With the Support Of

The European Union funded Technical Assistance to support the Human Capital Development Programme for Bangladesh 2021 (HCDP-21)

REPORT OF

TVET GRADUATE TRACER STUDY 2020

November 2021

DIRECTORATE OF TECHNICAL EDUCATION

কারিগরি শিক্ষা অধিদপ্তর

Study Conducted by:

TVET Graduate Tracer Study 2020 Team, DTE (details at Annex-5)

Study Commissioned by:

The Directorate of Technical Education (DTE) in collaboration with the Bangladesh Technical Education Board (BTEB) and the European Union funded Technical Assistance to support the Human Capital Development Programme for Bangladesh (HCDP-21).

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MESSAGE

Technical and Vocational Education and Training (TVET) plays a key role in human capital development. It supports the development of a skilled workforce, augments productivity, and helps improving the quality of life of the people. There is a close relationship between TVET and the socio-economic development of a country.

Technological advancement in Bangladesh is happening at a fast pace. The international labour market for skilled workers is also expanding rapidly. Bangladesh is in huge need of highly skilled human resources to address the present demand of the industries that are driving the economic transformation. Skilled manpower to support industrial and agricultural development is vital for poverty reduction, economic growth, and sustainable development of Bangladesh.

The current education system of Bangladesh could be divided into three major categories, such as general education, madrasah education and TVET. The type of education which delivers distinct practical knowledge of technologies and skills is known as TVET. Technical education offers an excellent opportunity for employment at home and abroad.

It is essential to ensure that graduates meet the expectations of the industries. If we do not know the employment outcome of our graduates, and if we do not have the database of our graduates, we would not be able to respond properly to the labour market demand. On one hand, employers are requiring thousands of skilled manpower; on the other hand, 2.7 million educated youths are unemployed in the country. To solve this imbalance, we need to conduct demand analysis of our graduates regularly. An institutional tracer study could help us understanding the supply and demand situation of our TVET graduates in a systematic manner as well as support us in developing market responsive TVET courses.

I hope this report will help the TVET institutions, students, graduates, and policymakers in various forms including evidence-based policy making.

I appreciate the support of HCDP21 TA to build the capacity of the five TVET institutes to conduct TVET Graduate Tracer Study and look forward to expanding the tracer study to other institutes under DTE in the future.

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ACKNOWLEDGEMENTS

We would like to thank the European Union funded 'Technical Assistance to support the HCDP-21' that has provided our TVET institutes an opportunity to carry out, for the first time, an institutional tracer study on its TVET graduates from different course and trades. We found the study as a useful study for the institutes, and for the directorate to study market responsiveness of our courses and curriculum.

We acknowledge the capacity building support, technical guidance, and other supports those have been provided by the HCDP-21 TA to our TVET institutes, and our Research and Knowledge Management cell to successfully conducting this important study. The study has provided a unique opportunity to us and to our institutes to be engaged with the key stakeholders including employers, graduates, and parents. We express our sincere appreciation for the time and cooperation that our graduates and their employers have provided in responding to the questionnaire and by attending the Focus Group Discussions (FGDs). The study also obtained feedback from our teachers and current students on the quality and performance of the education system. We thank our students, their guardian and parents, and the teachers for their time and valuable inputs.

We thank everyone associated with this study, particularly, the study team from DTE, BTEB, Barishal Technical School and College, Cox's Bazar Polytechnic Institute, Dhaka Graphic Arts Institute, Manikganj Technical School and College, and Rangpur Polytechnic Institute.

Sincerely,

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ACRONYMS AND ABBREVIATIONS

BBS	Bangladesh Bureau of Statistics
BDT	Bangladeshi Taka
BTEB	Bangladesh Technical Education Board
BTSC	Barishal Technical School and College
CBPI	Cox's Bazar Polytechnic Institute
DTE	Directorate of Technical Education
EU	European Union
FGDs	Focused Group Discussions
GAI	Graphic Arts Institute
HCDP-21	Human Capital Development Programme for Bangladesh 2021
HE	Higher Education
HR	Human Resource
HRMIS	Human Resource Management Information System
K2P	Knowledge to Policy
MTSC	Manikganj Technical School and College
NEET	Not in Education, Employment, or Training
RPI	Rangpur Polytechnic Institute
SPSS	Statistical Package for the Social Sciences
STR	Student Teacher Ratio
TA	Technical Assistance
TPR	Throughput Rate
TVET	Technical and Vocational Education and Training

EXECUTIVE SUMMARY

Institutional tracer study is a relatively new practice as opposed to the traditional tracer study carried out by independent researchers. This type of study is carried out mostly in European countries such as Finland, France, Germany, Hungary, Italy, the Netherlands, and Romania. This is probably the first of its kind study in the TVET sector in Bangladesh.

An institutional tracer study usually tries to obtain feedback from all graduates of the academic institution one to two years after graduation. The gathered data allows the analysis of the employment outcome of the graduates as well as the quality and relevance of the course. The findings can support the policy makers in evidence-based policy making aiming to deliver a market responsive TVET by the providers. Keeping these in mind, the Directorate of Technical Education (DTE) with support of the Bangladesh Technical Education Board (BTEB) and the European Union funded HCDP-21 TA, designed a pilot tracer study to be carried out by the public TVET institutes. Five public TVET institutes of DTE voluntarily took part in the pilot initiative.

The overall objective of this pilot initiative was to build the capacity of the TVET institutes to conduct tracer studies and prepare reports. The specific objectives of the tracer study were to know the status of the TVET graduates of selected trades/technologies, and courses and to develop a database of the graduates and their employers towards revitalising the function of the Career Counselling Office of TVET institutes.

The study was designed based on literature reviews of national and international tracer study reports and international guidelines on conducting tracer studies. Under the overall guidance of the central study team supported by HCDP21 TA, both DTE and BTEB have been closely engaged in the process and provided regular guidance and support throughout the process. The institutes lacked the experience and capacity to carry out such a tracer study. Therefore, the study focussed on simple objectives, and a simple questionnaire emphasising on quantitative data. This creates some limitations to the study, though very minimum.

Five TVET institutes under DTE participated in the pilot phase of the study covering Diploma, HSC (voc) and SSC (voc) level courses. Geographically, these five institutes represent central, eastern, northern, and southern parts of the country. TVET graduates of 2018 and 2019 in selected trades/technologies of the pilot institutes took part in the tracer study.

The study was conducted during 2019-2020, in the institution closures because of the COVID-19 pandemic. The institutes collected quantitative data from the graduates through a questionnaire using hard copy, Google forms, emails, WhatsApp, and telephonic interviews. Collected data have been cleaned, verified, and inputted in the system for analysing the data using SPSS. Focus Group Discussions (FGDs) have been conducted separately with employers, graduates, students, parents, and teachers at the selected institutes to gather some qualitative data to further support the study. Some secondary data on local economy and relevant sectors have also been collected.

A total of 1,938 TVET graduates of the five institutes were targeted for the tracer study, of which 1,792 graduates' responses (92% of the target) were collected. Of these respondents, 47% were from 2018 graduates and the remaining 53% from 2019. 13% of the graduates participated in the survey were female and 87% were male. Over 98% of the graduates who participated in the study are young i.e., within the age group of 15-24 years. 25% of the respondents completed SSC (vocational) course, about 9% completed the HSC (vocational) course, and 66% completed four-years Diploma in Engineering course in different technologies/ trades.

The employment outcome of the diploma graduates is relatively satisfactory considering the job market crisis during the ongoing COVID-19 pandemic. Considering the age factor, SSC (voc) and to some extent HSC (voc) graduates have relatively lower employment outcome. The employment rate is only 10% of the total SSC (voc) graduates participated in the tracer study. The rate is 23% for HSC (voc) graduates. The employment rates for the diploma graduates from GAI, RPI and CBPI are 55%, 30% and 29% respectively of the total survey graduates from respective institute. The average employment rate of the diploma graduates is about 39%.

Higher education is a priority for TVET graduates. Social status, better salary expectations, and also ability to pay the cost for higher education after employment seem to support graduates to pursue higher education. 29% of the total graduates who participated in the tracer study are pursuing higher education. However, 40% of the graduates were not in education, employment, or training (NEET) at the time of the tracer study. Expanding the access to higher education or further skills training for these young graduates could be a strategy to reduce the number of NEET for the youths and support the country to realise the demographic dividends.

The number of participants was kept limited in FGDs due to COVID-19. Altogether, 62 graduates, 39 employers, 72 students, 39 guardians, and 53 teachers along with DTE, BTEB and HCDP TA representatives participated in the FGDs. It was reported by most of the graduates, students, and their parents during the FGDs that they have willingly opted for TVET as a favourite option and a large percentage of them are satisfied with their decision. More than 97% of the employers attended the FGDs were satisfied with their decision of recruiting TVET graduates in their organisations. There were suggestions to further improve the quality of TVET through emphasising on the practical training on modern technology/equipment, communication skills, improvement in syllabus and curriculum, and relevant career guidance service. Both DTE and BTEB should consider how these suggestions could be addressed along with targeting a reasonable Student Teacher Ratio.

Overall, all key stakeholders are in favour of such a tracer study which empowers and engages key stakeholders for their mutual interests.

TVET GRADUATES TRACER STUDY 2020

INFOGRAPHIC PRESENTATION OF THE KEY FINDINGS

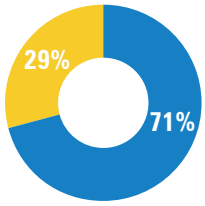
Barishal Technical School and college

Study respondents: 2018 and 2019 S.S.C (Vocational) Graduates

Total 448 graduates from 5 trades

Computer and Information Technology	113
General Electrical Works	112
Civil Drafting with CAD	90
Refrigeration & Air Conditioning	72
Machine Tools Operation	61

Age of the graduates



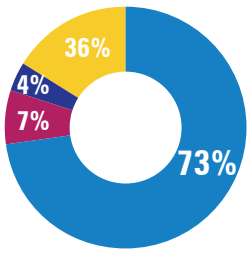
* Laws in Bangladesh do not support employing children and adolescents

Gender of Graduates, S.S.C (Voc)

Male 93%

Female 7%

Status of graduates as of December 2020



Employment outcome of graduates by trade*

35%	25%	23%	17%	0%

*Percntage of total graduates in jobs and Selfemployment

MANIKGANJ TECHNICAL SCHOOL AND COLLEGE

Study respondents: 2018 and 2019 H.S.C. (vocational) graduates

- 47 Electrical Works and Maintenance
- 45 Welding and Fabrication
- 36 Computer Operation and Maintenance
- 28 Refrigeration & Air Cooling

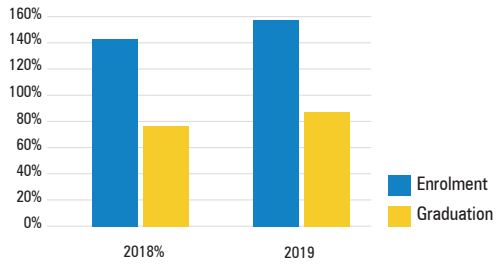
Gender of Graduates

Male 90%

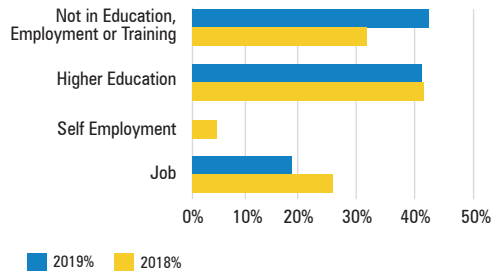
Female 10%

Total 156 HSC graduates from 4 technologies

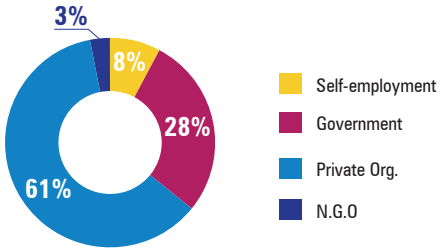
HSC (Voc) - Enrolment vs. Graduation numbers



Status of graduates as of December 2020



Percentage of employment by type of organisation*



Annual income range of the employed graduates*

- more than 2 lac taka
- Between 1 to 2 lac taka
- less than 1 lac taka

- 97% employed graduates remained in their first job
- 94% employed graduates secured their 1st job within one year of obtaining HSC*
- 50% employed graduates serve in the service sector; remaining are in production and industrial jobs
- 19% employed graduates had additional training after HSC*

*Percentage of total graduates in Jobs and Self-employment

GRAPHIC ARTS INSTITUTE

Study Respondents: 2018 and 2019 Diploma in Engineering graduates

232
Printing

187
Graphic Design

Gender of Graduates

87%

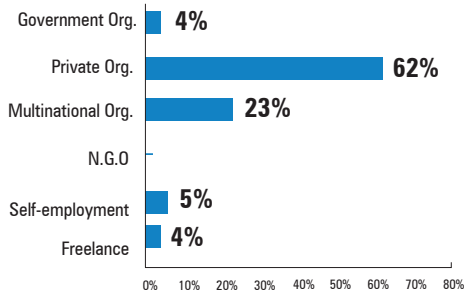
13%

Graduation year

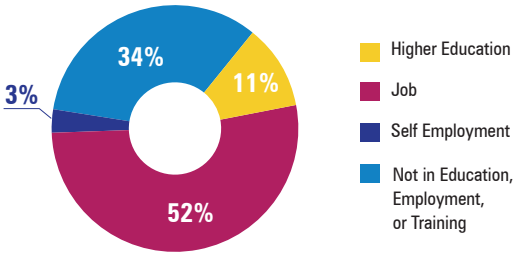
Total 419 graduates from 2 trades

2018	2019
267	152

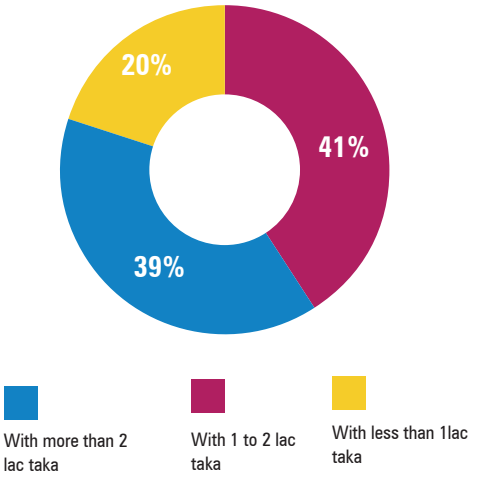
Percentage of employment by type of organisation*



Status of graduates as of December 2020



Annual Income Range of the employed graduates*



98%
Employed graduates remained in the first job

47%
Employed graduates moved on from their 1st job*

91%
Employed graduates secured an employment relevant to their diploma*

27%
Employed graduates had additional training after diploma*

*Percentage of total graduates in Jobs and Self-employment

RANGPUR POLYTECHNIC INSTITUTE, RANGPUR

Study Respondents: 2018 and 2019
Diploma in Engineering graduates

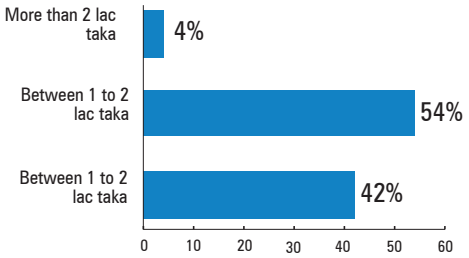
167	154	131
Computer Technology	Mechanical Technology	Electromedical Technology

Gender of graduates

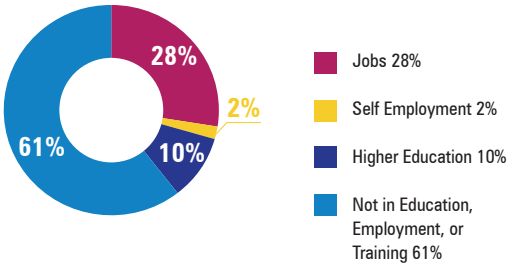
Total 152 graduates from 3 technologies

83% 17%

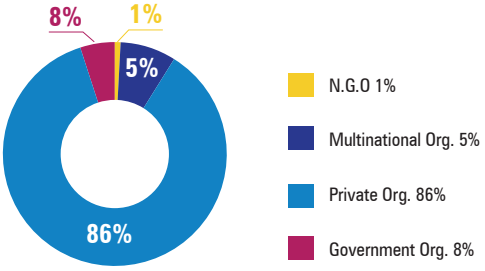
Annual Income at Current Job



Status of graduates as of December 2020



Percentage of employment by type of organisation*



Employed graduates secured their 1st job within 1 year of graduation*

Employed graduates serve in the service sector

Employed graduates had additional training after diploma*

Employed graduates changed their 1st job*

*Percentage of total graduates in Jobs and Self-employment

COX'S BAZAR POLYTECHNIC INSTITUTE

Study Respondents: 2018 and 2019 Diploma in Engineering graduates

84	81	83	69
Civil Technology	Computer Technology	Refrigeration and Air Conditioning	Food Technology

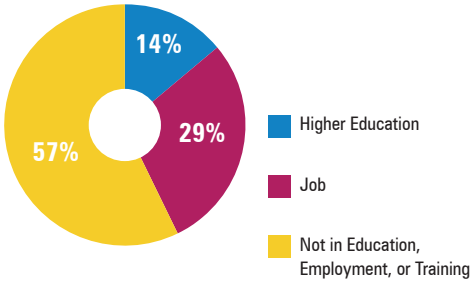
Gender of graduates

Total 317 graduates from 4 technologies

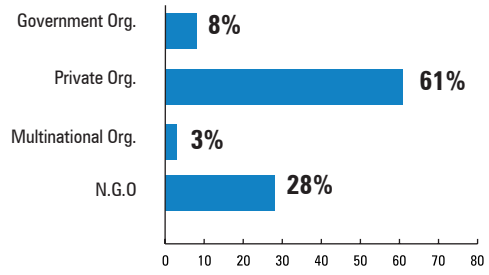
83%

17%

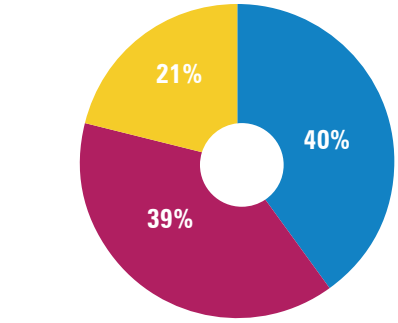
Annual income range of the employed graduates



Percentage of employment by type of organisation



Annual income range of the employed graduates



employed graduates secured their 1st job within 1year of graduation*

employed graduates secured a job relevant to their field of study*

employed graduates changed their first job*

employed graduates had additional training after diploma*

*Percentage of total graduates in Jobs and self-employment

1. INTRODUCTION

1.1 Background

Expansion of Technical and Vocational Education and Training (TVET) and skills development has been a priority for the government. There are needs for an assessment of the effectiveness of TVET and skills development courses in respect of achieving the key objectives of imparting industry-relevant skills for the graduates to enter the job market or access the next level of education.

Considering the above, the Directorate of Technical Education (DTE)[1] , the Bangladesh Technical Education Board (BTEB)[2] and the European Union (EU) funded TA to support Human Capital Development Programme for Bangladesh 2021 (HCDP-21) have designed a pilot TVET Graduate Tracer Study 2020 and associated capacity building programme. The following five government-run TVET institutes have carried out the institutional tracer study on the TVET graduates of the respective institute:

i. Barishal Technical School and College (BTSC), Barishal

ii. Cox's Bazar Polytechnic Institute (CBPI), Cox's Bazar

iii. Graphic Arts Institute (GAI), Dhaka

iv. Manikganj Technical School and College (MTSC), Manikganj

v. Rangpur Polytechnic Institute (RPI), Rangpur

1.2 Objectives and methodology

The pilot initiatives aimed to provide practical experience and develop capacity of TVET institutes in conducting tracer study following a 'learning by doing' approach. The overall objectives were to learn the employment outcome of the TVET graduates from selected courses (SSC-voc, HSC-voc, Diploma in Engineering) and trades/ technologies, develop a database of graduates and their employers, and facilitate policy dialogue on emerging issues from the tracer studies to feed into the Knowledge to Policy (K2P)[3] process for ongoing sectoral reforms.

1.2.1 Study objectives

The study objectives were developed to measure the employability of graduates and to understand their pathways to further education. The main objectives of this tracer study were:

i. To know the status of the TVET graduates of last two years (2018 and 2019).

ii. To develop a database of the graduates and their employers towards revitalising the function of the Career Counselling Office of TVET institutes regarding the provision of local employment information to TVET students and management.

1.2.2 Study methodology

The five selected five institutes were from five different districts (Dhaka, Manikganj, Barishal, Rangpur, Cox's Bazar) and four different divisions (Dhaka, Barishal, Rangpur, Chattogram). Two of the institutes are Technical School and Colleges (TSCs), one specialised diploma level printing technology institute and two are polytechnic institutes. The scope of the pilot tracer study was shared with the selected TVET institutes, and

1 DTE operated under the Technical Education and Madrasah Education Division of MOE, offers TVET courses in its 119 public institutions.

2 BTEB is the state regulatory body responsible for accrediting TVET institutions, the development, and monitoring of the technical and vocational education in Bangladesh including examination and certification of TVET graduates, and curriculum and courses.

3 Knowledge to policy (K2P) is a popular term to describe the way research and other types of knowledge inform policy making. K2P approach aims to support decision-makers to create good policies that make a difference to people's lives.

each institute selected the trades and technology voluntarily considering the limited access to their graduates and employers for data collection within the COVID closures. Selected courses were SSC (vocational), HSC (vocational) and Diploma in Engineering. All the graduates of the year 2018 and 2019 of the selected trades and technologies were targeted for data collection. The below table provides details about samples of the study:

Table:1 Target population of the study

S/L	Institute	Course	Trade/technology	Target Population
01.	Barishal Technical School and College (BTSC), Barishal	SSC (vocational)	• Computer & Information • General Electrical Works • Civil Drafting with CAD, • Refrigeration & Air Conditioning (RAC) • Machine Tools Operation	459 graduates (response rate 97%)
02.	Manikganj Technical School and College (MTSC), Manikganj	HSC (vocational)	• Electrical Works and Maintenance • Welding and Fabrication • Computer Operation and Maintenance • Refrigeration & Air Conditioning (RAC)	165 graduates (response rate 95%)
03.	Graphic Arts Institute (GAI), Dhaka	Diploma in Engineering	• Printing • Graphic Design	480 graduates (response rate 87%)
04.	Cox's Bazar Polytechnic Institute (CBPI), Cox's Bazar	Diploma in Engineering	• Civil • Computer • Food • Refrigeration & Air Conditioning (RAC)	319 graduates (response rate 99%)
05.	Rangpur Polytechnic Institute (RPI), Rangpur	Diploma in Engineering	• Computer • Mechanical • Electromedical	515 graduates (response rate 88%)

Given the diversity among the courses and trades, an aggregated analysis and presentation of findings has been done only where it is appropriate.

Quantitative data was collected from the graduates during the COVID-19 pandemic through a questionnaire using hard copy, Google forms, emails, WhatsApp and telephonic interview. Collected data have been cleaned, verified, and inputted in the system for analysing the data using SPSS[4] . Focus Group Discussions (FGDs) have been conducted separately with employers, graduates, students, parents, and teachers to gather qualitative data to further support the study. Relevant secondary data was also collected through desk research.

The study was conducted in line with international guidebooks on the conduction of graduate tracer study. A detailed methodology of the study is at Annex-1.

4 Statistical Package for the Social Sciences (SPSS) is a software package used for interactive, or batched, statistical analysis.

1.2.3 Limitation of the study

The institutional tracer study is a very new initiative in Bangladesh. It is a new experience for all the institutes too. The study was conducted by the teachers of the institutes who have limited or no prior research experience. Prior experience, expertise and capacity could have supported more in achieving the optimal and quality response from the graduates and to cover more labour market and curriculum related qualitative questions.

Here are some possible limitations to the study:

- The participation in the study by the institute was voluntary and therefore, could not be representative. Given the diversity among the institute's types, course and trades, an aggregated analysis and conclusion are not possible.
- As a pilot study, the scope of the study including the questionnaire has been kept focused. Emphasis has been given to quantitative data which could undermine the detailed analysis and any conclusion.
- FGDs with all key stakeholders, particularly with the employers could not focus specifically on 2018 and 2019 graduates as it was also hard for the employers to differentiate between employees using their graduation year.
- Due to COVID-19 risks, physical data collection or rigorous focus group discussions were not possible. It was also not possible to verify some of the data such as the salary range of the graduates.
- The COVID-19 pandemic has reduced employment opportunities and increased job cuts in several sectors. The pandemic has also a negative impact on educational opportunities. Therefore, the findings of this study may not be suitable as a baseline.
- The database of the graduates was not up to date, so the institutes were unable to reach out to all of the target population. In some cases, the response rate was as low as 87%. Although it is common in tracer study of having less than 100% response, a higher number of responses could have given a better picture of the graduates' status.

1.3 Structure of the report

The report has been kept short and simple so that it is easily understood by the key stakeholders including current and future students, graduates, parents and guardians, employers of graduates, teachers, and management of the institute. The report has four chapters. Chapter 1 presents an introduction to the study including the objectives and methodology. Chapter 2 provides a brief description of the institutes participated in this pilot tracer study, local economy of the respective institute, and basic information on the courses those were targeted for the tracer study. Chapter 3 summarises the key findings and Chapter 4 discusses the major findings and provides conclusions. Annexes include, among others, detailed methodology of the study, copy of the questionnaire, notes from the FGDs, list of graduates, list of employers and a list of occupations of the employed graduates.

2. INSTITUTES AND LOCAL ECONOMY

This chapter provides a basic introduction to the local economy, the institution, and the courses relevant to the scope of this tracer study.

2.1 Participating institutes

Five DTE managed public TVET institutes participated in the tracer study. They are based in different districts and localities in Bangladesh. They have different histories, and their local economy is different. These institutes offer varieties of courses in different trades. These are summarised below:

2.1.1 Barishal Technical School and College (BTSC)

Name	Barishal Technical School and College (BTSC)
Location	In the city centre of the Barishal district in the Barishal division
History	The institute was established on 10 acres of land in 1901 and was the only government technical education institution in the district at that time. Initially, the institute started with 40 students with the name "Vocational Training Institute" or "VTI". Later in 1962, it was converted into Barishal Polytechnic Institute with the combination of trade course, Diploma in Commerce and Diploma in Engineering course, afterwards Diploma in commerce was separated and Polytechnic was shifted to a new campus, left the VTI in existing campus. VTI used to offer two-year trade courses in different trades. In 1995, VTI started offering the SSC (vocational) and in 1997, HSC (vocational) courses. The VTI was then converted as a Technical School and College (TSC) in 2003. BTSC is considered as one of the four largest TSCs among the total 64 public TSCs under DTE.
Courses and trades	BTSC offers SSC (vocational) and HSC (vocational) courses in 9 trades, and short courses. The 9 trades are: General Electronic, Computer and Information Technology, General Electrical Works, Automotive, Civil Drafting with CAD, Refrigeration and Air Conditioning (RAC), Wood Working, Machine Tool Operation, and Welding and Fabrication. Since 2016, it has been offering the Diploma in Engineering in Power Technology.
Local Economy	In the city's urban areas, commerce, pharmaceuticals, and cement are the mainstay of the economy. In its rural areas, agriculture (rice, fish, fruit, and vegetables) and agribusiness are the main sources of income. According to BBS Economic Census 2013 Barishal District Report there were 107,072 establishments in Barishal in 2013 where 342,511 persons were employed.

2.1.2 Manikganj Technical School and College (MTSC)

Name	Manikganj Technical School and College (MTSC)
Location	Manikganj district headquarter in Dhaka Division
History	Manikganj Technical School and College (formerly, Vocational Training Institute) is a public TVET institute that was established by DTE in 1973 on 3.24 acres of land. The institute started offering SSC (Vocational) courses since 1995 and HSC (Vocational) course since 1997. In 2004, the Vocational Training Institute (VTI) was renamed as the Manikganj Technical School and College (MTSC). In 2016, a 4-year Diploma-in-Engineering course was launched.
Courses and trades	The institute offers SSC (vocational) and HSC (vocational) courses in Welding and Fabrication, Refrigeration and Air Conditioning (RAC), Electrical Works and Maintenance, Computer Operation and Maintenance. It also offers a Diploma in Engineering in Electrical, and Civil technologies as well as several short courses in different trades.
Local Economy	The main source of income is agriculture, although in recent years, some big industries like Dhaka Tobacco industries, Akij Particle Board Ltd., Munno Textile, Basundhara Steel Factory, Akij Textile - Manikganj Garment Plant have been set up. According to BBS Economic Census 2013 Manikganj District Report there were 51,677 establishments in Manikganj in 2013 where 152,354 persons were employed.

2.1.3 Graphic Arts Institute (GAI)

Name	Graphic Arts Institute (GAI)
Location	Dhaka district in Dhaka Division
History	Graphic Arts Institute (GAI), established in 1967, is a technology based monotechnic institution in Mohammadpur, Dhaka. It is the only government-run printing-based technical institute for Diploma in Engineering courses in Bangladesh.
Courses and trades	GAI provides a four-year Diploma in Engineering course in three technologies: Printing, Graphic Design, and Computer technology. The diploma course on Computer Technology was newly added from 2016-17 session. All courses are delivered in two shifts. GAI also offers short courses on graphic design, web design and video editing.
Local Economy	The economy of Dhaka contributes 40% of Bangladesh's gross domestic product (GDP). In 2020, the economy contributed US$162 billion in nominal gross state product and US$235 billion in purchasing power parity.[5] Head office of all major public and private organisations and country/regional office of several international organisations are based in Dhaka. Having the major chunk of the print, design, publishing, and communications related firms and garments, leather and pharmaceuticals industries, Dhaka offers the maximum number of jobs for print and graphic design graduates. According to BBS Economic Census 2013 Dhaka District Report there were 9,686 printing related establishments in Dhaka in 2013 where 70,306 persons were employed.

5 https://en.wikipedia.org/wiki/Economy_of_Dhaka# (Retrieved on 5 May 2021)

2.1.4 Rangpur Polytechnic Institute (RPI)

Name	Rangpur Polytechnic Institute (RPI)
Location	Rangpur district in Rangpur division
History	This public institute was established in 1968. Earlier, the institute has been providing technical education since 1882 as the Baily Gobindo Technical School, and since 1962 as the Rangpur Polytechnic Institute. The institute has shifted to its present campus in 1976.
Courses and trades	RPI offers four years Diploma in Engineering course in seven technologies and one non-tech department. Technologies are Civil, Electrical, Mechanical, Power, Electronics, Computer and Electromedical.
Local Economy	The Rangpur city is the commercial hub of the division with several government offices, public and private banks, insurance companies, residential hotels, international restaurants, and brand shops. Rangpur is one of the main tobacco producing regions in Bangladesh, thus the homes to tobacco companies like British American Tobacco, Akij Group, and Abul Khair Group. Other than that, people are also engaged in agriculture. According to BBS Economic Census 2013 Rangpur District Report there were 183,153 establishments in Rangpur in 2013 where 511,580 persons were employed.

2.1.5 Cox's Bazar Polytechnic Institute (CBPI)

Name	Cox's Bazar Polytechnic Institute (CBPI)
Location	Cox's Bazar district in Chattogram division
History	The Cox's Bazar Polytechnic Institute is a government-run comparatively new polytechnic institute in Bangladesh. It is the only mid-level engineering institution in South Chattogram. It was established in 2004 to offer a Diploma in Engineering course.
Courses and trades	The institute offers a four-year Diploma-in-Engineering in five trades, namely Computer technology, Refrigeration & Air-conditioning (RAC) technology, Civil technology, Food technology and Tourism & Hospitality Management. The Tourism & Hospitality Management trade started later in 2016.
Local Economy	Cox's Bazar is famous for the longest natural unbroken sea beach in the world. The economy is highly dependent on the tourism industry which provides millions of jobs in hotels, motels, restaurants, communications, construction and the sector. People are also involved in fishing and collecting seafood and sea products for their livelihood. In addition to these, a mix of small-scale agriculture, marine and inland fishing and salt production, drying fish are other industrial sources that play important roles in the national economy. According to BBS Economic Census 2013 Cox's Bazar District Report there were 95,614 establishments in Cox's Bazar in 2013 where 260,078 persons were employed.

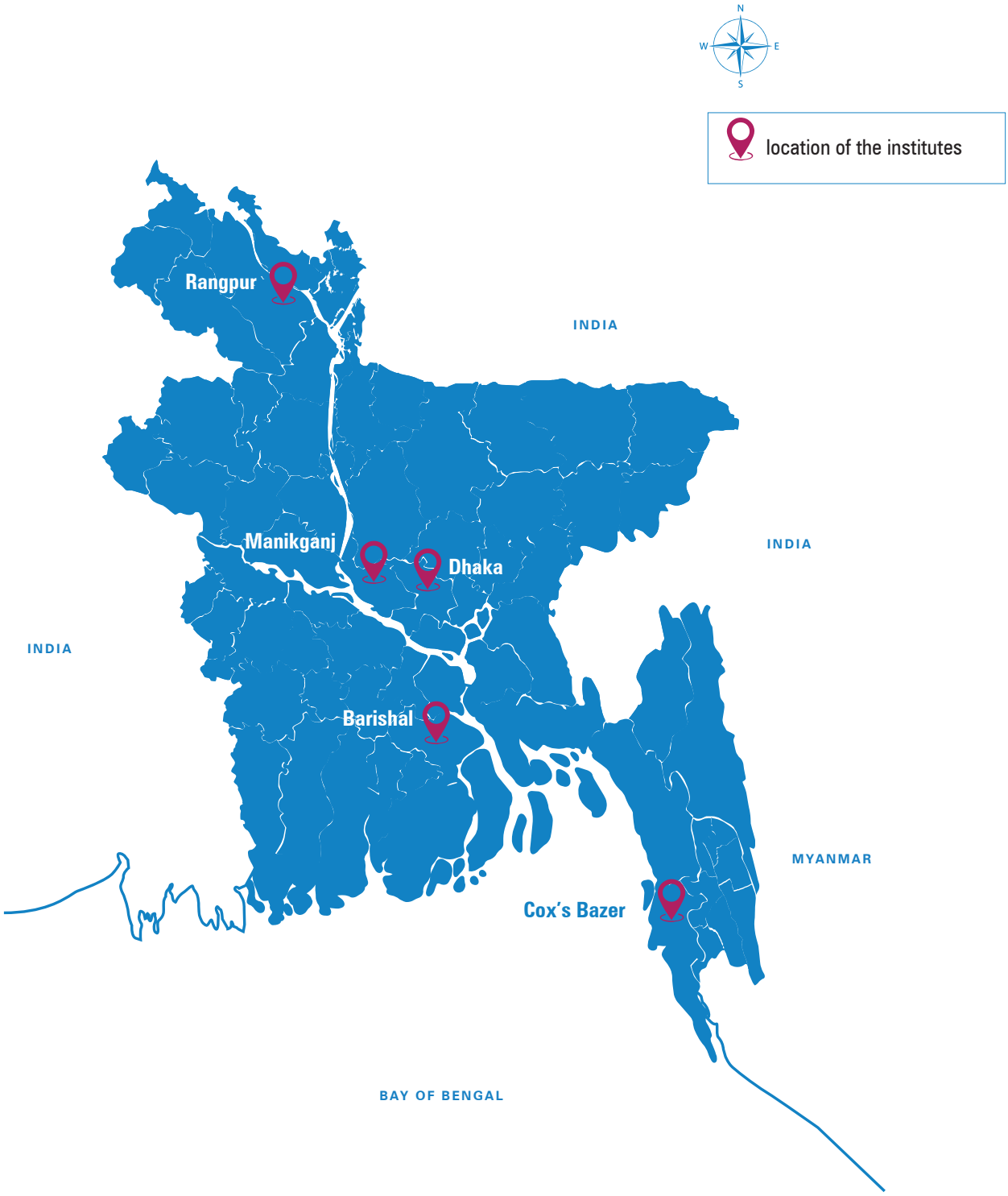


Figure:1 Map of Bangladesh showing the location of the institutes

2.2 Courses and trades

TVET graduates of the following courses were targeted in the Pilot Tracer Study 2020. The below table provides the general description of the courses.

SSC (vocational) After successfully completing the eight years of schooling (grade 8), students are eligible to enrol in a public or private TSC or vocational school for a two-year SSC (vocational) course in one of the 31 trades. SSC (vocational) course offers a 2 - years (Class 9 and 10) of intensive education and training both in technical (trade oriented vocational) and non-technical (general) education blended with theory and practical classes. An annual six-week of Industrial Attachment is included in the course each year. After successful completion of the SSC public examination, the graduates secure the Secondary School Certificate (SSC) and are eligible for further education (e.g., HSC, HSC-voc or Diploma in Engineering) and training.

HSC (vocational) After successfully completing the SSC, students can enrol for the 2-years HSC (vocational) course comprising of intensive education and training in both technical (trade oriented vocational) and non-technical (general) education blended with theory and practical classes. An annual six-week of industrial attachment is included in the course in each year. After successful completion of the Higher Secondary School Certificate (HSC) public examination, the graduates can apply for jobs or can pursue higher education including Diploma in Engineering course.

Diploma in Engineering The Diploma in Engineering is an academic certificate awarded by the BTEB and courses offered by the polytechnic institutes in Bangladesh. It is a 4 - year course (8 semesters) with three and a half-year study at the institute and six months mandatory industry attachment (internship). The course is offered on a specific branch of engineering / technology, for instance, Printing, or Civil, or Computer technology.

3. SUMMARY OF FINDINGS

This chapter presents the basic statistics gathered through the tracer study while analysis and discussions on the key findings are presented in the following chapter.

STUDY RESPONDENTS

The target population of the tracer study was 100% of the TVET graduates of the selected courses and selected trades/technologies from the five TVET institutes of the year 2018 and 2019. The response rate varied from 87% to 99% of the target population of the respective institutes. The below table presents the number of survey respondents per institute.

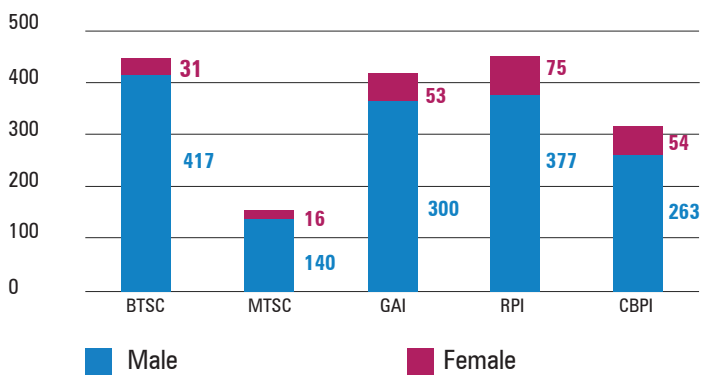
Table:2 Tracer Study respondents per institute

Institute	Course	No. of trades	Target Population	Response rate (%)	Gender		Total	Pass Year	
					Male	**Female**		**Y2018**	**Y2019**
BTSC	SSC (vocational)	05	459	97	417	31	448	202	246
MTSC	HSC (vocational)	04	165	95	140	16	156	69	87
GAI	Diploma in Engineering	02	480	87	366	53	419	267	152
RPI	Diploma in Engineering	03	319	99	377	75	452	172	280
CBPI	Diploma in Engineering	04	515	88	263	54	317	133	184
TOTAL			**1938**	**92**	**1563**	**229**	**1792**	**843**	**949**

GENDER OF THE GRADUATES

About 13% of the graduates who participated in the tracer study were female as opposed to 87% male. The following chart presents gender disaggregated distribution of participating graduates per institute.

Figure:2 Gender of the survey graduates per institute



AGE OF GRADUATES

The following table presents the age range of the graduates at the time of the tracer study which is one to two years later to their completion of the degree. Over 98% of the graduates who participated in the study are young i.e., within the age group of 15-24 years. 71% of the total SSC (voc) and 6% of the HSC (voc) graduates were 18 years and

Table:3 Age of the surveyed graduates

below.

No.	Course	Age		Total
		15-24	25-28	
01.	SSC (Voc)	448	00	448
02.	HSC (Voc)	155	01	156
03.	Diploma	1146	42	1188
Total		**1749**	**43**	**1792**

STATUS OF THE GRADUATES

The following table presents the status of the graduates as of December 2020 stating whether they are pursuing further or higher education or are in service (jobs) or in self-employment or Not in Education, Employment, or Training (NEET). Given the diversity in the age group of the graduates, courses, and trades, aggregated numbers are not

Table:4 Status of graduates per institute

presented.

No.	Category	BTSC	MTSC	GAI	RPI	CBPI
01.	Higher education	329	63	48	43	44
02.	Jobs / in-service	29	33	218	126	92
03.	Self-employment	19	03	13	09	00
04.	Not in Education, Employment, or Training (NEET)	71	57	140	274	181
Total		**448**	**156**	**419**	**452**	**317**

Table:5 Status of graduates per course

No.	Category	SSC (Voc)	HSC (Voc)	Diploma
01.	Higher education	329 (73%)	63 (40%)	135 (11%)
02.	Jobs / in-service	29 (7%)	33 (21%)	436 (37%)
03.	Self-employment	19 (4%)	03 (2%)	22 (2%)
04.	Not in Education, Employment, or Training (NEET)	71 (16%)	57 (37%)	595 (50%)
Total		**448**	**156**	**1188**

GRADUATES' EMPLOYMENT BY TYPE OF ORGANISATION

The following tables present the distribution of the employed graduates by the type of employing organisation. Nearly 70% of the total employed graduates are serving at the private sector.

Table:6 Distribution of employed graduates by type of organisation

Type of employing organisation	BTSC	MTSC	GAI	RPI	CBPI	Total	Share
Public organisation	03	10	10	11	07	41	08%
Private organisation	23	22	143	116	56	360	69%
Multinational Corporation	02	00	52	7	03	64	12%
Non-Governmental Org. (NGO)	01	01	02	1	26	31	06%
Self-employment	00	03	14	00	00	17	03%
Freelance / outsourcing	00	00	10	00	00	10	02%
Total	**29**	**36**	**231**	**135**	**92**	**523**	**100%**

TIME TAKEN TO OBTAIN JOBS

The following table presents how quickly the graduates obtain their first employment. More than 82% of the graduates in employment secured their 1st job within six months of the graduation and a total of 95% of the employed graduates secured their 1st job within one year of the graduation. 30% of the total employed graduates changed their 1st job and 29% of the employed graduates obtained additional training beyond the industrial attachment.

Table:7 Time to obtain the 1st job (per institute)

Time from the graduation	BTSC	MTSC	GAI	RPI	CBPI	Total	Share
Before the final result	03	04	116	32	24	179	34%
Within 6 month of graduation	14	20	97	65	54	250	48%
Within 1 year of graduation	11	10	13	25	10	69	13%
Within / around 2 years of graduation	01	02	05	13	04	25	05%
Total	**29**	**36**	**231**	**135**	**92**	**523**	**100%**

Table:8 Time to obtain the 1st job (per course)

Time from the graduation	SSC (voc)	HSC (voc)	Diploma	Total	Share
Before the final result	03	04	172	179	34%
Within 6 month of graduation	14	20	216	250	48%
Within 1 year of graduation	11	10	48	69	13%
Within/around 2 years of graduation	01	02	22	25	05%
Total	**29**	**36**	**458**	**523**	**100%**

ANNUAL INCOME RANGE OF THE EMPLOYED GRADUATES

The following table presents the annual income range of the employed graduates in their current job at the time of the tracer study. The numbers have been presented as a percentage of the total employed graduates of the respective institute.

Table:9 Annual income range of the employed graduates (%) per institute

Annual Income Range (BDT)	BTSC	MTSC	GAI	RPI	CBPI	Average (%)
Less than 1 lac taka	86	33	20	42	39	44
Between 1 to 2 lac taka	7	50	41	54	40	38
More than 2 lac taka	7	17	39	4	21	18
Total	**100**	**100**	**100**	**100**	**100**	**100**

*Numbers shown as a percentage of the total employed graduates of respective institute.

Table:10 Annual income range of the employed graduates (%) per course

Annual Income Range (BDT)	SSC (voc)	HSC (voc)	Diploma
Less than 1 lac taka	86	33	30
Between 1 to 2 lac taka	7	50	45
More than 2 lac taka	7	17	25
Total	**100**	**100**	**100**

*Numbers shown as a percentage of the total employed graduates of respective institute.

TEACHERS AND SUPPORT STAFF

Most of the institutes are running with less than 50% of the teaching capacity. Student enrolment has been substantially increased, double shifts have been introduced, and new departments / trades have been created. However, new teaching or support staff posts have not been created accordingly. Rather, half of the approved posts are vacant. This has made the Student Teacher Ratio (STR) unreasonably higher than what was proposed in the National Education Policy (NEP 2010). The Government has already approved recruitment of new TVET teachers and support staff. The following table presents the overall situation regarding the STR per institute.

Table:11 Student Teacher Ratio (STR)

Institute	Teacher			Support staff (employed)	Total student	STR
	Approved	Employed	Vacant			
BTSC	83	44	39	16	1341	30:1
MTSC	22	13	09	09	1400	107:1
GAI*	18	15	5	30	1432	95:1
RPI	73	35	38	28	4567	130:1
CBPI*	45	30	15	15	1200	40:1
Total	**241**	**137**	**106**	**98**	**9940**	

*Recently introduced trades/departments have no approved teaching posts; so, the institute had to recruit teachers while waiting for the approval or teachers of other departments runs the course in addition to their own departmental course.

4. DISCUSSIONS AND CONCLUSIONS

This chapter presents some of the key findings of the study along with analysis and discussions for a better understanding. The analysis and discussions also reflect on the relevant points discussed in the FGDs with key stakeholders and available secondary data.

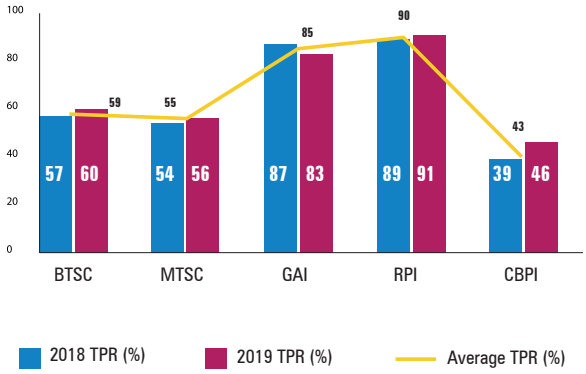
4.1 Survey respondents

A total 1938 TVET graduates from the five public TVET institutes graduated in the year 2018 and 2019 by successfully completing their respective course were the target population of the tracer study. Out of this group 1792 graduates responded to the questionnaire. Of these respondents, 47% were from 2018 and remaining 53% were from 2019. 13% of the graduates participated in the survey were female and 87% were male. 25% of the respondents completed the SSC (vocational) course, about 9% completed the HSC (vocational) course, and 66% completed the four-years Diploma in Engineering course in different technologies/trades.

4.2 Enrolment, retention, completion

The demand for all trades/technologies is not the same and often some seats remain vacant. Also, several students drop out between the enrolment and the final examination of the course. Some of the students who appeared in the final examination also could not pass the exam. The Throughput Rate (TPR) differs from institute to institute. In some cases, the TPR is as low as 39%, which means that more than half of the students enrolled for the course could not successfully complete it. Teachers have mentioned that students coming who have miss the required foundation of knowledge of knowledge often struggle to understand the basics of the engineering courses. This also affects the quality of the classroom teaching. The average TPR for these five institutes and selected trades is 66%. The following figure presents the TPR as a percentage of the total enrolled student in the respective academic session of the respective institute.

Figure:3 Throughput Rate of batch 2018 and 2019



4.3 Equity

87% 13%

The number of students enrolled in TVET (grade 9 to 12) increased from 476 thousand in 2009 to 1.07 million in 2018[6] and the share of girls in total TVET enrolment remained low at a quarter of enrolment in 2018. The share of female enrolment in diploma courses remained steady, averaging around 12% of the total enrolment during 2012-2017.[7] According to a BTEB TVET Enrolment Analysis,[8] TVET enrolment under BTEB in 2019 was 17.14% of the total education enrolment in the country, and the female enrolment was 26.71% of the total TVET enrolment. Female enrolment is concentrated to some very selected technologies

6 Global Partnership, 2020. Education Sector Analysis (ESA) for Bangladesh.

7 2017, the World Bank. Bangladesh Female Participation in Technical Education: Breaking the Glass Ceiling – Challenges to Female Participation in Technical Diploma Education in Bangladesh.

8 Data source: Bangladesh Education Statistics, 2017-2019, BANBEIS and BTEB Computer Cell, 6 January 2020 cited at the BTEB Enrolment Analysis Report, 3 August 2020.

such as architecture/civil or computer. This a poor retention and completion rate, leads to a low number of female graduates. Less than 13% of the graduates who participated in the tracer study were female. 87% of the graduates were male graduates. In a country with almost 50% female population, it is important that women have good access to TVET and skill development opportunities for an equitable growth of the country.

4.4 Status of graduates

The ongoing COVID-19 pandemic presumably has negative impact on education and employment opportunities. The survey graduates, particularly the graduates who completed their course in 2019, are also impacted by it. Age of SSC (voc) and HSC (voc) has also a potential corelation to their employment. The following figures present the status of the tracer study survey respondents of each of the institute separately. Aggregated data on the status might not be accurate for various reasons such as differences in course, trades and the age of the graduates of graduates.

Figure:4 Course-wise status of TVET graduates

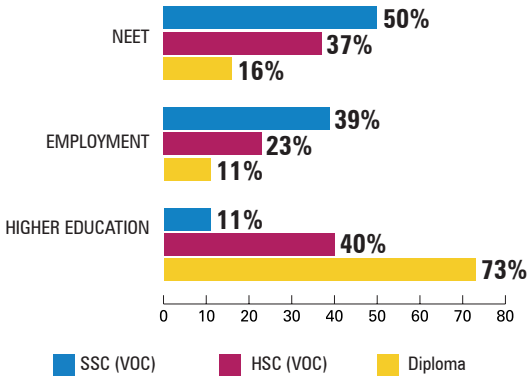


Figure:5 Status of SSC (voc) graduates of BTSC

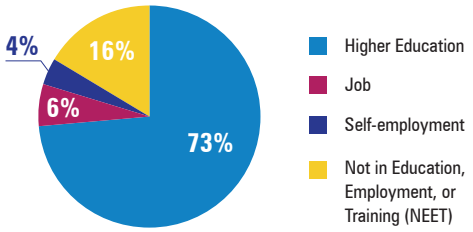


Figure:6 Status of HSC (voc) graduates of MTSC

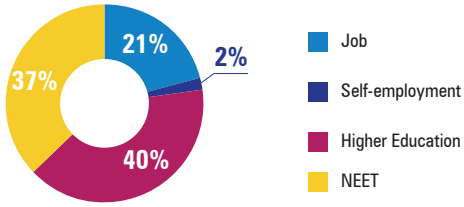


Figure:7 Status of diploma graduates of GAI

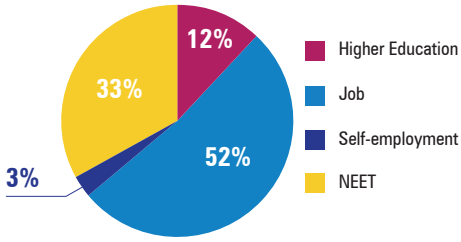


Figure:8 Status of diploma graduates of RPI

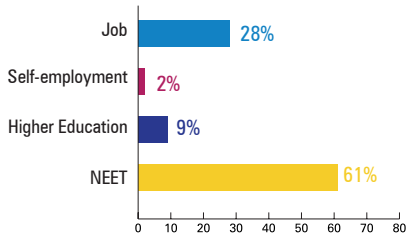
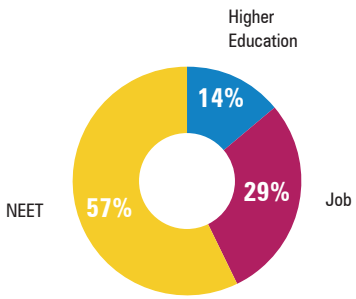


Figure:9 Status of diploma graduates of CBPI



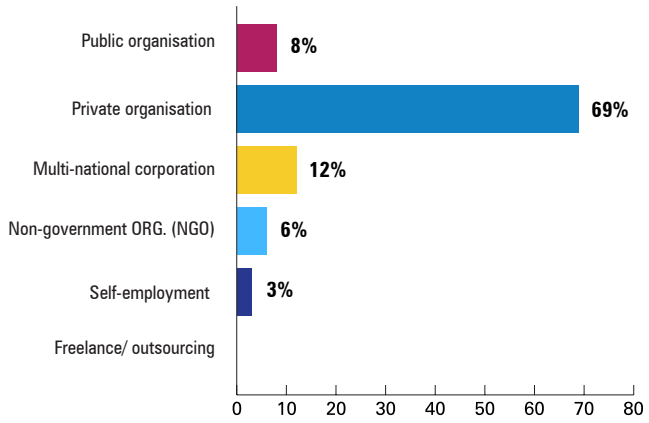
4.4.1 Employment outcome

The employment outcome of the diploma graduates is relatively satisfactory considering the job market crisis during the ongoing COVID-19 pandemic. Considering the age factor, SSC (voc) and to some extent HSC (voc) graduates have relatively less satisfactory employment outcome. Some of them are pursuing higher education, but many are not in education, employment, or training. The employment rate is about 11% of the total SSC (voc) graduates who participated in the tracer study and the rate is 23% for HSC (voc) graduates and 39% for the diploma graduates. The employment rates for RPI and CBPI diploma graduates are 30% and 29% respectively of the total RPI and CBPI surveyed graduates. The employment rate is 55% for the printing and graphic design diploma graduates from GAI. 91% of the GAI employed graduates are having a job relevant to their graduation study. The job relevancy rate is 76% for the CBPI diploma graduates.

69% of the employed graduates are serving for private organisations, 12% at multinational corporations (MNCs) and only 8% graduates secured an employment in public sector organisations. During the FGDs, several stakeholders suggested that relevant recruitment in government service should emphasize the qualifications obtained from TVET institute.

Information regarding the duration to obtain the first job, and income range are presented in subsequent sub-sections.

Figure:10 Percentage of employed graduates by type of organisation



4.4.2 Higher Education (HE)

Higher education is a priority for the TVET graduates. Social status, better salary, and also ability to pay the cost for higher education after employment seem to support graduates to pursue higher education. Out of the 1792 graduates who participated in the tracer study, 29% of them are pursuing higher education. Several graduates who were employed or in NEET category were also considering higher education or further education options once the COVID-19 situation improves and academic institutions are open. During the FGDs, stakeholders emphasised on more options and opportunities for higher education for the TVET graduates. Although, teachers have emphasised that the aim of TVET should be to create skilled manpower and employment opportunities rather than stretching the higher education sector.

4.4.3 Not in Education, Employment or Training (NEET)

The following figures show the percentage of NEET graduates in terms of total graduates of the respective course and institute. The rate ranges from 16% to 61% of the total survey graduates of each institute. Out of the 1792 graduates who participated in the tracer study, 40% were not in education, employment, or training at the time of the study. It was noted that the NEET rate is higher among the diploma graduates and lower in SSC (voc) level graduates while both SSC (voc) and HSC (voc) graduates tend to go for higher education if they are not in employment. Over 98% of the graduates participated in the study are young i.e., within the age group of 15-24 years. Expanding the access to higher education or further skill training for these young graduates could be a strategy to reduce the number of NEET for the youths and support the country to realise the demographic dividends.

Figure:11 NEET percentage per course

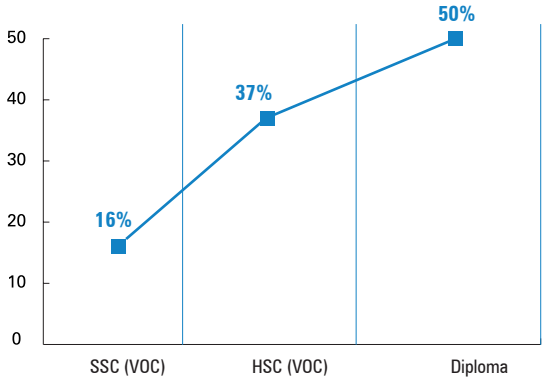
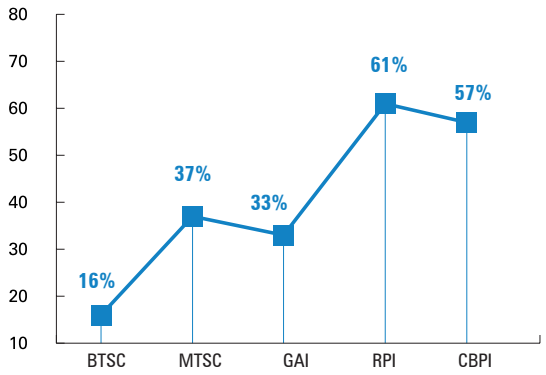


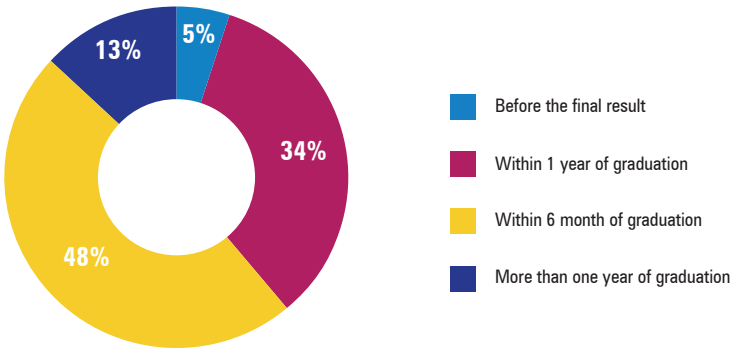
Figure:12 NEET percentage per institute



4.5 Time taken to secure the first job

95% of the employed graduates managed to secure their 1st job within one year after the course final examination. About 5% of the graduates took more than one year to secure a job, while a few beyond two years.

Figure:13 Time to secure the first job



4.6 Income range of the employed graduates

Although TVET graduates often start their job with a relatively low salary, employers said that the salary is increased very quickly as soon as they are further trained by the employing organisation, and they learn their job. It was recorded that 30% of the total employed graduates who changed their 1st job had a positive impact on their annual income. The below figure shows the aggregated percentage of the total employed graduates and their annual income range of the jobs they had during the filling up of the tracer study questionnaire. Only 18% of the graduates get an annual income of more than two lac taka, while 44% of the employed graduates get less than one lac taka. SSC (voc) graduates mostly work at a lower salary range. Subsequent figure shows the course-wise income range of the employed graduates.

Figure:14 Annual income at present job (%)

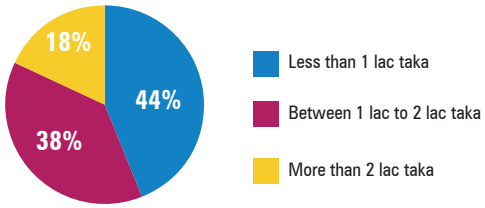
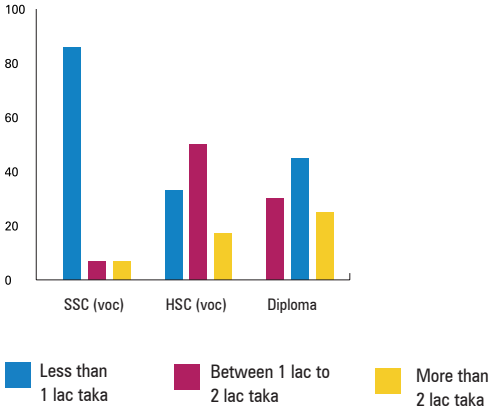


Figure:15 Annual income range of graduates (%) from different courses



4.7 Conclusion

The tracer study finds that parents and students are positively considering TVET as a preferred option to gain technical and practical knowledge which maximises the chances for employment compared to general education graduates. Employers also expressed their preferences in recruiting TVET graduates because of their technical knowledge and quick adaptation capacity compared to the general education graduates. However, employers, graduates, and ongoing students have raised concerns about the syllabus and curriculum which do not provide a clear objectives and are not aligned with the changing demand of the industries. More emphasis should be given in developing practical skills in relevant technologies, and good practices like industrial tours should be expanded. Career counselling should include but not limited to the introduction to potential industries, professionalism at workplace and communication skills. The teachers have noted the possibility of institute-industry partnerships allowing the institute's students to access modern technology of the industry. A local level delegation of authority by DTE to the institute may help the institute to assess and make such decisions for the benefit of the institute and the students/graduates.

The current Student Teacher Ratio (STR) of all the participating institutes of this study is way beyond the set STR target at the National Education Policy 2010. The STR is certainly a key factor impacting on the quality delivery of the TVET and should be looked at by the government for a faster remedial action. The government should also have a policy to facilitate the recruitment of TVET graduates in the public and private sector. The institute needs to develop a marketing campaign so that HR professionals at private sector organisations know about the competency standards of the TVET graduates of different courses. This tracer study report could contribute to that effort.

The tracer study provided a unique opportunity to the institutes to be connected with their graduates, parents and employers, activating the Career Counselling Service and also to be able to receive feedback from their ongoing

students. Both employers and graduates have shown their interest to contribute to the improvement of the quality of the education and career guidance to the future graduates. Some of these offers could be easily realised by the institute locally. The feedback provided by the stakeholders are also useful for policy makers including DTE and BTEB, particularly when designing market responsive curriculum, syllabus and courses and the recruitment of teachers.

Overall, all key stakeholders are in favour of such tracer study which empowers and engages key stakeholders for their mutual interests.

The tracer study captured some interesting impact stories that TVET and TVET institutes are creating through the TVET graduates. DTE considers capturing, documenting, and disseminating such impact of the sector. DTE has already established a Research and Knowledge Management Cell to lead to similar initiatives.

Figure:16 Impact Stories

Impact Stories			
One Food Technology Diploma graduate became a successful entrepreneur and now creates employments for several. He has established a factory to produce packaged food and baked items. He believes that CBPI helped him to dream big and has developed his knowledge base. This helped him to be successful despite of several challenges he has faced.	One female Diploma in Engineering graduate proudly mentioned that she has been moved to a leadership position in her organisation so quickly; now she manages a team of 20 staff including several Master's degree holders. Several of her colleagues with B.Sc. in Engineering have not been entrusted for the role.	One RAC graduate of CBPI is the lead engineer and the unit head at the Cox's Bazar office of an international chain hotel management. He is entrusted to manage and monitor the whole RAC related operation of the chain hotel in Cox's Bazar. He receives a rewarding financial package for his excellent job.	One female Diploma graduate works in an international NGO. She started a job with only BDT 10,000 a month and now, within only eighteen months of her career, she receives more than BDT 56,000 monthly income. She also supports the management team in strategic planning.

ANNEX – 1: STUDY METHODOLOGY

A. Purpose and scope of tracer studies

A tracer study or graduate survey is a standardised survey (in written or oral form) of graduates from the education institutions, which takes place sometime after graduation or at the end of the training. The common aim of TVET tracer studies is to determine the outcomes of TVET training provided to trainees in terms of relevant skills necessary for their entry into the job market or to access further education and training. Globally, tracer studies are common in higher education, but often conducted in TVET and skill development sector as well. Conducting tracer studies is a formal requirement in many countries for the accreditation of study programmes. Tracer studies can provide timely and relevant data on the effectiveness of skill-based interventions and the relevance of the interventions in the context of the labour market; based on those, TVET courses are adjusted to improve effectiveness.

Tracer Studies could be - (i) Traditional National Tracer Study (commonly, carried out by research organisations) covers objectives such as to inform ministries and other central bodies about the labour market success of the graduates; or (ii) Institutional Tracer Study (conducted by the academic institute itself) could have many objectives related to feedback for practical conclusions for improving the education/training programme or for research on the relationships between education and employment. This institutional tracer study is a relatively new type that has emerged during the last 15 years and practiced in countries like Finland, France, Germany, Hungary, Indonesia, Italy, the Netherlands, and Romania. This is probably first of its kind study in the TVET sector in Bangladesh.

B. Rationale

In recent years, there have been some tracer studies conducted in Bangladesh TVET/education sector. Most of these studies were carried out under the Development Partners (DPs) funded projects, with a project specific objective or on a targeted theme, and by independent research organisations. Any example of 'institutional tracer study' in Bangladesh TVET sector is yet unknown.

Both the institutes and the key stakeholder of the sector assumes that TVET provides more jobs, faster employment, and better opportunities to obtain technical knowledge for future self-employment compared to the general education stream. However, there has been no data supporting such assumptions. No institute has done such a tracer study before. So, the pilot tracer study was designed, the following five public TVET institute voluntarily participated in the study:

iii. Barishal Technical School and College (BTSC), Barishal

iv. Cox's Bazar Polytechnic Institute (CBPI), Cox's Bazar

v. Graphic Arts Institute (GAI), Dhaka

vi. Manikganj Technical School and College (MTSC), Manikganj

vii. Rangpur Polytechnic Institute (RPI), Rangpur

In collaboration with DTE and BTEB, the European Union funded HCDP-21 TA has been working with five TVET institutes in the pilot tracer study since August 2020. These pilot tracer studies aimed at developing sustainable capacities within the TVET institutes so that DTE and TVET institutes can carry out such studies regularly to support evidence-based policy making. Successful pilot initiatives could be scaled up with necessary adjustments to the study design based on the lessons learnt.

The overall objectives of the pilot initiatives were:

1. Developing capacity of TVET institutes in conducting tracer study on the employment outcome of their graduates.
2. Developing a database of TVET graduates and their employers. The database is expected to be integrated with the newly developed DTE HRMIS in order to ensure sustainability. The database will be instrumental to the Career Counselling cell of TVET institutes and to the TVET graduates in exploring employment or apprenticeship or industrial attachment opportunities with the employers. This will also contribute to strengthening linkages between TVET institutes and industries.
3. Facilitating policy dialogue on emerging issues from the tracer studies to feed into the Knowledge to Policy (K2P) process for ongoing sectoral reforms.

Available tracer study reports and international guidelines have been reviewed and consulted for the design and development of the tracer study and capacity building interventions. In addition to the experts from the TA team, staff from the Knowledge Management and Research Cell of DTE and the Research cell of the BTEB have provided regular capacity building support in conducting and completing the tracer study.

C. Objectives

The study objectives were developed to measure the employability of graduates and to understand their pathways to further education. The main objectives of this tracer study were:

- To know the status of the TVET graduates of 2018 and 2019 of selected trades/technologies.

- To develop a database of the graduates and their employers towards revitalising the function of the Career Counselling Office of TVET institutes regarding the provision of local employment information to TVET students and management.

D. Target population

Standard guidelines on tracer studies suggest that a tracer study is ideal to be conducted one to two years after the graduation. Therefore, the target population of the pilot tracer study was two homogenous group from selected trades/technologies and courses who completed their course in 2018 (batch 2018) and in 2019 (batch 2019). The below table presents the profile of the target population and their response rate from each of the institute.

Table:12 Target population of the study

S/L	Institute	Course	Trade/technology	Target Population
01.	Barishal Technical School and College (BTSC), Barishal	SSC (vocational)	• Computer & Information • General Electrical Works • Civil Drafting with CAD, • Refrigeration & Air Conditioning (RAC) • Machine Tools Operation	459 graduates (response rate 97%)
02.	Manikganj Technical School and College (MTSC), Manikganj	HSC (vocational)	• Electrical Works and Maintenance • Welding and Fabrication • Computer Operation and Maintenance • Refrigeration & Air Conditioning (RAC)	165 graduates (response rate 95%)
03.	Graphic Arts Institute (GAI), Dhaka	Diploma in Engineering	• Printing • Graphic Design	480 graduates (response rate 87%)
04.	Cox's Bazar Polytechnic Institute (CBPI), Cox's Bazar	Diploma in Engineering	• Civil • Computer • Food • Refrigeration & Air Conditioning (RAC)	319 graduates (response rate 99%)
05.	Rangpur Polytechnic Institute (RPI), Rangpur	Diploma in Engineering	• Computer • Mechanical • Electromedical	515 graduates (response rate 88%)

E. Questionnaire

Two questionnaires for collecting data from the TVET graduates (Annex-1) and the management of the institute (Annex-2) were developed through participatory workshops. Considering the scope and objectives of the pilot tracer study as well as the capacity of the institutes, the questionnaire for graduates was kept short with limited open-ended questions, and no qualitative questions. The 5 - 6 pages long questionnaire included 18 questions covering personal information (e.g., name, contacts, age, gender); status (job, self-employment, HE, NEET); job, employer, and income related information from graduates who have employment; training, and higher education related information, among others. It was estimated that the questionnaire can be completed in 20-30 minutes on an average.

Both questionnaires were translated into Bangla and were pre-tested. Based on the feedback of the pre-testing phase, graduate questionnaire was revised and further simplified.

F. Quantitative and qualitative data

The tracer study primarily focussed on quantitative data collection and analysis on TVET graduates. The quantitative data was collected through a questionnaire targeting several aspects of the graduates' status. Answers of the questionnaire were already coded with standard values.

Maximum number of questionnaires were self-administered. However, in order to optimise the response rate, four approaches were taken:

i. Respondents were requested to complete the questionnaire in the presence of the data collector so that it could be collected upon completion.

ii. Some questionnaires were left with the respondents to be collected later upon completion. Where required, data collectors followed up and provided reminders for timely completion of the questionnaire.

iii. Employed graduates who work/live outside the district or country, the distribution and collection of the questionnaires were done through Google Forms.

iv. Some questionnaires were administered through telephone interviews by the data collectors.

The institute had no computerised database of the contacts of the students and graduates. The institute had contact addresses including mobile numbers of the graduates which they provided during the registration for the final examination. However, several addresses and mobile numbers were changed and email addresses for all graduates were not in the record. So, the data collectors primarily contacted the graduates who have valid mobile numbers and email addresses and obtained contacts of other graduates from them. Some of the graduates were also reached through the Facebook groups and social networking among the graduates. Data collection activities were carried out during October to December 2020.

Teachers of respective technologies/trades were involved in the data collection and checking the validity of the data. The principal of the institute has supervised the data collection and quality aspects. Quantitative data was inputted into the Statistical Package for Social Sciences (SPSS) software after data cleaning and cross verification of data by the DTE Knowledge Management and Research team, and the HCDP-21 TA experts. Quantitative data were analysed using SPSS. A database development is ongoing with the collected contact-data of the graduates and the employers.

The study also collected some quantitative data on the management of the institute and some qualitative data through Focus Group Discussions (FGDs). FGDs with key stakeholders including employers, graduates, students, parents, and teachers gathered qualitative data on expectations, gaps, and challenges of the overall quality of the course. Questions and notes from FGDs are at Annex-4.

Relevant secondary data including enrolment and graduation data, data on local economy etc. were also collected and included in the report as appropriate.

G. Limitation of the study

The institutional tracer study is not only new in Bangladesh, but also a new experience for the participating institutes. The study was conducted by the teachers and instructors of the institutes who have limited or no prior research experience. Prior experience, expertise and capacity could have supported more in achieving the optimal and quality response from the graduates and to cover more labour market and curriculum related qualitative questions.

Here are some possible limitations to the study:

- Scope of the study: The scope of the study focussed on learning by doing opportunity for the institute than implementing a comprehensive tracer study. Therefore, the questionnaire has been kept simple which limited a detailed analysis of some findings. For example, it was not possible to investigate the reason why some of the graduates did not get a job yet, or why several graduates moved on from their first job, or relation between job change and salary.
- Access and quality data: Access to graduates after one to two years of their graduation has been challenging while many of them changed their contacts. Access to female graduates and getting their personal data have been difficult in the socio-cultural context of Bangladesh. Graduates who are in employment, and those live outside the district or country, having their time for the study required several follow-ups.
- Impact of COVID - 19: The ongoing COVID - 19 pandemic has adverse impact on both employment and education opportunities in Bangladesh. This could have impacted on the number of graduates in NEET. So, the findings of this study may not be considered as a baseline.

- Salary range: Employed graduates were not fully comfortable in sharing their annual salary range. It was also not possible to verify the accuracy of the salary data. Further improvement in the questionnaire for more clarities could be done.
- Focus on quantitative data: Considering the capacity of the institute, including the availability of time of the teachers, the tracer study focussed primarily on simple quantitative data collection and avoided complex items such as job satisfaction, relevance between study and job, focus of higher education or training. Inclusion of these elements could enhance further the quality of the tracer study report.
- Limited qualitative data: Keeping in mind the COVID-19 health and safety measures, the FGDs with key stakeholders were done at a limited scale. FGDs with larger groups and for longer time could have provided more qualitative data.
- Lack of relevant secondary data: The study tried to capture available secondary data on local economy and labour market. However, there is a lack in availability of district-wise labour market data. The currently available district data on the economic activities and establishments is from 2013 published at the BBS Economic Census 2013 district reports.

H. Challenges and suggestions

The pilot tracer study faced the following challenges. Suggestions to address these challenges may be considered during the design of future tracer study and capacity building interventions:

- Institutions do not have a database of contacts of graduates which could be easily updated. Lack of quality (complete and valid) contact data of graduate is a major challenge. A database with quality contact data for future graduates is recommended. Institute should also keep networking with the graduates through formation of alumni so that access to them is easier. Successful graduates may be invited to the institute as a guest lecturer to provide practical career counselling.
- Teachers and instructors of the institute did not have experience in conducting tracer studies and collecting data. It was challenging for the data collectors to convince the graduates on the purpose of the tracer study and obtain their responses to the questionnaire. Capacity building on obtaining graduates response is recommended for future initiative.
- Employed graduates and their employers were not receptive to the tracer study while they were unfamiliar with such study and its purpose. More regular interactions with the graduates and employers will bring several benefits.
- Female graduates and their families were unwilling to provide contact data considering potential misuse. It is recommended that the data collected for the study and database development are strictly used for the intended purpose.
- Graduates who were unemployed were not comfortable to disclose their status as they fear potential social humiliation. Data collectors need capacity building support to deal with this type of situations.
- More comprehensive capacity building / training events should be planned before the launching of the tracer study.

ANNEX – 2: STUDY QUESTIONNAIRE – TVET GRADUATES

কারিগরি শিক্ষা অধিদপ্তর (ডিটিই) এর সার্বিক তত্ত্বাবধায়নে বাংলাদেশ কারিগরি শিক্ষা বোর্ড এর সহযোগিতায় ইইউ - এইচসিডিপি - ২১ কর্তৃক পরিচালিত ট্রেসার স্টাডি - ২০২০ গবেষণা কার্যক্রম।

কারিগরি ও বৃত্তিমূলক শিক্ষা এবং প্রশিক্ষণ এ পাশকৃত শিক্ষার্থীদের ট্রেসার স্টাডি - ২০২০

তথ্য সংগ্রহের ফরম: কারিগরি ও বৃত্তিমূলক শিক্ষা এবং প্রশিক্ষণ এ পাশকৃত শিক্ষার্থী

(প্রদত্ত তথ্যসমূহ শুধুমাত্র এই গবেষণা কাজেই ব্যবহৃত হবে এবং তথ্যদাতা সম্পর্কীত গোপনীয়তা সংরক্ষণ করা হবে।)

১. নাম, বয়স, জাতীয় পরিচয়পত্র নম্বর, মোবাইল নম্বর এবং ইমেইলসহ যোগাযোগের ঠিকানা

নাম: _____

বয়স: _____ বছর

যোগাযোগের ঠিকানা: _____

মোবাইল নম্বর: _____

জাতীয় পরিচয়পত্র নম্বর: _____

ইমেইল: _____

২. অর্জিত সার্টিফিকেট (সর্বশেষ): (উপযুক্ত স্থানে ☑ চিহ্ন দিন)

☐ ডিপ্লোমা ইন ইঞ্জিনিয়ারিং

☐ এইচএসসি (ভোকেশনাল)

☐ এসএসসি (ভোকেশনাল)

☐ বেসিক ট্রেড

☐ অন্যান্য: _____

৩. ট্রেড/টেকনোলজি নাম: _____

৪. পাশের সন: _____

৫. কর্মসংস্থান এর বর্তমান অবস্থা: (উপযুক্ত স্থানে ☑ চিহ্ন দিন)

- ☐ চাকুরিজীবী
- ☐ চাকুরিরত নয় চাকরি খুঁজছেন
- ☐ উচ্চশিক্ষায় অধ্যয়নরত
- ☐ উচ্চশিক্ষার প্রস্তুতি নিচ্ছেন এবং চাকুরি খুঁজছেন
- ☐ নিজস্ব ব্যবসা বা পারিবারিক ব্যবসা চালাচ্ছেন
- ☐ ব্যবসা করেছেন এবং চাকুরি খুঁজছেন
- ☐ বিদেশে কর্মরত
- ☐ অধ্যয়নরত নয়, চাকুরি বা প্রশিক্ষণে নেই
- ☐ আমি কাজ করছি কিন্তু একটি চাকুরি খুঁজছি
- ☐ অন্যান্য (দয়া করে উল্লেখ করুন)

_____

৬. চাকুরিরত হলে নিয়োগপ্রাপ্ত প্রতিষ্ঠানের ধরণ: (উপযুক্ত স্থানে ☑ চিহ্ন দিন)

- ☐ সরকারী সংস্থা
- ☐ বেসরকারী সংস্থা
- ☐ বহুজাতিক প্রতিষ্ঠান
- ☐ এনজিও
- ☐ অন্যান্য (উল্লেখ করুন)

_____

৭. আপনার কর্মস্থলের তত্ত্বাবধায়নকারী/উর্ধ্বতন কর্মকর্তার নাম, পদবী ও মোবাইল নম্বর:

_____

৮. আপনার প্রতিষ্ঠানের প্রধান উৎপাদিত পণ্য/সেবার নামঃ _____

৯. প্রতিষ্ঠানের ধরন: (উপযুক্ত স্থানে ☑ চিহ্ন দিন)

- ☐ উৎপাদন
- ☐ সেবা
- ☐ শিল্প উৎপাদন
- ☐ এগ্রো-ফুড
- ☐ অন্যান্য (উল্লেখ করুন) _____

১০. প্রতিষ্ঠানের আকার: (উপযুক্ত স্থানে ☑ চিহ্ন দিন)

- ☐ কটেজ (০ থেকে ৯ জন কর্মী)
- ☐ মাইক্রো (১০ থেকে ২৪ জন কর্মী)
- ☐ ক্ষুদ্র (২৫ থেকে ৯৯ জন কর্মী)
- ☐ মাঝারী (১০০ থেকে ২৫০ জন কর্মী)
- ☐ বৃহৎ (২৫০ জন কর্মী বা তদূর্ধ্ব)

১১. প্রতিষ্ঠানের অবস্থান: (উপযুক্ত স্থানে ☑ চিহ্ন দিন)

- ☐ শহর
- ☐ গ্রাম
- ☐ শিল্প জোন/পার্ক

১২. আপনার প্রথম কর্মসংস্থানের তথ্য: (উপযুক্ত স্থানে ☑ চিহ্ন দিন)

☐ চূড়ান্ত পরীক্ষার ফলাফলের আগে

☐ ডিগ্রী অর্জনের ছয় মাসের মধ্যে

☐ ডিগ্রী অর্জনের এক বছরের মধ্যে

☐ ডিগ্রী অর্জনের দুই বছরের মধ্যে

☐ ডিগ্রী অর্জনের দুই বছরের অধিক

১৩. শিল্প প্রতিষ্ঠানে বাস্তব প্রশিক্ষণ (Industrial Attachment) ব্যতিত বর্তমান চাকুরি পেতে আপনার অন্য কোন প্রশিক্ষণ নিতে হয়েছিল কী? (উপযুক্ত স্থানে ☑ চিহ্ন দিন)

☐ হ্যাঁ

☐ না

যদি হ্যাঁ হয়, তবে প্রশিক্ষণের ব্যাপ্তি:

☐ ছয় মাসের কম

☐ ছয় মাসের বেশি

১৪. প্রথম চাকুরির মোট আয় (বার্ষিক): (উপযুক্ত স্থানে ☑ চিহ্ন দিন)

☐ ১ লক্ষ টাকার কম

☐ ১-২ লক্ষ টাকার মধ্যে

☐ ২ লক্ষ টাকার অধিক

☐ অন্যান্য (উল্লেখ করুন)

_____

১৫. প্রথম যোগদানকৃত চাকুরির পদবী (উল্লেখ করুন):

_____

১৬. বর্তমান চাকুরি কী আপনার প্রথম চাকুরি?

☐ হ্যাঁ

☐ না

যদি উত্তর না হয় তবে অনুগ্রহ করে উল্লেখ করুন:

☐ বর্তমান পদবী:

☐ যোগদানের তারিখ:

☐ বার্ষিক আয়:

১৭. যদি আপনি কোন উচ্চতর শিক্ষা বা প্রশিক্ষণ সম্পন্ন করে থাকেন তবে অনুগ্রহ করে উল্লেখ করুন:

☐ প্রতিষ্ঠান:

☐ সময়:

☐ প্রশিক্ষণ:

১৮. অন্যান্য তথ্য যদি থাকে (উল্লেখ করুন):

ধন্যবাদ

তথ্য সংগ্রহকারীর স্বাক্ষর ও তারিখ

তথ্য প্রদানকারীর স্বাক্ষর ও তারিখ

ANNEX – 3: STUDY QUESTIONNAIRE – TVET INSTITUTE

কারিগরি শিক্ষা অধিদপ্তর (ডিটিই) এর সার্বিক তত্ত্বাবধায়নে বাংলাদেশ কারিগরি শিক্ষা বোর্ড এর সহযোগিতায়
ইইউ - এইচসিডিপি - ২১ কর্তৃক পরিচালিত ট্রেসার স্টাডি - ২০২০ গবেষণা কার্যক্রম।

কারিগরি ও বৃত্তিমূলক শিক্ষা এবং প্রশিক্ষণ এ পাশকৃত শিক্ষার্থীদের ট্রেসার স্টাডি - ২০২০

তথ্য সংগ্রহের ফরম: কারিগরি ও বৃত্তিমূলক শিক্ষা এবং প্রশিক্ষণ প্রতিষ্ঠান

(সকল তথ্য শুধুমাত্র গবেষণা কাজে ব্যবহারের জন্য সংরক্ষণ করা হবে)

সাধারণ তথ্য : _____

প্রতিষ্ঠানের নাম : _____

ঠিকানা : _____

প্রতিষ্ঠার কাল : _____

প্রতিষ্ঠানের ধরন : ক. সরকারি | খ. বেসরকারি (এমপিও) | গ. বেসরকারি (বানিজ্যিকভাবে)

কোর্স সমূহ : ক. ডিপ্লোমা ইন ইঞ্জিনিয়ারিং | খ. এইচএসসি (ভোক) | গ. এসএসসি (ভোক)

ঘ. বেসিক ট্রেড কোর্স

৬. শিক্ষার্থী সংক্রান্ত তথ্য

শিক্ষাক্রম:

ট্রেড/ টেকনোলজি	শিক্ষার্থীর সংখ্যা							
	২০২০		২০১৯		২০১৮		২০১৭	
	আসন সংখ্যা	নিবন্ধিত শিক্ষার্থীর সংখ্যা	আসন সংখ্যা	নিবন্ধিত শিক্ষার্থীর সংখ্যা	আসন সংখ্যা	নিবন্ধিত শিক্ষার্থীর সংখ্যা	আসন সংখ্যা	নিবন্ধিত শিক্ষার্থীর সংখ্যা

শিক্ষাক্রম:

ট্রেড/ টেকনোলজি	শিক্ষার্থীর সংখ্যা							
	২০২০		২০১৯		২০১৮		২০১৭	
	আসন সংখ্যা	নিবন্ধিত শিক্ষার্থীর সংখ্যা	আসন সংখ্যা	নিবন্ধিত শিক্ষার্থীর সংখ্যা	আসন সংখ্যা	নিবন্ধিত শিক্ষার্থীর সংখ্যা	আসন সংখ্যা	নিবন্ধিত শিক্ষার্থীর সংখ্যা

শিক্ষাক্রম:

ট্রেড/ টেকনোলজি	শিক্ষার্থীর সংখ্যা							
	২০২০		২০১৯		২০১৮		২০১৭	
	আসন সংখ্যা	নিবন্ধিত শিক্ষার্থীর সংখ্যা	আসন সংখ্যা	নিবন্ধিত শিক্ষার্থীর সংখ্যা	আসন সংখ্যা	নিবন্ধিত শিক্ষার্থীর সংখ্যা	আসন সংখ্যা	নিবন্ধিত শিক্ষার্থীর সংখ্যা

৭. পাশকৃত শিক্ষার্থীদের তথ্য:

ট্রেড/ টেকনোলজি	পাশকৃত শিক্ষার্থীর সংখ্যা							
	২০১৯				২০১৮			
	সমাপনী পরীক্ষায় অংশ গ্রহণকারী শিক্ষার্থীর সংখ্যা	পাশকৃত শিক্ষার্থীর সংখ্যা			সমাপনী পরীক্ষায় অংশ গ্রহণকারী শিক্ষার্থীর সংখ্যা	পাশকৃত শিক্ষার্থীর সংখ্যা		
		ছাত্র	ছাত্রী	মোট		ছাত্র	ছাত্রী	মোট

৮. শিক্ষক/কর্মচারী:

ট্রেড/ টেকনোলজি	অনুমোদিত পদের সংখ্যা (শিক্ষক)	পাঠদানরত মোট শিক্ষক সংখ্যা			শূণ্যপদ	সহায়ক কর্মচারী		
		নিয়মিত	নিয়মিত	মোট		অনুমোদিত পদসংখ্যা	বর্তমান কর্মরত	শূণ্যপদ

৯. অন্যান্য তথ্য যদি থাকে (উল্লেখ করুন):

_____

_____

ধন্যবাদ

_____ _____

তথ্য সংগ্রহকারীর স্বাক্ষর ও তারিখ তথ্য প্রদানকারীর স্বাক্ষর ও তারিখ

ANNEX – 4: QUESTIONS AND NOTES FROM FOCUS GROUP DISCUSSIONS

A. Open questions to facilitate the FGDs

Employers:

1. How did you find the competencies of the TVET graduates compared to others?
2. Where are the major gaps - relevancy of knowledge, or skills or behaviour?
3. What factors would you consider employing more TVET graduates?

Graduates:

1. What was the reason in selecting TVET as an option?
2. What is your current experience, feelings about your decision?
3. What challenges did you face in getting the job or accessing HE?
4. Did you find a relevance between your education and job?
5. What is your recommendation to improve the quality of the course you have studied (curriculum, practical, apprenticeship, work attachment)?

Students:

1. What was the reason in selecting TVET as an option?
2. What is your current experience, feelings about your decision?
3. What challenges you foresee in getting a job or accessing HE?

Parents:

1. What was the reason in selecting TVET as an option?
2. What is your current experience, feelings about your decision?

Teachers:

1. How do you select examples and practical classes (theories, or research on emerging issues like 4IR)?
2. How classroom teaching and curriculum could be more market relevant?
3. How is currently career guidance provided? How this could be further improved?

B. Notes from the FGDs at BTSC (Course: SSC-voc)

STAKEHOLDER	NOTES
Employers	6 employers including Summit Power which has 120 TVET graduates as employees. Points noted by the employers: • TVET graduates are better than others, foundations are good, learn fast • Computer - Basic understanding of hardware is low (knowledge of laptop is very poor) • Mechanical – huge gaps in the supply of skilled machine design, graduates are only production oriented • Electrical – graduates come with good practical and technical knowledge • Pharmaceuticals – recruitments take place through personal networking and not formal job advertisement • Conflicts between GE and technical graduates at the workplace • Lack of professionalism (important) • Move to self-employment after learning the work • Overseas employment is a pre-conceived target that takes away skilled workers for unskilled overseas employment • Good theoretical knowledge • Practical/industry attachment – 8 weeks including holidays and weekends, so it gives less time to learn as per the objective of the industry attachment • Trainer of the industry knows the technology, but not fully capable of training students and students' knowledge level; particularly, the standard terminologies students learn in theories (industry trainer uses informal terminologies) • Salary structure is determined on an individual basis which undermines the TVET graduates *Out of 6 employers, 50% are very satisfied, 17% satisfied and 33% are partially satisfied by recruiting TVET graduates.

STAKEHOLDER	NOTES
Graduates	Reasons for studying TVET: • Interested in software, did not get Science in General Education, so took TVET • Family reference • Family decision for SSC (voc), but later, HSC (Voc) was own decision • Personal choice against family decision to study power technology, Family target was BCS. • Challenges and suggestions • UCEP has limited equipment, but efficient planning ensures more practical knowledge for the students (a student who studied at the UCEP earlier – allows students to fully access the equipment and solve the problem, instructors just monitor and proactively suggest where students are going to a wrong direction) (good practice) • Overall monitoring is needed • Teaching quality is weak – practical exercises are not practiced in Bangla and English (teachers said the opposite thing) • No regular assessment on non-technical subjects • Teaching quality differs between 1st shift and 2nd shift class while teachers' energy level decreases over time • One computer for 3 to 5 students does not provide enough opportunity to learn properly *Out of 13 (2F, 11M) graduates, 38% are very satisfied, 46% satisfied, 15% are partially

Students Have taken TVET as an option, because of:

- Poor economic condition
- The parent is a construction worker and wanted his son to be a Civil Engineer
- Interest in technology
- Family reference, elder brother, relatives studied TVET
- Self-employment and fast job
- Already in a job, second-chance in education
- Developing expertise in computer
- Reasons for regret / challenges faced:
- Backdated curriculum, e.g., Laptop is a new trend, but students learn basic of desktop computer (so students have to go and take short courses at private training centres such as Supernova Computer in Dhaka) (important)
- Family opposed, but uncle supported who is a technician
- Poor syllabus
- Poor salary
- Industrial attachment is short, and teachers also suggest the industry trainer to focus on the syllabus topic (important)
- Industrial trainer sometimes does not teach them everything because the trainer is also engaged with Private Training Centres
- Institute teaches them 3D max, AutoCAD 2007 when the current version in market is AutoCAD 2019
- Industrial attachments do not develop their skills fully
- For higher education, they get direct access to 5th semester, but they compete with general education students for a better education
- Equipment – not available or old equipment, such as no CNC machine at the BTSC
- Large class size and teachers have double shifts duties. Sometimes instructors only get the signature on attendance sheet and assign no practical work or group work which does not help much.
- Limited access to higher education opportunities at the engineering universities
- Teachers with specialised skills (e.g., Prior industry experience) seemed much effective (important)
- 25% update of syllabus and 40% update of the curriculum are needed

*Out of 11 (3F, 8M) students, 64% are very satisfied, 27% satisfied and 9% are partially satisfied with their decision of studying vocational education (TVET).

Parents / Guardians	Took TVET as an option, because of: • One relative studied general education and struggled to get a job • Practical knowledge helps getting a job faster • Parent has a technical/TVET background - both sons studied vocational education • Technical knowledge meets the demand of current labour market • Self-employment opportunities • Less interest in education, so TVET was a choice • In addition to job/income, HE option is still open • Career growth potential is low in GE, job is competitive, people needs to pay large ransom to get a job • Principals and teachers are very accessible and friendly which are not common in general education • Private tuition is required in general education, it is also expensive • During job scarcity, a person with technical knowledge will survive through self-employment • TVET is easily accessible, this allows 8 pass irregular, bad students and local mastans to access it to secure a degree to improve their social status. This gives a bad reputation to TVET, impacting on educational environment at the institute. • Marketing of TVET is required to raise awareness of the HR personnel in the labour market. (important) to access it securing a degree to improve their social status. This gives a bad reputation to TVET, impacting on the educational environment at the institute. • Marketing of TVET is required to raise awareness of the HR personnel in the labour market (important) *Out of 8 (2F, 6M) parents, 75% are very satisfied, and 25% are partially satisfied with their decision of selecting TVET as an option for their children.

Teachers

How teachers teach new things including IR 4.0 during their lessons and their reflections (challenges and suggestions) to improve the quality of the education:

- Student interactions
- Internet search, YouTube - 3D View
- Question and answer (when students have questions after watching the videos)
- Demo creation
- Project work (?)
- Multi-media projection and then practical
- Practical examination at the neighbourhood workshops (good practice)
- Follow the curriculum
- Talking with industry people or practical experience from previous industrial job
- Step by step explanation (foundation is weak of the students, so cannot absorb much)
- Syllabus and reality are different (safety, PPE before practical, but come late in the syllabus)
- Syllabus – 16 books at 9 grade includes contents from general educations, there should be flexibility
- Non-tech such as Bangla – teacher uses debate, presentation etc. to practice (students disagreed with this statement)
- Feedback from graduates employed at the industry (good practice)
- Group learning
- Career guidance should also include professionalism such as workplace ethics, time maintenance, team work etc. (important)

Total 14 (2F, 12M) teachers participated in the FGD.

C. Notes from the FGDs at MTSC (Course: HSC-voc)

STAKEHOLDER	NOTES
Employers	In total 10 (1F, 9M) participated in FGD. Participants were IT Executive, HR, Admin, Project Manager, Chairman, Manager, Sub-Assistant Engineer, Admin, Director of Pvt Training Institute (including HR Manager from Monno Group). Points noted by the employers: (as clarified by them, comments were mostly based on the employees who joined by completing the SEIP short training courses) • Require training up after they join • Lack in professionalism (office time, office environment, sincerity, attitude, behaviour issues) (important) • Lack digital machine knowledge • Lack theoretical knowledge on digital machines or practical knowledge on 440-volt motors) • Quick job switch after training is completed (do not report the reason for leaving) (important) • Less idea on Measurement which is very basic • Doing good as Computer Trainers (better than others) • Vocational Students get their probation period completed in 3 months (faster than others) • Under 18 aged graduates could not be hired as per law (Child labour issue) *Out of 9 employers, 56% are satisfied, 33% partially satisfied and 11% are poor satisfied by recruiting TVET graduates.

Graduates

Total 9 (all M) graduates participated in the FGD. Graduated in 2012, 2017, 2018. Two of them are doing higher education in China (during Corona pandemic, they were in Bangladesh, doing online classes, and working as Translator/Interpreter because of their proficiency in Chinees)

Reasons for studying TVET:

- Wanted to be an Engineer
- Hard to catch up general education
- Fast job after completing TVET
- Getting required skills for job
- Become self-employed/entrepreneur, job creator
- People stays unemployed for long after completing General Education
- Getting Skills certificate
- Chance to get practical learning in addition to the theoretical education

Challenges:

- Low salary offered
- Lacking in education (TIG, MIG, Welding)

Recommendations:

- Increase seats
- New machine
- More qualified teachers
- Trade-wise new technology and machines
- Industry tour (good practice)

*Out of 9 graduates, 67% are very satisfied, 22% satisfied, 11% are partially satisfied with their decision of studying vocational education (TVET).

Students	Have taken TVET as an option, because of: • Liked technical education • Job oriented education and training • Practical knowledge gain • Self-employment • Interest in computer Challenges: • Equipment • English • Shortage of teachers • Cleanliness of the institute • MIG welding *Out of 17 (7F, 12M) students, 94% are very satisfied, and 6% are satisfied with their decision of studying vocational education (TVET).
Parents / Guardians	Total 12 (7F, 5M) guardians participated in the event. Took TVET as an option for their children, because of: • Chance to get job faster than general education • Interest in computer • Better education • Relevant talent and interest in engineering • To learn technical knowledge of handwork • siblings have also studied and doing good. *Out of the 11 parents, 100% are very satisfied with their decision of selecting TVET as an option for their children.

Teachers	How teachers teach new things including IR 4.0 during their lessons and their reflections (challenges and suggestions) to improve the quality of the education: • Curriculum development is needed • Use virtual simulator and YouTube to show modern technology (good practice) • Networking with local workshops who informs as soon as they get new or modern machines for repairing (good practice) • Non-tech (such as English, sociology, Bangla) – 36 weeks course, but in reality, its only 25 weeks, about 3 classes per week – this does not provide proper learning opportunity, on the other hand, these non-tech courses minimises the time to learn the actual technical education • There are some technologies like Plasma, Arcwelding etc. which are included in the curriculum, but the technologies are absent in Bangladesh • 4IR is not reflected in curriculum • Quality of students vary to a large extent (e.g., passed with 33% marks and 99% marks), which have impacts on their lesson absorbing capacity • Training in Singapore was useful, but onsite job training would help teachers (important) • PPP with industry would help them to access new machinery and technology (important) Total 9 (1F, 8M) teachers participated in the FGD.

D. Notes from the FGDs at GAI (Course: Diploma in Engineering)

STAKEHOLDER	NOTES
Employers	Several of the employers were former students of GAI and are now successful entrepreneurs, or in private sector jobs. Points noted by the employers regarding the TVET graduates serving in their organisations: • Theoretical knowledge is good, but practical skills should be developed • Graduates from TVET/GAI could cope-up easily and can relate their learning with new technologies (they are fast learner because of their good foundation knowledge) • They require training to be able to deliver the job responsibilities, but they switch the job after being trained up. Although, the number of jump-ship is low, but most employers are disappointed with this feature of TVET students (however, there are issues related to salary that needs to be looked at). • They lack interest in 'Image editing' which is often required in present job market, and which is relevant to graphic design • Knowledge of other sectors like Pharmaceuticals, Heat Transfers Labels (HTL), and Printed Fabric Labels (PFL) is also weak • Start-up business – passion is needed, knowledge of online market is needed • Knowledge of the fast-changing online market should be developed at the institutions (important) • Teachers should be linked with sector expert and update their knowledge on the modern technological development • Graduates should also get ideas about the freelance/outsourcing jobs and not confine them to only traditional jobs (important) • Higher education is required for better job offers • Packaging is a promising sector that the students should know about and learn about. • Communication skills (reporting, and presentation) is weak (important) • 4 years of diploma are not fully utilised in proper learning, there are gaps in education • Career guidance is needed before they come to the labour market • Should know more about recent development and opportunities there, for instance, 3D graphic designs • There is a lack of professionalism (punctuality, switching job, truthfulness!) (important) *Out of 8 employers, 25% are very satisfied, 38% satisfied and 38% are partially satisfied by recruiting TVET graduates.

Graduates

Passing year of the graduates 2010, 2012, 2014, 2019, 2020. All graduates participated in the FGD were already employed.

Reasons for studying TVET:

- Opportunities for self-employment and fast employment
- Labour marked demand from print and communication industry
- Family decision
- Location (residence in nearby places)
- Perceived as an 'average' student and not competent enough to tackle general education
- Interest in technical education

Challenges faced during the study:

- Lab equipments
- Teachers – lacking competence of some latest technologies that are in demand at present job market.
- Curriculum – more emphasis should be given on concept development. Fashion aspect has not focused much on the curriculum and syllabus
- Industry attachment - 3 months introductory training, and 3 months reporting
- Industrial tours (good practice, but do not practiced equally for all batches)
- Final year should have more project-based work, fair or gallery of the projects where industry people and potential employers could be invited (important)

Challenges faced during pre or post job or higher education:

- Without a B.Sc. (higher education degree), the social status is perceived low
- Graduates required higher study because of self-development & certifications is required for better job opportunities
- Financing for higher education is a challenge, private universities are expensive
- Options are limited in Bangladesh to get a relevant higher education degree
- Printing graduates have no relevant higher education opportunity in country
- GAI is not known to many people involved in HR job at the industry. Job requirements do not prioritise the cutting edge of this specialised institutions. More marketing is needed. Current marking of TVET is to increase the "access" targeting potential students, not for "advocay" but to let the industry and HR people know about the "outputs" of the sector. (important)
- Salary structure in government job is not aligned with private sector job of this profession
- Graduates said that most of the modern technologies & practical things they have learned are because of industrial attachments

*Out of 8 (1F, 7M) graduates, 75% are very satisfied and 25% are satisfied with their decision of studying vocational education (TVET).

Students

Total 17 (7F, 10M) students attended at different times of the FGD. 3 students from SSC (vocational)

Have taken TVET as an option, because:

- Interest in graphic arts, design
- To obtain a diploma qualification
- Interest in software
- Recommended by seniors and family members
- Higher education in abroad
- Getting job from general education is harder nowadays
- Desire to become good at one specific trade

Challenges / suggestions:

- Syllabus is not fully fit for purpose – they are taught courses like English, Chemistry, Business Management. They are unable to get fully competent in English in 6 months semester course. On the other hand, learning all these basic subjects allow them less time to learn their own trade/technology.
- Equipment at GAI are backdated, most of these have been replaced by digital machines at the industry
- Higher education opportunity in Bangladesh is very limited for Graphic Arts students

*Out of 6 parents, 50% are satisfied, and 50% are partially satisfied with their decision of selecting TVET as an option for their children.

Parents / Guardians

Took TVET as an option, because of:

- Limited higher education opportunities
- Opportunities for B.Sc degree holders should be widely available
- During COVID-19 pandemic auto pass was given to General Education students, there was no decision for TVET
- Limited information is available on TVET - earlier they had no idea about TVET related higher education, or job market
- Decision was made based on past (when government was encouraging to study TVET, less students, more institutes etc.), but now capacity of the institute is decreasing (low quality teachers, part-time teachers, higher ratio of students and teachers, low support, limited and old equipments, teachers are also struggling to provide quality education after taking two shifts of classes) (important)

*Out of 6 (4F, 2M) parents, 67% are very satisfied, 17% are satisfied and 17% are partially satisfied with their decision of selecting TVET as an option for their children.

Teachers	How teachers teach new things including IR 4.0 during their lessons and their reflections (challenges and suggestions) to improve the quality of the education: • Automation in automobile industry is fast, Youtube (animation and simulation videos are used) • Links of video on new tech are shared - no way to monitor if the students learn these • Teachers are so busy with double shifts and large number of students; they do not get the time and opportunity to update themselves in new technologies • Electronics - students are advised to acquire advance knowledge on relevant technologies (!) • Networking with past students/graduates to get copy of manual or video of new technology in their office (good practice) • Hospital visits (even in different city) to observe new electro-medical machines (good practice) • Limited time available to cover so many students; teachers create a group of 6-7 students with 1 student as a leader who was provided TOT • There are 7 Smart boards with internet connection in 7 labs. These are used to show videos on new technologies • One teachers do not have cutting edge knowledge on a particular subject since one teacher is taking classes on several subjects; also subject assignments are changes every year Total 15 (15M) teachers participated in the FGD.

E. Notes from the FGDs at RPI (Course: Diploma in Engineering)

STAKEHOLDER	NOTES
Employers	Total 9 (9M) employers participated in the FGD. Employers included Site-Engineer in Bangladesh Military, Director at Private Polytechnic, HR Manager at RFL (which employs hundreds of TVET graduates, and its GM and Director are from TVET), Plant Engineer, Owner and Director at private IT training centre, and freelance/outsourcing business, Manager at Biomedical engineering. Points noted by the employers on strengths and weaknesses in TVET graduates: • Good theoretical knowledge but less practical knowledge • Do not want to work much (for the same salary) • Government policy is to make them skilled with better technical knowledge, but they are not getting proper technical and practical knowledge as required by the industry • As a Diploma Engineer, a graduate should know all the relevant tools, but normally they do not know them, particularly the formal and informal names of tools • Suffer from inferiority complex than the general education students • Computer related job – doing very good and earning well as they have keen interest in computers, although they are not very skilled. They should also learn about Freelancing. • Biomedical – serving as technologist, cannot repair the machines (Note: it is not required by the role, but could have added value. Repairing the high-tech medical equipment also requires foreign training). • Freelancing – curriculum covers the basics of graphics, but web designing is not covered. Students have no idea about opportunities in freelancing • Graduates want more desk jobs than the floor duty which does not fit for Diploma Engineers. They also do not want to do night shift duties. Poor professionalism. (important) • Job starts with low salary, but it increases fast as soon as they learn the work. TVET graduates normally learns quickly. Teachers should update the mindset of the students before they come to the job market. (important, career guidance) • Students should keep in mind the difference between general education and technical education and prepare themselves as technical experts. • Career guidance is needed • Sometimes they take irrelevant job (and are low paid) because their knowledge for relevant job is weak *Out of 8 employers, 12% are very satisfied, and 88% are satisfied by recruiting TVET graduates.

Graduates

Among others, 4 graduates passed in 2018 and 6 in 2019

- Works at the Post-office – digital payment
- IT Tech - hardware
- Mobile phone assembly and repair

Reasons for studying TVET:

- Fast job
- Family reference
- Technical learning
- Learning new technology
- Wanted to be an Engineer
- Getting a job and continue higher education (socio-economic factor)
- Interest in ICT

Challenges in getting job:

- Mobile phone – participated in additional training in Dhaka on mobile phone repairing: no salary for the 15 days training period. If he had relevant training, only 3 days without pay
- Knowledge on mechanical engineering would have been helpful
- Female – dress up and other considerations rule out female to access and get job (even in IT sector) (important)
- Paid for the 6 months Industrial Attachment (RSE department); industrial attachment became a "paid training" (important)
- For a better job, they require to have further computer related training courses, often these are expensive and require travel to and stay in Dhaka
- IT courses provide very basic of different items, part-time teachers are not competent enough to teach graphics and web-design
- Computer students should know good typing, and MS office as the need of these is very wide (important)
- Emphasis should be on practical learning of technical knowledge
- Private sector employers know that Electro-medical students have no job opportunities at the public sector, so they exploit them with low salary (BDT 8 to 10k per month) (important)
- Teachers should familiarise themselves (could be via Youtube) on new technologies before the class
- Electro-medical graduates are mostly in sales and marketing job of the medical equipment
- Felt nervous and had no training on how to talk and present themselves at the job interview
- Old equipment

- The Digital Board of the institute was dysfunctional, and it was not repaired; students were not given a chance to work on it and try to repair
- Up to month 6, salary was only BDT 3,000, then started to increase. Now it is 18,000 after 3 years of job
- Digital vs. manual technology challenges
- No knowledge of CNC machine which is very much a job market demand; learnt only manual Lathe machine
- Mechanical students should also learn computer applications, particularly MS Excel, which they need to perform their job (important)
- RPI was the best polytechnic in BGD in 2020!
- Emphasis on theories and pass in the exams. Private training is required to get a good job.
- Industrial tour helps (good practice, but not practiced)

*Out of 12 (1F, 11M) graduates, 42% are very satisfied, 33% satisfied, 17% poor satisfied and 8% are not satisfied with their decision of studying vocational education (TVET).

Students

Total 11 (6F, 5M) students participated in the FGD.

Have taken TVET as an option, because of:

- Gaining practical knowledge
- Getting a job faster, helping the family
- Higher education (B.Sc. and M.Sc.) – could be challenging in general education stream
- Becoming an engineer

Challenges/suggestions

- Syllabus covers basics of 3 programming languages (Python, C++, Java), instead of, learning one would have made them specialised in one than knowing the basics of 3 and unable to perform one.
- A group work where teacher could guide easily
- Teachers' competencies are lacking, so they are unable to bring out the best of the students
- Skills projects come with different interventions (short courses, paid training, sure job) and create unequal practices among students within the same institutes (important)
- Varied degree of students' quality (weak students coming from very poor socio-economic condition, or sometimes from rich family who has no interest in education) often do not understand what teachers are saying and they lost interest, impact negatively on the learning environment

	• Stipend should be more accessible (monitoring should be there) • Monitoring of quality education delivery should be strengthened *Out of 9 students, 33% are satisfied, 56% partially satisfied and 11% are poor satisfied with their decision of studying vocational education (TVET).
Parents / Guardians	Took TVET as an option, because of: • Their child decided • Chances of getting job faster, general education graduates get job slowly or do not get a job Challenges and weaknesses: • Limited higher education opportunities • B.Sc. opportunity should be widely available • During corona – auto pass was given to General Education students, there was no decision for TVET • Limited information available on TVET - earlier they had no idea about TVET related higher education, or job market • Decision was made based on past (when government was encouraging to study TVET, less students, more institutes etc.), but now capacity of the institute is decreasing (low quality teachers, part-time teachers, higher ratio of students and teachers, low support, limited and old equipment, teachers are also struggling to provide quality education after taking two shifts of classes) (important) *Out of 6 (4F, 2M) parents, 67% are very satisfied, 17% are satisfied and 17% are partially satisfied with their decision of selecting TVET as an option for their children.

Teachers	How teachers teach new things including IR 4.0 during their lessons and their reflections (challenges and suggestions) to improve the quality of the education: • Automation in automobile industry is fast; Youtube (animation and simulation videos are used) • Links of video on new tech. are shared. No way to monitor if the students learn these. • Teachers are so busy with double shifts and large number of students; they do not get the time and opportunity to update themselves in new technologies • Electronics - students are advised to get advance knowledge on relevant technologies (!)
	• Networking with past students/graduates to get copy of manual or video of new technology in their office (good practice) • Hospital visit (even in different city) to observe new Electro medical machines (good practice) • Limited time available to cover so many students; teachers create a group of 6-7 students with 1 student as a leader. S/he was provided TOT • There are 7 Smart boards with internet connection in 7 labs. These are used to show videos on new technologies • 1 teacher is taking different subjects and several subjects, also subject assignment changes every year. So, teachers do not have cutting edge knowledge on one subject. Total 15 (15M) teachers participated in the FGD.

F. Notes from the FGDs at CBPI (Course: Diploma in Engineering)

STAKEHOLDER	NOTES
Employers	Total 8 employers participated in the FGD. Participants included: • Acting General Manager of hotel • Production Manager of Bonoful • ICT manager, • Refrigeration and Air Conditioning (RAC) Engineer of a large hotel chain (a graduate of CPI) • Executive Engineer of Power Development Board • Regional Skills person of ILO Points noted by the employers: • Well trained, require only little polishing, while general education graduates require more training • Do not know sequence of service (hotel industry) • Skilled graduates with knowledge of complete hotel service (A to Z) are lacking (important) • TVET CSE students know only basic of MIS and often cannot cope up with tailor-made software used at different hotels • Computer related problem-solving skill is poor • Communication (speaking and writing) skill is poor • Computer Engineer (on paper) but did not have a computer and could only practice computer which was limitedly available at the lab • 4 years diploma should make some tangible differences in quality. If the same institute can teach/train a student in 4 months (short courses under ADB SEIP) and make him or her ready for a job, why they learn a little over 4 years! (important) • Industry institute partnership *Out of 7 employers, 43% are very satisfied, 43% satisfied and 14% are partially satisfied by recruiting TVET graduates.

Graduates

Passing year of the graduates 2018 & 2019

Reasons for studying TVET:

- Parent's decision (family reference e.g., aunt, uncle were TVET graduates and are doing good)
- Missed the chance to study at a medical college, so picked up engineering study
- Engineering is a passion
- Self-choice
- TVET was unknown earlier, went to general education, found it challenging, and then moved to TVET

Challenges faced:

- Technology is different and old (e.g., circuits type) – faced humiliation during training period and job
- Salary is very low, does not allow to attend further courses to improve the knowledge
- Equipments are old
- All departments are not performing equally because of teachers' competencies and lab facility
- After completing Diploma Engineering, jobs are offered as Technician not as Engineer
- Some general education graduates get the same job with only 4 months short training courses from TVET institutes, so they do not get any privilege for completing 4 years diploma (important)
- Industry attachments are not always suitable for the girls and so they face several challenges including transport, washroom facility and social factors (important)
- The qualifications of HSC-voc and Diploma degree are perceived same by several employers
- New technologies – teachers cannot answer, he also learned from Youtube same as the students!
- Students who opted to take relevant job, often do not get the job
- Self-employment – problems with access to finance, so cannot do much (important)
- More theories, and less practical with poor lab facilities
- Civil Engineer – very limited AutoCAD, only paper-based drawing does not help in job sector (who learns the AutoCAD at private training centre does well in job sector)
- Care Bangladesh VET – 50% technical and 50% non-technical courses
- Completed a Diploma but currently managing 10 Masters degree holders in his / her team (impact story)
- Salary of a graduate is BDT55,000 a month (increased in just over 2 years period) (impact story)

- Once, Bangladesh Bank job recruitment set Diploma in Computer Engineering as a requirement. This needs to be practiced in government service and other relevant job recruitments (good practice)
- Female engineer gets priorities in job (good practice)
- RAC– BRF AutoCAD is not in syllabus, but it requires to get a job
- Teachers are not asked to provide what is lacking in the syllabus (some of them are involved in the preparation or revision of the syllabus, but they do not get sufficient time to provide inputs!)
- Teachers and principals are friendly and accessible (good practice)
- Successful graduates are happy to be involved in providing career guidance (important)

*Out of 20 (6F, 14M) graduates, 45% are very satisfied, 20% satisfied, 25% partially satisfied and 10% are poor satisfied with their decision of studying vocational education (TVET).

Students

Have taken TVET as an option, because of:

- Interest in Graphic Arts, design
- To obtain a diploma qualification
- Interest in software
- Recommended by senior brothers, family members
- Higher education in abroad
- Getting job from general education is harder now a days
- Desire to become good at one specific trade

Challenges/suggestions:

- Syllabus is not fully fit for purpose – they are taught courses like English, Chemistry, Business Management. They are unable to get fully competent in English in 6 months semester course, on the other hand, learning all these basic subjects allow them less time to learn their own trade/technology.
- Equipment at GAI are backdated, most of these have been replaced by digital machines at the industry
- Higher education opportunity in Bangladesh is very limited for Graphic Arts students
- Reasons for regret/challenges/suggestions
- No hostel, and no bus for students to travel to the institute. Local transport cost is high. Even a private college got government bus, but CPI did not get one! (important)
- Socio-economic condition does not support students from outside Cox's Bazar to cover the living expenses here staying in rented flat
- Limited number of practical class

- A TVET Diploma is not recognised by the employers as valuable degree. This diploma (4 years) is treated like HSC of general education (important)
- Several technologies (in the name of emerging technologies) were created without much studying.
- No government jobs for RAC (important)
- Insufficient number of teachers
- Teachers are taking more classes than they should be taking, so quality is suffering during the classes later in the day
- Teachers are not capable of operating all equipment in the lab
- Insufficient equipment
- Less opportunity for higher education
- Syllabus not followed, teaching is targeted to help the students passing the exams only, real learning is missing
- Till 4th semester, only 8 practical classes were taken
- Limited number of labs, students have to share on practical, often they can only watch from the distant at the practical class.
- Low salaried jobs
- Industry tour should be in each semester and workshops visits should be increased (important)
- Lab materials are low quality
- 2nd shift has no regular classes
- Old equipment
- Teacher left; vacant position was not filled in
- Tourism and Hospitality Management – (8th semester ongoing) lacking subject teachers, trade related books

*Out of 22 (5F, 17M) graduates, 55% are very satisfied, 23% satisfied, 9% partially satisfied and 14% are not satisfied with their decision of studying vocational education (TVET).

Parents / Guardians

Took TVET as an option, because of:

- Admitted in general education and then moved to TVET. Technical knowledge provides better job opportunities
- Live in nearby place
- There are high number of jobless people from general education
- 3 brothers studied TVET and all have jobs

*Out of the 7 parents, 100% are very satisfied with their decision of selecting TVET as an option for their children.

Teachers

How teachers teach new things including IR 4.0 during their lessons and their reflections (challenges and suggestions) to improve the quality of the education:

- 8086 Processor does not exist anymore, but it is the foundation knowledge that students must learn!
- Use online / Youtube to show new technologies and explain the differences with the old one mentioned in the syllabus
- Food technology – 2 labs on food processing (but teachers are not fully trained to use the new technologies such as Astarte Pro, and Hit Aps!)
- WB STEP supported with the procurement of latest equipment; GOB also provided BDT 60 lac for 3 new labs (will be accessible from next semester)
- Trainer laptops and sufficient new equipment have been provided by DTE
- Double shift use of computers and laptops on an everyday basis kills the equipment fast.
- 7 computers for Civil Engineering department, not enough to train AutoCAD;
- AutoCAD is only in one semester. Students should learn more about such useful software for the job market.
- Civil theory is not in the syllabus
- Teacher recruitment does not emphasise on industry experience which seemed to be very effective (important)
- Subjective training has recently started, it is very useful (good practice)
- Teachers received subjective training, but the equipment (which they have learnt to operate) is not at the institute/CPI.
- In the old - days, lab instructors knew everything, this is not the case now. They lack knowledge and competencies
- Equipment specifications must be provided by competent persons (often they are prepared by procurement persons) (important)
- Students do not get the chance to do industry attachment in public sector / SOEs, if the government does not provide access to the TVET students, the private sector does not respect the request for industry attachment by the institute (important)
- There are now several private training centres that provide only industry attachment, and they lobby to get students. Industry affiliated private sector training centres made it profit making venture, since employer/industry get money for industry attachment service to students! Industry attachment should be at the industry and not in the training centres. (important)
- BQF/NTVQF needs to be implemented for overseas employment, this will increase demand of TVET and will increase country's reputation in exporting skilled manpower
- Syllabus review in only 3 days – not sufficient enough (feedback from teachers participated in syllabus review several times)

- Syllabus review should be done based on graduates and employers' feedback (should be done in every five years) (important)
- In 2006, CadCam was included in syllabus based on practice in Canada, but there is no equipment in the lab or in many industries
- Useful items like STEP Pro, E-tabs, load calculation, seismic analysis should be in the syllabus
- Career guidance is provided only individually not officially. It should be included in the syllabus.
- Industry terminologies for equipment and tools should be shared with potential job seekers/ future graduates
- Science students can cope up better, but madrasah or students from arts groups suffer most with Physics, Chemistry, Mathematics
- A lab without electricity for the last one year – how to use?
- BCS job – no representation from TVET!

Total 11 teachers participated in the FGD.

*F=Female, M=Male

ANNEX – 5: STUDY TEAM

Organization	Name	Designation
DTE	Engr. Md. Jahangir Alam	Director (Planning and Development)
	Mr. Biplab Bikash Pal Choudhury	In-Charge (Research and Knowledge Management Cell)
	Ms. Madina Akter	Designated Officer (Research and Knowledge Management Cell)
BTEB	Mr. Raju Mohammad Shahidul Islam	Deputy Director (Research)
Manikganj Technical School and College	Engr. Md. Hafizur Rahman	Principal/Coordinator
	Md. Maksudur Rahman	Instructor (Computer)/ Data Administrator
	Md. Monowar Hossain	Instructor (Welding)
	Md. Enamul Hassan Kajol	Jr. Instructor (Electrical)
	Md. Mojibar Rahman	Jr. Instructor (Computer)
	Md. Abu Musa	Jr. Instructor (RAC)
Barishal Technical School and College	Engr. Md. Nur Uddin Ahmed	Principal/Coordinator
	Engr. Md Arifur Rahman	Instructor (Head of the Department (Machinist)
	Md. Zahangir Hossain	Instructor (Civil Drafting)
	Md. Tanvir Ahmed	Jr. Instructor (RAC)
	Md. Harun or Rashid	Jr. Instructor (Electrical)
	Md. Maksudur Rahman	Jr. Instructor (Computer)
	Md. Mahedul Islam	Jr. Instructor (Computer)/ Data administrator

Cox's Bazar Polytechnic Institute	Engr. Pradipta Khisa	Principal (In-Charge)/ Coordinator
	Mr. Ariful Karim	Instructor (Food)
	Mr. Kazi Sarower	Instructor (Tourism and Hospitality Management)/ Data Administrator
	Mr. Kazi Mohd. Fakhrul Azam	Jr. Instructor (RAC)
	Mr. Shoriful Islam (Shaon)	Jr. Instructor (Computer)
	Mr. A.S.M Mayen Uddin Khan	Instructor (Civil)
Graphic Arts Institute Dhaka	Mr. Niher Ronjon Das	Principal (In-Charge)/Coordinator
	Md. Ali Hossain	Instructor (Graphic Design)
	Mr. Pankaj Kumar Sutradhar	Jr. Instructor (Printing)
	Mohd. Saifur Rahman	Data Administrator
Rangpur Polytechnic Institute	Engr. Md. Khaled Hossain	Principal / Coordinator
	Mr. Fuad Md. Tauhidul Ashraf	Instructor (Computer)/ Data Administrator
	Mr. Md. Ruhul Amin	Jr. Instructor (Computer)
	Mr. Md. Siddiqur Rahman	Jr. Instructor (Electro- Medical)
	Mr. Md. Zulfiqur Rahman	Jr. Instructor (Non-Tech)
EU HCDP- 21 TA	Mr James Lee	Team Leader, HCDP-21 TA
	Dr Hari Pada Das	Key Expert (TVET), HCDP-21 TA
	Mr Nahid Hasan Sumon	Non-Key Expert (TVET Research), HCDP-21 TA

ANNEX - 6:
LIST OF GRADUATES

Access to the Graduate Database will be granted by the respective institutes based on assessment of the request. Should the industry need to hire staff faster without going through the advertisement procedures, the institute will be able to facilitate that using the database.

Contact persons at the institutes:

BTSC Principal

Barishal Technical School and College

North Alekanda, Barishal – 8200

Phone: +880431-63702

Email: btsc95@yahoo.com

Website: www.btsc.edu.bd

MTSC Principal

Manikganj Technical School & College (MTSC)

20, Shaheed Sarani, Manikganj Sadar, Manikganj, Bangladesh.

Call: +880 27710357 | Fax: +880 27710357

Website: www.mtsc.gov.bd

GAI Principal

Graphic Art Institute

Shatmasjid Road, Mohammadpur, Dhaka – 1207

Phone: +8802-58151777

Email: principal.graphic@gmail.com

Website: www.gai.gov.bd

RPI Principal

Rangpur Polytechnic Institute

Shalbon Mistry Para Road, Rangpur 5400, Bangladesh

Phone: +880 521-63513

Email: rpi_16058@yahoo.com

Website: www.rpir.gov.bd

CBPI Principal (In-charge)

Cox's Bazar Polytechnic Institute

Link Road Zhilanja, Cox's Bazar.

Phone: +88034163388

Email: Coxpoly@gmail.com

Website: www.coxpoly.gov.bd

ANNEX - 7: LIST OF EMPLOYERS OF THE EMPLOYED GRADUATES

Contact details of the employers or access to the Employer Database at the institutes are provided by the respective institute to the graduates and existing students upon request.

A. Employers of surveyed graduates of BTSC

Sl. NO.	Employer	Location
1.	The Daily Prothom Sokal News Paper	Peyara Road, Barishal
2.	Gazi Construction	Amtola, Barishal
3.	Bangladesh Water Development Board	VIP Colony Barishal
4.	Opsonin Pharma ltd	Rupatoli, Barishal
5.	MEP Ltd	Hatkhola, Barishal
6.	Basundhra Security Services	BM Collage Rode
7.	Bangladesh Army	Ramu Cantonment, Cox's Bazar
8.	Securex Security Ltd	Bangla Bazar Barishal
9.	Bangladesh Army	Sarda Police Training Centre, Rajshahi
10.	Security Guard of the House	South Jatrabari, Dhaka
11.	Bay Footwear Ltd	Kaliakoir, Gazipur
12.	Food Panda	Savar
13.	Squire Consumer Products	Barishal Sales Depo
14.	Banglalink Company	Sador Road, Barishal
15.	SR Refrigeration	Fakir Bari Road, Barishal
16.	Gamin Fan	Uttora 11 No sector, Dhaka
17.	Rafsan Dri Ltd	Dhaka
18.	Nit Consan Group	Narayanganj
19.	Moksed Store	Sador Road, Barishal

Sl. NO.	Employer	Location
20.	Mayer Dhowa Furniture	Mirpur Dhaka
21.	Arkan	Saudi Arabia
22.	New Denim	Tongi BSCIC
23.	Akij Poly Fiber	Narayanganj
24.	Matimahal Cloth Store	Padmavati Barisal
25.	Garments	Gulsan-2, Seora Bazar, Dhaka
26.	AUP Hup	Middle Badda Dhaka
27.	Sarkar Transport Agency	Mawna, Gazipur

B. Employers of surveyed graduates of MTSC

Sl. No.	Employer	Location
1	Beximco Industry Limited	Chokroborto, Gazipur
2	Bashundhara GI Pipe	Golora, Manikganj
3	The Acme Laboratories	Dhamrai, Dhaka
4	Akij Textile Mills Ltd	Golora, Manikganj
5	Metlife American life insurance Co	Manikganj
6	Walton	Sylhet
7	Bangladesh Army	23rd battalion, Chattogram Cantonment.
8	Fair Knitting Ltd.	Arpara, Saver, Dhaka.
9	Q C L A M	Savar, Dhaka.
10	Pioneer Denim Ltd.	Madob Pur, Hobigonj, Sylhet.
11	Momtaj Herbal Ltd.	Vowal, Mirzapur, Tangail.
12	Fire Service	Daudkandi, Comilla
13	Grafics Textile Ltd.	Dhamrai, Dhaka.
14	3rd Terminal Construction Company	Airport, Dhaka.

Sl. No.	Employer	Location
15	Bangladesh Army	Chittagong Cantonment.
16	Tarashima Apparels Ltd.	Golora, Manikganj.
17	Walton	Chandra, Gazipur.
18	Fire Service.	Sylhet
19	SKF Pharmaceuticals	Tangail, Dhaka
20	Bangladesh Army	Chattogram
21	Palli Biddut Samity (REB)	Belabo, Norshindi
22	Bangladesh Police force	Khulna Metropolitan Police line
23	Bangladesh Police force	Gazipur police Line, Gazipur
24	Rahimafrooz Gastec Ltd.	West Sewtar, Manikganj

C. Employers of surveyed graduates of GAI

SN	Employer	Location
1	Ad Interactive	Dhanmondi, Dhaka
2	Akij Printing Packages Ltd.	Tejgaon, Dhaka
3	Al-Madina Pharmaceuticals Limited	Mohakhali, Dhaka-
4	Annex Communications Ltd.	Dhanmondi R/A, Dhaka
5	A&Z Packaging Ltd	Majukhan, Gazipur
6	Anny Firm	Norail
7	Arbab Poly Pack Ltd.	Siddirgonj, Narayangonj
8	Ardent Advertising	Purana Paltan Dhaka
9	Artot Matrimony	Rampura, Dhaka
10	Asiatic Laboratories Ltd.	Shantinagar, Dhaka
11	Bag Pack Ltd.	Dhanmondi, Dhaka.
12	Bangladesh Shilpakala Academy	Segun Bagicha, Dhaka
13	Beacon Pharmaceuticals	Motijheel, Dhaka.

SN	Employer	Location
14	Bengal Flexible Printing & Packaging	Gulshan, Dhaka
15	Best Printing Ltd.	Narayangonj
16	Bhumi Properties Ltd.	Mohakhali, Dhaka
17	Biman Bangladesh Airlines Press	Farmgate, Dhaka 1215
18	Biplob Digital Printing	Green Rd, Dhaka
19	Bithi Bostraloy	Gaibandha
20	Boi Ghor	Dhaka
21	Bornomala	Nilkhet, Dhaka
22	Bproperty Real Estate	Khilkhet, Dhaka
23	BRAC (Hospitality)	Mohakhali, Dhaka
24	BRAC Centre	Mohakhali, Dhaka-
25	Brick Manufacturing	Tongibari, Munshiganj
26	Checkpoint Systems Bangladesh Ltd.	Siddirganj, Narayanganj
27	Child & Old Age Care	Mirpur, Dhaka-1216
28	Cimex Engravour Bangladesh Ltd.	Stadium Market, Dhaka
29	Cliping Edge	Mohammadpur, Dhaka
30	Creative Media Limited	Dhanmondi, Dhaka
31	Cobwebs Design	Bangla motor, Dhaka
32	Cut Out Wiz	Panthapath, Dhaka
33	IBD Communication	Uttara, Dhaka
34	99 Explainers	Nikunja-2, Dhaka
35	Daraz Bangladesh Ltd.	Dhaka
36	Data Soft Ltd.	Shyamoli, Dhaka-1207
37	Dekko Accessories Ltd.	Savar, Dhaka
38	Department of Family Planning	Azimpur, Press unit
39	Design & Printing Solution	Mohammadpur, Dhaka
40	Dhaka University	Dhaka University.

SN	Employer	Location
41	Digital Agency Ltd.	Uttara, Dhaka
42	Digital Graphic Studio	Ramna, Dhaka
43	Digital Printing Solutions	Keraniganj Dhaka
44	Digital Revolution Technologies BD Ltd.	Uttara, Dhaka
45	e-Scan Antivirus	Agargaon, Dhaka 1207
46	Edorpon	Mirpur DOHS, Dhaka
47	Envato	Melbourne, Australia
48	Epark IT Ltd.	Mirpur, Dhaka
49	Ethical Drugs Ltd.	Sobhanbag, Dhaka
50	Exclusive Can Ltd.	Tongi, Gazipur
51	Fair Group	Banani, Dhaka
52	Faith Industries Ltd.	Tejgaon, Dhaka.
53	Faraji Electric	Gendaria, Dhaka
54	Farm Asia Ltd.	Dhaka
55	Fiverr	Israel
56	Foysal Confectionery	Sonagazi, Feni
57	Freepik	Málaga, southern Spain
58	Gadget & Gear	Dhaka
59	Genuine Tech & Research Ltd.	Uttara, Dhaka
60	Get Smart Ltd.	Uttara, Dhaka
61	Getweb Inc. Ltd.	Shyamoli, Dhaka-1207
62	GK Printing House	Amtali, Barguna
63	Global Brand Pvt. Ltd.	Dhanmondi, Dhaka
64	GMS Trims Ltd.	Kashimpur, Gazipur
65	Goodman Pharmaceuticals	Motijheel C/A, Dhaka
66	Graphic Arts Institute	Mohammadpur, Dhaka
67	Graphic Associates International Ltd.	Mohakhali, Dhaka

SN	Employer	Location
68	Great Wall Ceramics	Sreepur, Gazipur
69	Green Dot Ltd.	Mohakhali, Dhaka
70	Gstar Media	Noriya, Sariatpur
71	Hazi Store	Gazipur Sadar, Gazipur
72	Incepta Pharmaceuticals	Tejgaon I/A, Dhaka
73	Insighters	Dhanmondi, Dhaka
74	Institute of Child and Mother Health	Jatrabari, Dhaka
75	Intelligent Label Solutions Ltd.	Uttara, Dhaka
76	Jenson & Nicholson Bangladesh Ltd.	Nasirabad I/A, Chittagonj
77	JMI Printing & Packaging Ltd.	Ramna, Dhaka
78	Julphar Bangladesh Ltd.	Mohalhali, Dhaka
79	Kalyar Packaging Limited	Gazipur Sadar, Gazipur
80	Labaid Pharmaceuticals Ltd.	Gulshan-1, Dhaka
81	Lecture Publications Ltd.	Banglabazar, Dhaka
82	LEDP Project	Nogor, Dhaka
83	Libra Pharmaceutical Ltd.	Rupnagar, Dhaka
84	Liz Fashion Ltd.	Kaliakair, Gazipur
85	M/s Mostakim Traders	Palashbari, Gaibandha
86	Macomm Group	Dhanmondi, Dhaka
87	Manohar Filaments (BD) Ltd.	Nandun, Gazipur
88	Maruf Creative IT	Mohammadpur, Dhaka
89	MATRiX Business Development Ltd.	Shyamoli, Dhaka
90	Max Store Platform	Online Platform
91	Maxim Label & Packaging BD Pvt. Ltd.	Ashulia, Dhaka
92	Md Akbar Gas Ltd.	Saudiarabia
93	Ministry of Planning	Banglanagor, Dhaka
94	Monirul Traders	Mohammadpur, Dhaka

SN	Employer	Location
95	Multiply Digital Advertising	Rampura, Dhaka
96	Myone Energy Limited	Gulshan-2, Dhaka
97	Nation Wide Internet	Khilgaon, Dhaka
98	NEXT Accessories	Rupganj, Narayanganj-
99	NIPRO JMI Pharma Ltd.	Eskaton, Dhaka
100	NTV Europe	London E18 1HB,
101	Oboys Design	USA
102	Offshore Digital	Dhanmondi, Dhaka-1207
103	Online Printing Solution	Nikunjo, Dhaka
104	Opekgfx	Online Platform
105	Orion Pharma Limited	Dhaka
106	Paper Rhyme Advertising Ltd.	Banani, Dhaka
107	Paragon Ceramic	Baridhara, Dhaka
108	Parcel BD	Mirpur, Dhaka
109	Paxar Bangladesh Ltd.	Savar, Dhaka
110	Polli Biddut Somity	Langol kot, Cumilla
111	Premiaflex Plastics Limited	Sreepur, Gazipur
112	Prokirti Media & Communication	Purana Palton, Dhaka
113	Punna Patra Traders	Uttara, Dhaka
114	Quasem Industries Limited	Baridhara, Dhaka
115	R Pac Bangladesh Packaging Company Ltd.	AEPZ, Narayanganj
116	Rahman Electronics	Mirpur, Dhaka
117	Reproductive Health Services	Mirpur, Dhaka
118	Robin Printing & Packages Ltd.	Purana Paltan, Dhaka
119	Rono Pixels	CA, USA
120	Rupayan Shelford	Mirpur Rd, Dhaka
121	S.R Papers Industries Ltd.	Tongi, Gazipur

SN	Employer	Location
122	Sahadat Traders	Metropolition Police, Dhaka
123	Shamutsuk Printers Ltd.	Mohammadpur, Dhaka
124	Sharetrip	Banani, Dhaka
125	Shikdar Paultry Firm	Mirzapur, Tangail
126	Shopnil Fashion House	Fulbaria, Mymensingh
127	Shopno IT Ltd.	Dhanmondi-32, Dhaka
128	Siddique Stationary	Bokshiganj, Jamalpur
129	SML Packaging Solution BD Ltd.	Narayangonj-1431
130	Solve Creative IT	Gulshan, Dhaka
131	Sotota Printers Ltd.	Muradnagar, Cumilla
132	Swiss Tex Group	Savar, Dhaka
133	Tag Packaging Ltd.	Singair, Manikgonj
134	Taska Accessories	Amman, Jordan
135	Tech Station	Banani C/A, Dhaka
136	Techno Drugs Ltd.	Dhaka 1000
137	Telecom House	Keraniganj, Dhaka
138	The Study Town	Mohammadpur, Dhaka
139	Timtom Paradise	Sultangonj, Dhaka
140	TMSS Technical Institute	Noongola, Bogra.
141	Torrecid Bangladesh Ltd.	Dhaka
142	Travel Kites	Dhaka
143	Uniglory Paper & Packaging ltd.	Mirzapur, Tangail
144	Unik Lifestyle	Mirpur-11, Dhaka
145	UniMed UniHealth Pharmaceuticals Ltd	Dhaka-1207
146	Unique Designers Ltd.	Gazipur
147	US Bangla Airlines	Banani, Dhaka
148	Uttara Flour Mills Pvt. Ltd.	Kushtia

SN	Employer	Location
149	We are X	Mohakhali, Dhaka
150	Wimax Mobile Company	Banani, Dhaka-1213
151	Windmill Advertising Limited	Banani, Dhaka
152	X Ceramic Group	Badda, Dhaka
153	XVECT	Dhaka-1207
154	Z Fashion Ltd.	Tongi, Gazipur.
155	Zist Corner/AG Ceramics Limited.	Mohakhali, Dhaka
156	Zoom Bangladesh	Ramna, Dhaka-1000.

D. Employers of surveyed graduates of RPI

SL	Name of Organization	Location
01	ABC Corporation	Dhaka
02	ABC Corporation	Chittagong
03	Ad-din Hospital	Dhaka
04	Advanced Technology Solution	Dhaka
05	AkIJ Food and Beverage	Dhamrai, Dhaka
06	Akij Food and Beverage Ltd.	Borobariya, Gazipur
07	Akij Food and Beverage Ltd.	Dhamrai
08	Akij Group	Dhamrai, Dhaka
09	Akij Plastic	Mawna, Gazipur
10	Alam Vander	Satibari, Rangpur
11	Analytical Bangladesh, Dhaka	Dhaka
12	Ansar Battalion	CMH hospital, Dhaka
13	Asif Engineering & Equipment	Badda, Dhaka
14	ATN RK Software Ltd.	Dhaka
15	Bajaj Ttras Asia Industry	Uttara motors, Dhaka

SL	Name of Organization	Location
16	Bengal group (Power utility BD Ltd.)	Gulshan-2, Dhaka
17	Better Life Hospital	Dhaka
18	Bindo Nagar High School	Nawabgonj, Dinajpur
19	Biotech International	Dhaka
20	Biotech, Khulna	Khulna
21	Blue Net Communication Ltd.	Dhaka
22	China Petroleum Pipeline Engineering Com.	Dhaka
23	Commilla Cantonment Board	Commilla
24	Develop IT Ltd.	Farmgate, Dhaka
25	Dhaka International University	Dhaka
26	Dhaka Tech.	Dhaka
27	Dr. Dil Afroza Memorial Hospital	Saidpur
28	Ekarchali High School	Taragonj, Rangpur
29	Every Dennison (Paxar BD LTD.)	EPZ- Dhaka
30	Exebio, Dhaka	Dhaka
31	Expert Zone	Mirpur, Dhaka
32	Fakir Group (Garments)	Narayangonj
33	Frind's Graphics Solution	Rangpur
34	Global Online Limited	Kachpur, Narayangonj
35	Great Wall Ceramic	Gazipur
36	Green Soft Bd.	Mirpur, Dhaka
37	Gudimary Potibondi Otestic School	Dhaka
38	Haven- Bangladesh	Nilphamari
39	Hospitech	Farmget , Dhaka.
40	Impex Trade. International	Dhaka
41	Initiative Global	Dhaka
42	Innovative IT	Rangpur

SL	Name of Organization	Location
43	Inspire IT	Rangpur
44	Intraco Group	Mymensingh
45	Lab Reagent	Dhaka
46	Life Tech	Adabor, Dhaka
47	Life-stoke dairy Development Project	Gaibandha
48	Mediland Trade International	Polton, Dhaka
49	Medionics	Dhaka
50	Meditrust	Dhaka
51	Meigo	Keranigonj
52	Multazim Group	Valuka, Mymensingh
53	MZ Textile	Narayangonj
54	Nafi Nano Science Ltd.	Dhaka
55	Nannu Spinning	Rupgonj, Narayangonj
56	Nasir Glass	Mirjapur, Tangail
57	Novo Air	Banani, Dhaka
58	Noman Group of Industries	Gazipur
59	Padma Bridge Rail Link Project, CREC com.	Dhaka
60	PRAN - RFL	Rangpur
61	PRAN - RFL	Kaligonj, Gazipur
62	Rangpur Polytechnic Ins.	Rangpur
63	Rephco Pharma Ltd.	Gazipur
64	RFL Group	Rangpur
65	RFL Plastic	Narsingdi
66	RFL Plastic	Gazipur
67	RMS Surgical	Rangpur
68	Royal Footwear Ltd.	Gazipur
69	Runner Group	Dhaka

SL	Name of Organization	Location
70	S.S Mart Bd. com	Dhaka
71	SA Engineering (China Meta-Logical Group Company)	WASA, Dhaka
72	Soft Dreams International	Chittagong
73	Sonic Bangladesh Ltd.	Uttara EPZ
74	Sufia Cotton Mill	Gazipur
75	Super Star Electrical Accessories Ltd.	Naraongonj
76	Testing Laboratory	Dhaka
77	The Aristocrat Agro Ltd.	Taragonj, Rangpur
78	Transba medical, Dhaka	Dhaka
79	Update Diagnostic	Rangpur
80	Uttara Motors	Jirani, Gazipur
81	Walton	Chandpur
82	Walton	Norshindi
83	Walton	Gazipur
84	Won Cloth Business	Gongachara, Rangpur

E. Employers of surveyed graduates of CBPI

Sl.	Employers
1.	Abul Khair Co.
2.	ACF
3.	Action Aid Bangladesh
4.	Airport Armed Police Battalion
5.	Al Arafah Islami Bank
6.	Alian Foods Products Ltd.
7.	BADC

Sl.	Employers
8.	Bangla Kitchen
9.	Bangladesh Red Crescent Society
10.	Bonoful & Co.
11.	BITAC
12.	BRAC
13.	Building Design Engineers
14.	Building Planning Engineers
15.	Bureau Veritas
16.	Care Bangladesh
17.	Ceylon Biscuits (BD) Ltd.
18.	Clean Edge Technology Ltd.
19.	CNRS
20.	Dhaka Ahsania Mission
21.	Dream Corporation
22.	E-Cube Design
23.	EMCS
24.	FH Association
25.	Gazipur Consultancy
26.	Haider Construction
27.	Home Technology
28.	Home Design
29.	IOM
30.	Ispahani Foods Ltd.
31.	Jagorani Chakra Foundation
32.	Jamalpur Polli Biddut Shomity
33.	JCF
34.	Kakon Refrigeration Ltd.
35.	Kamil Madrasha

Sl.	Employers
36.	Khulna Agriculture University
37.	Masafi Bread and Biscuit Ltd.
38.	Ministry of Woman & Children Affairs
39.	MRF Agro Products Ltd.
40.	M/S Jahura
41.	Navana Construction Ltd.
42.	Nari Moitri
43.	Noor Group Industries
44.	Omera LPG Ltd.
45.	OPPO Mobile Ltd.
46.	Oxfam
47.	Peoria Food Products Ltd.
48.	PM Adarsha Dakhil Madrasah
49.	Reedisha Food & Beverage Ltd.
50.	Renata Ltd.
51.	Richi Food Products
52.	Robi Axiata Limited
53.	Save the Children
54.	Sea Pearl Resort & Spa
55.	Shamsher Knitwear Fashion
56.	Shopner Bari Design
57.	Six Star Construction
58.	Tarek Consultancy
59.	Thai Food Products
60.	Transcom Beverage Ltd.
61.	Triangle Engineering Limited
62.	Tritecs Building Service Ltd.

Sl.	Employers
63.	Umme Salma Dakhil Madrasah
64.	UMN Project Learning Centre
65.	Unimed Unihealth Pharmaceuticals Ltd.
66.	Wahid Construction
67.	Well Foods & Beverage Company Ltd.
68.	WFP (World Food Programme)
69.	World Concern Medair
70.	YPSA
71.	3 no. Mazida Union Parishad

ANNEX - 8: COURSE-WISE LIST OF OCCUPATIONS OF THE EMPLOYED GRADUATES

A. Designation of employed SSC (voc) graduates

S/L	Designation/Job title	S/L	Designation/Job title
01	Customer Service Technician	10	Site Man
02	Deliveryman	11	Office Staff
03	Driver	12	Software Technician
04	Electrician	13	Worker
05	Helper	14	Quality Control Technician
06	Inspector	15	Support Staff
07	Machine Man	16	Sewing Machine Operator
08	Salesman	17	Soldier
09	Technician	18	Pump Operator

B. Designation of employed HSC (voc) graduates

S/L	Designation/Job title	S/L	Designation/Job title
01	Junior Officer	17	Core Winder
02	Army	18	Operator
03	Sizing	19	Technician
04	Soldier	20	Finance Assistant
05	Constable	21	Welder
06	Fireman	22	Electrical Engineer
07	Computer Operator	23	Electrician

S/L	Designation/Job title	S/L	Designation/Job title
08	Electrician	24	Army
09	Cleaner	25	General Quality
10	Operator	26	Supervisor
11	Soldier	27	Lineman
12	Temporary Operator	28	Senior Waiter
13	Salesman	29	Forman
14	Constable	30	Feeder
15	Mechanical Helper	31	Fireman
16	Helper	32	Cashier

C. Designation of employed Diploma Engineering graduates

S/L	Designation/Job title	S/L	Designation/Job title
01	Account Officer	30	Sub-Assistant Engineer
02	Marketing Officer	31	Junior Engineer
03	Delivery In Charge	32	Shift Engineer
04	Photographer	33	Service Engineer
05	IT Officer	34	Senior Executive (Engineer)
06	Asst. Engineer	35	Quality Control Officer (Food Processing)
07	Operator	36	Junior Fitter
08	Jr. Operator	37	Technician
09	Computer Operator	38	Technical Operator
10	QC Officer	39	IT Executive
11	Teacher	40	Assistant Operator
12	Helper	41	Manager
13	Trainee	42	MIS officer

S/L	Designation/Job title	S/L	Designation/Job title
14	Marketing Executive	43	Assistant
15	Officer	44	Officer recovery
16	Manager	45	Jr. Executive Trainee
17	Creative Art Director	46	Sales representative
18	Floor In charge	47	Sales Engineer
19	Supervisors	48	Head of Marketing
20	Sr. Graphic Designer	49	Helper
21	Jr. Graphic Designer	50	Technical Officer
22	Visualizer	51	Lab Assistant
23	UI-UX Designer	52	Support Engineer
24	Web -Developer	53	Sales and Service Engineer
25	Director	54	Jr. Executive
26	Entrepreneur	55	Ansar
27	Owner	56	Soldier
28	IT Officer	57	Police Constable
29	Trainer/ Instructor/ Teacher	58	Civil CAD Operator

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REPORT OF

TVET GRADUATE TRACER STUDY 2020

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DIRECTORATE OF TECHNICAL EDUCATION

কারিগরি শিক্ষা অধিদপ্তর

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