Disagree	Strongly Disagree
Automobile Technology				
Ceramic Technology				
Chemical Technology				
Civil (Wood) Technology				
Civil Technology				
Computer Science and Technology				
Computer Technology				
Construction Technology				
Electrical Technology				
Electro-Medical Technology				
Electronics Technology				
Environmental Technology				

Food Technology				
Glass Technology				
Graphic Design Technology				
Mechanical Technology				
Mechatronics Technology				
Power Technology				
Printing Technology				
Refrigeration and Air-Conditioning Technology				
Surveying Technology				
Telecommunication Technology				

21. Which are the preferred areas/technology of education of female students?

22. Do you think the number of students can increase if the names of the technologies are written below with the main technology? (টেকনোলজির সমূহের নামকরণ মূল টেকনোলজির সাথে নিম্ন লিখিতভাবে করলে ছাত্রসংখ্যা বাডতে পারে বলে আপনি মনে করেন কি)

SL No	Main Technology	Proposed Technology name
1	Diploma in Civil Engineering	Diploma in Civil (Wood)Engineering Diploma in Civil (Construction)Engineering Diploma in Civil (Surveying)Engineering Diploma in Civil (Environmental)Engineering
2	Diploma in Electrical Engineering	Diploma in Electrical (Electro-Medical) Engineering Diploma in Electrical (Electronics) Engineering Diploma in Electrical (Telecommunication) Engineering Diploma in Electrical (Instrumentation and process control) Engineering Diploma in Electrical (Power) Engineering



3	Diploma in Mechanical Engineering	Diploma in Mechanical (Automobile) Engineering Diploma in Mechanical (Mechatronics) Engineering Diploma in Mechanical (Refrigeration and Air-Conditioning) Engineering
4	Diploma in computer Engineering	Diploma in computer (Graphic Design) Engineering Diploma in computer (Printing) Engineering Diploma in computer (Software) Engineering

Yes  No

If No, Please Explain:

23. Do you think naming technologies according to the above rules (28 no Questions) will create equal opportunities in the job market? ( উপরোক্ত নিয়ম অনুযায়ী টেকনোলজি সমূহের নামকরণ করলে চাকরির বাজারে সমান সুযোগ সৃষ্টি হবে বলে আপনি মনে করেন কি)

Yes  No

If No, Please Explain:

24. What is your opinion on the reason why the admission rate of students in women polytechnics is decreasing day by day (মহিলা পলিটেকনিক গুলোতে শিক্ষার্থী ভর্তির হার দিনে দিনে কম হওয়ার কারণ বিষয়ে আপনার অভিমত) -

- There are no job opportunities for girls
- The quality of teachers in practical class is not good
- Technical education is still looked down upon in society
- Lack of higher education facilities
- Skill gap teacher and student
- Lack of Quality Education
- Low stipend
- Low Interest of engineering
- Student hostel facilities
- Financial crisis of student family.
- ....
- .....

25. What problems do students face in enrollment/admission in female polytechnics? (মহিলা পলিটেকনিক গুলোতে শিক্ষার্থী এনরোলমেন্ট/ভর্তি এর ক্ষেত্রে কি কি সমস্যার সমস্যার সম্মুখীন হয়) -

26. What problems do students face during their studies in women's polytechnics

(মহিলা পলিটেকনিক গুলোতে পড়াশোনা চলাকালীন সময়ে শিক্ষার্থীরা কি কি সমস্যার সম্মুখীন হয়) -

- Lack of Subject-oriented practical class
- Lack of Transportation facilities
- Hostel facilities for girls are less
- Girls get married during their studies
- Lack of security of faraway student
- .....
- ....

27. What is your opinion on increasing the enrollment rate of female polytechnics? (মহিলা পলিটেকনিক গুলোতে শিক্ষার্থী ভর্তির হার বাড়ানোর বিষয়ে আপনার অভিমত) -

- Introducing a quota system for admission in various universities for students who have passed out of polytechnics**
- A quota system for girls can be introduced in engineering jobs**
- Increasing the amount of industrial attachment**
- Improving hostel Facilities for every student**
- Improving hostel management**
- Enhancing co-curricular activities**
- Enhance soft skills and communication skills of women**
- It is better to give money for industrial attachment at the beginning**
- Naming the technologies in accordance with the core technology**
- Online class arrange from expert teacher/role model etc.
- Increasing female Student stipend/Financial support
- Job placement support
- Improving Teaching Learning Environment
- .....
- .....
- .....

28. Are you satisfied with the quality of education in women's polytechnics?

( মহিলা পলিটেকনিক গুলোতে পড়ালেখার গুণগতমাননিষে আপনি সন্তুষ্ট কিনা)

Yes  No

If No, Please Explain

## Appendix C-Previous Student of Women Polytechnic

**Research Title: Why is student enrollment in women's polytechnic institutes declining? An exploratory study.**

**N.B.: This information will be used only for research purpose. Your name and address will be kept in secret completely.**

**Time: 30 Minutes**

1. Name of the student (নাম) :
2. Gender (লিঙ্গ) :  Male (পুরুষ)  Female (মহিলা)
3. Address (ঠিকানা): Upazila: \_\_\_\_\_ District: \_\_\_\_\_
4. E-mail (ইমেইল) :
5. Phone (ফোন) :
6. How many earning members in the family? (পরিবারে উপার্জনক্ষম সদস্য কতজন)
7. Occupation of the earning member of the family (পরিবারের উপার্জনক্ষম সদস্যর পেশা)
11. Educational qualification of the earning member of the family  
(পরিবারের উপার্জনক্ষম সদস্যর শিক্ষাগত যোগ্যতা)
9. Occupation of female guardian of the family (পরিবারের নারী অভিভাবকের পেশা)
12. Educational qualification of female guardian of the family  
(পরিবারের নারী অভিভাবকের শিক্ষাগত যোগ্যতা)
11. Do you believe Job opportunities are available for female student after completing Diploma in Engineering (তুমি কি মনে কর পড়ালেখা শেষ করার পরে মেয়েদের জন্য চাকরির সুযোগ যথেষ্ট)?
  - Highly Available
  - Moderately Available
  - Less Available
  - Not available
12. Was the Mohila Polytechnic Your Top Choice?
  - Yes
  - No
13. Where did You Plan to Attend?



Email Communication-		
Social Media Communication-		
Own Institute Website-		
The way you found out you were admitted-		

19. Please rate the following factors in terms of how important they were in deciding where you would attend

Factors	Not Important	Somewhat Important	Important	Very Important	Critically Important
Reputation or ranking of program					
Reputation or ranking of Institute					
Diversity of students, faculty, or community					
Geographic location					
Post-graduation employment opportunities					
Family or personal considerations					
Curricular emphasis, program structure, or faculty scholarship					
Tuition or cost of attendance					
Support service or program (student parent center, diversity program, disability resources, etc.)					
Other					

20. Which of the following technologies can be implemented in women's polytechnics? (মহিলা পলিটেকনিক গুলোতে নিম্নের কোন টেকনোলজি গুলো চালু রাখা যেতে পারে)

Architecture Technology	Strongly Agree	Agree	Disagree	Strongly Disagree
Automobile Technology				
Ceramic Technology				
Chemical Technology				
Civil (Wood) Technology				
Civil Technology				
Computer Science and Technology				
Computer Technology				
Construction Technology				
Electrical Technology				

Electro-Medical Technology				
Electronics Technology				
Environmental Technology				
Food Technology				
Glass Technology				
Graphic Design Technology				
Mechanical Technology				
Mechatronics Technology				
Power Technology				
Printing Technology				
Refrigeration and Air-Conditioning Technology				
Surveying Technology				
Telecommunication Technology				

21. Which are the preferred areas/technology of education of female students?

22. Do you think the number of students can increase if the names of the technologies are written below with the main technology? (টেকনোলজির সমূহের নামকরণ মূল টেকনোলজির সাথে নিম্ন লিখিতভাবে করলে ছাত্রসংখ্যা বাড়তে পারে বলে আপনি মনে করেন কি)

SL No	Main Technology	Proposed Technology name
1	Diploma in Civil Engineering	Diploma in Civil (Wood)Engineering Diploma in Civil (Construction)Engineering Diploma in Civil (Surveying)Engineering Diploma in Civil (Environmental)Engineering
2	Diploma in Electrical Engineering	Diploma in Electrical (Electro-Medical) Engineering Diploma in Electrical (Electronics) Engineering Diploma in Electrical (Telecommunication) Engineering Diploma in Electrical (Instrumentation and process control) Engineering Diploma in Electrical (Power) Engineering

3	Diploma in Mechanical Engineering	Diploma in Mechanical (Automobile) Engineering Diploma in Mechanical (Mechatronics) Engineering Diploma in Mechanical (Refrigeration and Air-Conditioning) Engineering
4	Diploma in computer Engineering	Diploma in computer (Graphic Design) Engineering Diploma in computer (Printing) Engineering Diploma in computer (Software) Engineering

Yes  No

If No, Please Explain:

23. Do you think naming technologies according to the above rules (28 no Questions) will create equal opportunities in the job market? ( উপরোক্ত নিয়ম অনুযায়ী টেকনোলজি সমূহের নামকরণ করলে চাকরির বাজারে সমান সুযোগ সৃষ্টি হবে বলে আপনি মনে করেন কি)

Yes  No

If No, Please Explain:

24. What is your opinion on the reason why the admission rate of students in women polytechnics is decreasing day by day (মহিলা পলিটেকনিক গুলোতে শিক্ষার্থী ভর্তির হার দিনে দিনে কম হওয়ার কারণ বিষয়ে আপনার অভিমত) -

- There are no job opportunities for girls
- The quality of teachers in practical class is not good
- Technical education is still looked down upon in society
- Lack of higher education facilities
- Skill gap teacher and student
- Lack of Quality Education
- Low stipend
- Low Interest of engineering
- Student hostel facilities
- Financial crisis of student family.
- ....
- .....

25. What problems do students face in enrollment/admission in female polytechnics? (মহিলা পলিটেকনিক গুলোতে শিক্ষার্থী এনরোলমেন্ট/ভর্তি এর ক্ষেত্রে কি কি সমস্যার সমস্যার সম্মুখীন হয়) -

26. What problems do students face during their studies in women's polytechnics

(মহিলা পলিটেকনিক গুলোতে পড়াশোনা চলাকালীন সময়ে শিক্ষার্থীরা কি কি সমস্যার সম্মুখীন হয়) -

- Lack of Subject-oriented practical class
- Lack of Transportation facilities
- Hostel facilities for girls are less
- Girls get married during their studies
- Lack of security of faraway student
- .....
- ....

27. What is your opinion on increasing the enrollment rate of female polytechnics? (মহিলা পলিটেকনিক গুলোতে শিক্ষার্থী ভর্তির হার বাড়ানোর বিষয়ে আপনার অভিমত) –

- Introducing a quota system for admission in various universities for students who have passed out of polytechnics**
- A quota system for girls can be introduced in engineering jobs**
- Increasing the amount of industrial attachment**
- Improving hostel Facilities for every student**
- Improving hostel management**
- Enhancing co-curricular activities**
- Enhance soft skills and communication skills of women**
- It is better to give money for industrial attachment at the beginning**
- Naming the technologies in accordance with the core technology**
- Online class arrange from expert teacher/role model etc.
- Increasing female Student stipend/Financial support
- Job placement support
- Improving Teaching Learning Environment
- .....
- .....
- .....

28. Are you satisfied with the quality of education in women's polytechnics?

( মহিলা পলিটেকনিক গুলোতে পড়ালেখার গুণগতমাননিষে আপনি সন্তুষ্ট কিনা)

Yes  No

If No, Please Explain



**Appendix D-Present women student of the nearest polytechnic institute of Women Polytechnic**

**Research Title: Why is student enrollment in women's polytechnic institutes declining? An exploratory study.**

**N.B.: This information will be used only for research purpose. Your name and address will be kept in secret completely.**

**Time: 30 Minutes**

1. Name of the student (নাম) :
2. Gender (লিঙ্গ) :  Male (পুরুষ)  Female (মহিলা)
3. Address (ঠিকানা): Upazila: \_\_\_\_\_ District: \_\_\_\_\_
4. E-mail (ইমেইল) :
5. Phone (ফোন) :
6. How many earning members in the family? (পরিবারে উপার্জনক্ষম সদস্য কতজন)
7. Occupation of the earning member of the family (পরিবারের উপার্জনক্ষম সদস্যর পেশা)
13. Educational qualification of the earning member of the family  
(পরিবারের উপার্জনক্ষম সদস্যর শিক্ষাগত যোগ্যতা)
9. Occupation of female guardian of the family (পরিবারের নারী অভিভাবকের পেশা)
14. Educational qualification of female guardian of the family  
(পরিবারের নারী অভিভাবকের শিক্ষাগত যোগ্যতা)
11. Do you believe Job opportunities are available for female student after completing Diploma in Engineering (তুমি কি মনে কর পড়ালেখা শেষ করার পরে মেয়েদের জন্য চাকরির সুযোগ যথেষ্ট)?  
 Highly Available  
 Moderately Available  
 Less Available  
 Not available
12. Was the Mohila Polytechnic Your Top Choice?  
 Yes  
 No
13. Where did You Plan to Attend?  
 Mohila Polytechnic

- Another Polytechnic
- General College
- Vocational Institute / College

14. How did you plan to pay for institute? Check all that apply

- Family
- Stipend/Scholarships
- Loans
- Employment/Work
- Other

15. How do you rate your polytechnic?

- Excellent
- Good
- Average
- Fair
- Poor

16. How do you think the level of education at Mohila Polytechnic compares to other Polytechnic?

Better                      Average                                            Worse                     

16. How satisfied were you with the following-?

Description	Satisfied	Not Satisfied
Communication with Admission Staff-		
Communication with teacher from own Technology-		
Email Communication-		
Social Media Communication-		
Own Institute Website-		
The way you found out you were admitted-		

17. Please rate the following factors in terms of how important they were in deciding where you would attend/study

Factors	Not Important	Somewhat Important	Important	Very Important	Critically Important
Reputation or ranking of program					
Reputation or ranking of Institute					

Diversity of students, faculty, or community					
Geographic location					
Post-graduation employment opportunities					
Family or personal considerations					
Curricular emphasis, program structure, or faculty scholarship					
Tuition or cost of attendance					
Support service or program (student parent center, diversity program, disability resources, etc.)					
Other					

18. Which of the following technologies can be implemented in women's polytechnics? (মহিলা পলিটেকনিক গুলোতে নিম্নের কোন টেকনোলজি গুলো চালু রাখা যেতে পারে)

Architecture Technology	Strongly Agree	Agree	Disagree	Strongly Disagree
Automobile Technology				
Ceramic Technology				
Chemical Technology				
Civil (Wood) Technology				
Civil Technology				
Computer Science and Technology				
Computer Technology				
Construction Technology				
Electrical Technology				
Electro-Medical Technology				
Electronics Technology				
Environmental Technology				
Food Technology				
Glass Technology				
Graphic Design Technology				
Mechanical Technology				
Mechatronics Technology				
Power Technology				
Printing Technology				
Refrigeration and Air-Conditioning Technology				
Surveying Technology				

Telecommunication Technology				

19. Which are the preferred areas/technology of education of female students?

20. Do you think the number of students can increase if the names of the technologies are written below with the main technology? (টেকনোলজির সমূহের নামকরণ মূল টেকনোলজির সাথে নিম্ন লিখিতভাবে করলে ছাত্রসংখ্যা বাড়তে পারে বলে আপনি মনে করেন কি)

SL No	Main Technology	Proposed Technology name
1	Diploma in Civil Engineering	Diploma in Civil (Wood)Engineering Diploma in Civil (Construction)Engineering Diploma in Civil (Surveying)Engineering Diploma in Civil (Environmental)Engineering
2	Diploma in Electrical Engineering	Diploma in Electrical (Electro-Medical) Engineering Diploma in Electrical (Electronics) Engineering Diploma in Electrical (Telecommunication) Engineering Diploma in Electrical (Instrumentation and process control) Engineering Diploma in Electrical (Power) Engineering
3	Diploma in Mechanical Engineering	Diploma in Mechanical (Automobile) Engineering Diploma in Mechanical (Mechatronics) Engineering Diploma in Mechanical (Refrigeration and Air-Conditioning) Engineering
4	Diploma in computer Engineering	Diploma in computer (Graphic Design) Engineering Diploma in computer (Printing) Engineering Diploma in computer (Software) Engineering

Yes  No

If No, Please Explain:

21. Do you think naming technologies according to the above rules (28 no Questions) will create equal opportunities in the job market? (উপরোক্ত নিয়ম অনুযায়ী টেকনোলজি সমূহের নামকরণ করলে চাকরির বাজারে সমান সুযোগ সৃষ্টি হবে বলে আপনি মনে করেন কি)

No

If No, Please Explain:

22. What is your opinion on the reason why the admission rate of students in women polytechnics is decreasing day by day (মহিলা পলিটেকনিক গুলোতে শিক্ষার্থী ভর্তির হার দিনে দিনে কম হওয়ার কারণ বিষয়ে আপনার অভিমত) -

- There are no job opportunities for girls
- The quality of teachers in practical class is not good
- Technical education is still looked down upon in society
- Lack of higher education facilities
- Skill gap teacher and student
- Lack of Quality Education
- Low stipend
- Low Interest of engineering
- Student hostel facilities
- Financial crisis of student family.
- ....
- .....

23. What problems do women's face during their studies in polytechnics (পলিটেকনিক গুলোতে পড়াশোনা চলাকালীন সময়ে শিক্ষার্থীরা কি কি সমস্যার সম্মুখীন হয়) -

- Lack of Subject-oriented practical class
- Lack of Transportation facilities
- Hostel facilities for girls are less
- Girls get married during their studies
- Lack of security of faraway student
- .....
- ....

24. What is your opinion on increasing the enrollment rate of female polytechnics? (মহিলা পলিটেকনিক গুলোতে শিক্ষার্থী ভর্তির হার বাড়ানোর বিষয়ে আপনার অভিমত) -

- Introducing a quota system for admission in various universities for students who have passed out of polytechnics**
- A quota system for girls can be introduced in engineering jobs**
- Increasing the amount of industrial attachment**
- Improving hostel Facilities for every student**
- Improving hostel management**

- Enhancing co-curricular activities**
- Enhance soft skills and communication skills of women**
- It is better to give money for industrial attachment at the beginning**
- Naming the technologies in accordance with the core technology**
- Online class arrange from expert teacher/role model etc.**
- Increasing female Student stipend/Financial support**
- Job placement support**
- Improving Teaching Learning Environment**
- .....
- .....
- .....

28. Are you satisfied with the quality of education in polytechnics?

( মহিলা পলিটেকনিক গুলোতে পড়ালেখার গুণগতমাননিষে আপনি সন্তুষ্ট কিনা)

Yes  No

If No, Please Explain:

## **Appendix E-Focus Group Discussion (FGD) Topics for Teachers**

(Participants: Teachers of Women Polytechnic Institute)

**Research Title: Why is student enrollment in women's polytechnic institutes declining? : An exploratory study.**

**Participants Institute name: .....** Polytechnic Institute

**Number of Participants:**

**Venue:**

**Time:**

**Date:**

**Moderator:**

**Notetaker:**

**Discussion Topics:**

### **1. Students declining issues of women polytechnics:**

- Quality of Education
- Employment
- Married
- Low stipend
- Low Interest of engineering
- Quota system
- Subject
- Student hostel facilities
- Teachers' shortage
- Financial crisis of student family.

### **2. Problems faced female enrolling in women poly:**

- Hostel facilities
- Lab facilities
- Sexual harassment
- Transport
- Safety
- low education facilities,
- instructors lack of teaching skills
- crowded classroom
- gender related problem,
- 

### **3. Strategies to increased female enrollment in Women Poly:**

- Soft skill / Digital skill etc.
- Online class arrange from expert teacher/role model etc.
- Increasing female Student stipend/Financial support
- Job placement support
- Improving Teaching Learning Environment
- Extracurricular activities

**4. Is the enrolment of male students in polytechnic institutes declining; If not, what are the reasons behind it?**

5. Which are the preferred areas of education of female students?

6 Do you think the number of students can increase if the names of the technologies are written below with the main technology?

SL No	Main Technology	Proposed Technology name
1	Diploma in Civil Engineering	Diploma in Civil (Wood)Engineering Diploma in Civil (Construction)Engineering Diploma in Civil (Surveying)Engineering Diploma in Civil (Environmental)Engineering
2	Diploma in Electrical Engineering	Diploma in Electrical (Electro-Medical) Engineering Diploma in Electrical (Electronics) Engineering Diploma in Electrical (Telecommunication) Engineering Diploma in Electrical (Instrumentation and process control) Engineering Diploma in Electrical (Power) Engineering
3	Diploma in Mechanical Engineering	Diploma in Mechanical (Automobile) Engineering Diploma in Mechanical (Mechatronics) Engineering Diploma in Mechanical (Refrigeration and Air-Conditioning) Engineering
4	Diploma in computer Engineering	Diploma in computer (Graphic Design) Engineering Diploma in computer (Printing) Engineering Diploma in computer (Software) Engineering



**Appendix F-Focus Group Discussion (FGD) topics for student**

(Participants: Students of Women Polytechnic Institute)

**Research Title: Why is student enrollment in women's polytechnic institutes declining? : An exploratory study.**

**Participants Institute name: ..... Polytechnic Institute**

**Number of Participants:**

**Venue:**

**Time:**

**Date:**

**Moderator:**

**Notetaker:**

**Discussion Topics:**

**1. Students declining issues of women polytechnics:**

- Quality of Education
- Employment
- Married
- Low stipend
- Low Interest of engineering
- Quota system
- Subject
- Student hostel facilities
- Teachers' shortage
- Financial crisis of student family.

**2. Problems faced female enrolling in women poly:**

- Hostel facilities
- Lab facilities
- Sexual harassment
- Transport
- Safety
- low education facilities,
- instructors lack of teaching skills
- crowded classroom
- gender related problem,
- 

**3. Strategies to increased female enrollment in Women Poly:**

- Soft skill / Digital skill etc.
- Online class arrange from expert teacher/role model etc.
- Increasing female Student stipend/Financial support
- Job placement support
- Improving Teaching Learning Environment

- Extracurricular activities

4. Is the enrolment of male students in polytechnic institutes declining; If not, what are the reasons behind it?

5. Which are the preferred areas of education of female students?

6 Do you think the number of students can increase if the names of the technologies are written below with the main technology?

SL No	Main Technology	Proposed Technology name
1	Diploma in Civil Engineering	Diploma in Civil (Wood)Engineering Diploma in Civil (Construction)Engineering Diploma in Civil (Surveying)Engineering Diploma in Civil (Environmental)Engineering
2	Diploma in Electrical Engineering	Diploma in Electrical (Electro-Medical) Engineering Diploma in Electrical (Electronics) Engineering Diploma in Electrical (Telecommunication) Engineering Diploma in Electrical (Instrumentation and process control) Engineering Diploma in Electrical (Power) Engineering
3	Diploma in Mechanical Engineering	Diploma in Mechanical (Automobile) Engineering Diploma in Mechanical (Mechatronics) Engineering Diploma in Mechanical (Refrigeration and Air-Conditioning) Engineering
4	Diploma in computer Engineering	Diploma in computer (Graphic Design) Engineering Diploma in computer (Printing) Engineering Diploma in computer (Software) Engineering