

South Asia Region, Education Global Practice

How Does the Short-Term Training Program  
Contribute to Skills Development in Bangladesh?

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September 2015



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*A Tracer Study of the Short-Term Training  
Graduates***

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**Discussion Paper Series**



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## **Abbreviations and Acronyms**

ADB	Asian Development Bank
BDT	Bangladeshi Taka
BMET	Bureau of Manpower, Employment and Training
BTEB	Bangladesh Technical Education Board
CAD	Computer Aided Designing
DTE	Directorate of Technical Education
GoB	Government of Bangladesh
HSC	Higher Secondary Certificate
ISC	Industry Skills Council
JSC	Junior Secondary Certificate
LFS	Labor Force Survey
MTTC	Mohila Technical Training Center
NEP	National Education Policy
NGO	Non-Governmental Organization
NSDC	National Skills Development Council
NSDP	National Skills Development Policy
NSS	National Skills Standard
NTVQF	National Technical and Vocational Qualification Framework
RAC	Refrigeration and Air Conditioning
RPL	Recognition of Prior Learning
SSC	Secondary School Certificate
STEP	Skills and Training Enhancement Project
TTC	Technical Training Center
TVET	Technical and Vocational Education and Training



## Executive Summary

### Context of Skills Development in Bangladesh

1. **Skills development is one of the priorities for national economic development strategies of Bangladesh.** The total number of workers in 2010 was 56.7 million and the labor force grew by an average of 1.3 million per year. Looking ahead, a demographic transition continues to present growth opportunities by creating a demographic dividend. Female labor force participation has been increasing partly as a consequence of increased girls' access to education. Yet, the Bangladeshi economy has a number of structural constraints, including relatively high youth unemployment rate - 4.8 percent for male youths and 5.8 percent for female youths. While there are increased opportunities of international migrant work, a great number of youth are still struggling to find jobs.

2. **The Vision 2021 of the Government of Bangladesh gives the highest priority to building a large base of skilled workers in order to achieve a poverty-free middle-income country by 2021.** The skills must be calibrated to match the growth and structural transformation of the economy, as well as expanding demand for Bangladeshi migrant workers in the global economy. The National Education Policy (NEP 2010) emphasized equalizing education opportunities for all children and building productive workers' skills to compete in the global economy, and the National Skills Development Policy (NSDP 2011) provided a scope for operationalizing the skills-development agenda. The NSDP aims to improve the skills development arena's quality and relevance; to establish more flexible and responsive delivery mechanisms; to improve access to skills development for various groups; and to involve industry organizations, employers, and workers in skills training and acquisition processes.

3. **The skills development sector is highly complex due to multiple service providers, a vast spectrum of target audiences, a large range in modalities of service provision, and varied emphases in terms of skills levels and types.** In Bangladesh, there are formal and informal Technical and Vocational Education and Training (TVET) opportunities. Formal TVET consists of Secondary School Certificate (SSC), Higher Secondary Certificate (HSC), and Diploma courses, which requires two, three, or four years of training and education before acquiring certificates. Altogether, about 500,000 students are currently enrolled in 3,000 formal TVET institutions (most of which are private), and a large proportion of the students are male. Due to a presence of many training providers and administrative bodies, the TVET system of Bangladesh is quite diverse and appears to be somewhat fragmented (World Bank 2013). The National Skills Development Council (NSDC), a public-private partnership initiative, leads the coordination of the skills development sector.

4. **The short-term training, a formal channel of six months training,<sup>1</sup> is an important instrument for bridging the gap between the needs of the labor market for increasing the pool of skillful workers and the aspiration of the students for finding a good job.** In the context of high youth unemployment, the program provides opportunities for anybody who has at least grade 8-level formal education to gain practical skills that can be practiced at workplaces after a short duration of training. It is one of the few training opportunities for those who have less education, and therefore is an important option for the policy makers in balancing the educational opportunities across different socio-economic groups of people.

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<sup>1</sup> Most courses are for six months, but some short-term training programs are more than six months.

5. **In order to assess the performance of short-term training and interventions by Skills and Training Enhancement Project (STEP), a tracer study was conducted between December 2013 and January 2014.** Skills and Training Enhancement Project (STEP) is jointly financed by the World Bank, Canada and the Government of Bangladesh (GoB), which started in 2010 for contributing to Bangladesh's medium to long-term objective of developing its human resources as a cornerstone of its strategy for poverty alleviation and economic growth. It supports competitively selected 42 public and 8 private short-term training institutions for improving the quality of training and providing opportunities to the disadvantaged youth for obtaining skills from the select training providers. The tracer study aims (i) to profile the characteristics of short-term vocational students and to understand the demands and expectations for short-term training, (ii) to assess the labor market outcomes of short-term training courses, especially of those that are supported by STEP, and (iii) to examine the relevance of the short-term training programs through constructive feedbacks of users (i.e., students) and demand-side (labor market) perspectives. The tracer study has collected randomly selected samples of 994 current students, 953 (cohort 1 – after 6 months from graduation) and 928 (cohort 2 – after 12 months from graduation) former students, respectively, from 93 trades in 36 institutions. Families of trades included in the survey were: (1) AutoCAD and Civil,<sup>2</sup> (2) Auto-mechanics and Mechanics, (3) Computer, (4) Electric, (5) Garments, (6) Refrigeration and Air Conditioning (RAC), and (7) Welding.

### **Key Findings from the Survey**

6. **Many students come to short courses to get practical skills that would give them opportunities to get good employment, and half of the students who came to short-term training experienced difficulties in finding a job.** The average age of the students is about 22 years, and many have an experience of a few years of non-employment after completing the latest education. The composition of the short-term training indicates that the proportion of students with minimum educational requirement (i.e., grade 8) is only about 17 percent. A total of about 70 percent of enrollment comes from either secondary or higher secondary certificates, and close to 10 percent comes even with a university degree. Female students are in a minority, consisting of only about 20 percent, and they are mostly in softer skill areas, such as AutoCAD/civil engineering, computer, and garment trades.

7. With support from STEP, most of the institutions<sup>3</sup> have established a job placement cell in the institution, but the quality of job placement service varies across institutions. Private institutions are much more likely to provide better job placement support, including career counseling, linkage with industries and job fairs. Students in private institutions generally reported a much higher level of satisfaction than students in public institutions. Better provision of job placement services, better quality of teachers and facilities that lead to better skills and a higher reputation are the core reasons for their overall satisfaction.

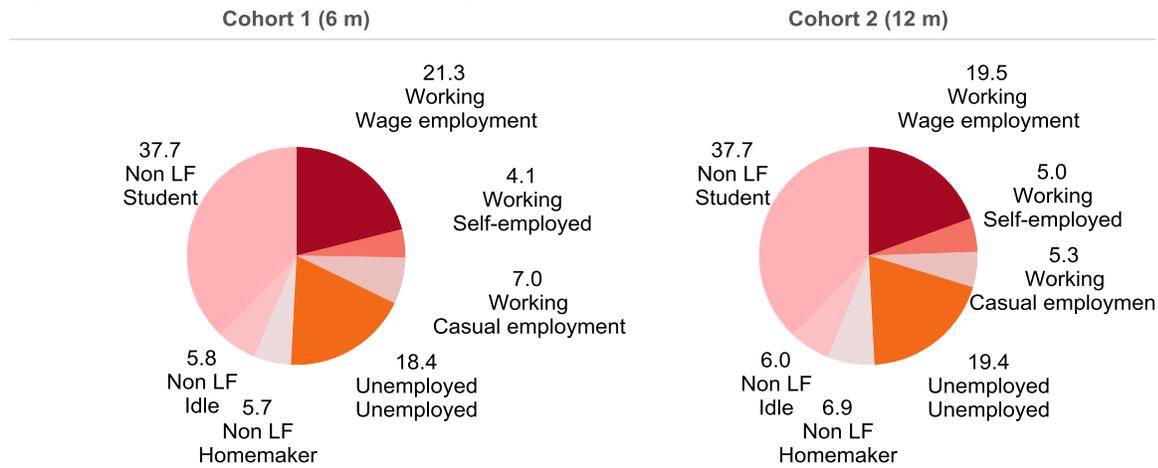
8. **After six months from completing the short-term training, 51 percent of the graduates enter the labor market while 38 percent continue with their further study and training.** The statistics are consistent with the findings of government Labor Force Survey in 2010, which showed the labor force participation rate of 46 percent for the youth aged 15 and 24. Many students come to short-term training while waiting for admission to a higher level of education. Indeed, 38 percent of the graduates of the short-term training courses continue studying at upper levels of education. The breakdown of the labor market entrants shows that about 33 percent of graduates are working and 18 percent are still looking for a job after six months. A large proportion of working graduates find wage employment (21 percent), but 4 percent work as self-employed and 7 percent work as casual employees.

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<sup>2</sup> Auto- CAD (Computer Aided Designing) and Civil engineering.

<sup>3</sup> Thirty-five out of 36 institutions reported that they had established a job placement cell according to the survey.

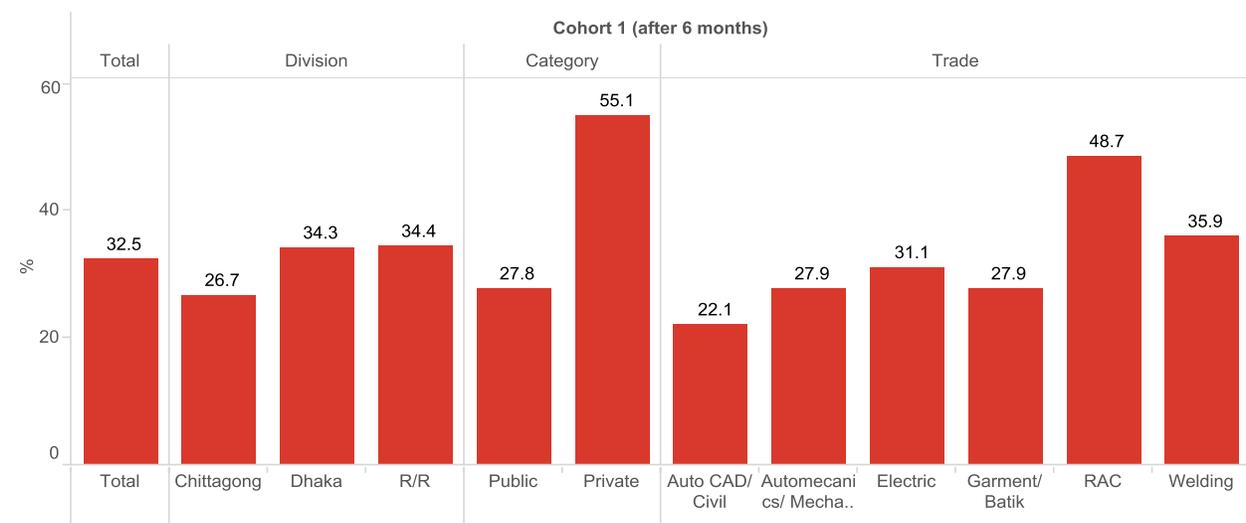
Figure 1: Labor force participation and employment status after 6 and 12 months of graduation



Source: Authors' analysis using the tracer study.  
 Note: These statistics include all the graduates in the denominator.

9. **Employment outcomes vary across different trades and types of institutions, with a high job placement rate among students from private institutions.** As opposed to the average rate of finding employment for all graduates, some groups of graduates exhibit higher performance. By types of institutions, 55 percent of graduates from private institutions find employment while only 28 percent of graduates from public institutions do. By trade, Refrigeration and Air Conditioning (RAC) and welding graduates tend to find better employment opportunities compared to graduates from autoCAD/civil trade. A wide diversity of the labor market outcomes across the trades is one of the unique features of short-term training because it alludes to the effectiveness of the labor market demand and supply by different types of skills. The statistics show a relatively higher wage rate among autoCAD/civil graduates, but the labor demand is relatively small. On the other hand, the wage rate may not be as high for RAC or welding graduates but there are more work opportunities.

Figure 2: Percentage of short-term course graduates working after 6 months



Source: Authors' analysis using the tracer study.  
 Note: These statistics include all the graduates in the denominator.

10. **Prior work experience and academic performance also matter for job placement in addition to the institution or selection of trade while job and trade selection is highly correlated to gender.** The representation of female students is relatively small in short-training, and they are about 18 percent of the graduates. Many of them are in autoCAD/civil and garment trades. Generally speaking, 19 percent of the female graduates stay home as homemakers or doing domestic work (as against 4 percent male graduates), so female graduates' labor force participation and employment are lower than those of male graduates. The quality of skills also matters to the employment outcomes. Although the number is limited, the short-term trainees who had previous work experience tend to be more successful in finding jobs than those without experience. By academic performance, those who have higher marks in the academic record tend to have better employment results, indicating that the quality of cognitive and technical skills, as measured by the school marks, is important for employment.

11. **STEP interventions seem to be effective in generating two important outcomes, which are: (i) providing opportunities to the poor, and (ii) improving the labor market outcomes in comparison with non-supported students.** First, STEP has been successful in attracting poorer students with disadvantaged household background. By the proxy-means tested poverty targeting, STEP has successfully targeted poor students. Among the students from the poorest quintile, 70 percent of students are found in STEP-supported trades in public institutions. Because tuitions are free and stipends are provided in STEP supported courses, poor students who would otherwise not be able to afford the training chose to join the STEP supported courses. Looking at the overall short-term training sector, a non-negligible share of enrollment is from relatively better educated students (with more than secondary or higher secondary education). Therefore, this intervention is effective in improving the targeting of the program to the neediest disadvantaged youth.

12. Second, the employment rate among the STEP supported graduates is higher than non-supported graduates from the same public institutions. Interestingly, the labor force participation rate and employment rate are both higher among STEP-supported graduates than non-supported graduates even though they are from the same institutions. One of the critical factors is the provision of better job placement support by the institutions. Job placement support is still generally weak in most institutions, but services are better catered to and/or better taken up by STEP-supported students.

13. **The survey has suggested that there is a great potential for making the short-term training course even better.** While the program has been successfully producing a number of skillful graduates, the short-term training could potentially produce much better outcomes if some of the bottlenecks are removed. The study has identified four possible areas where improvements can be made to the short-term training as follows:

- a) *Make the job matching mechanism more functional:* While STEP has introduced job-placement cells in all institutions, in reality, most graduates need to rely on their personal networks for finding a job because such a support is still limited. As a result of insufficient job placement support, a great proportion of graduates end up being unemployed or discouraged non-labor force when they are unsuccessful in job hunting. Providing better career counseling and reducing the gaps between students' expectation and the labor market situation is also important.
- b) *Improve the targeting of students:* Because short-term training is supposed to be targeted for the disadvantaged youth, the current enrollment composition of having more educated participants (such as those with a higher secondary or university degree) indicates inefficiency in targeting. As the economy demands a wider skill base, it is important that short-term training is provided to the disadvantaged youths who otherwise end up entering the labor market without any practical skills.
- c) *Improve the labor market relevance of the training programs:* The low labor force participation rate and employment rate indicate still high mismatches between skills demand and supply. Lack of labor market relevance of short-term training is partly due to a lack of teachers with industry

experience and weak collaborations with industries. From the curriculum side, increasing the credibility of relevance through certification and linking to National Technical and Vocational Qualification Framework (NTVQF), as well as provision of some kinds of business skills training, is important.

- d) *Increase the awareness of the programs to the businesses and to the youth:* For better targeting and better outcomes of short-term training, awareness raising about the program is needed. While the employers of short-term training graduates value the quality of training, employers who had no experience of hiring (as often discovered by other surveys) do not recognize the strength of short-term training. Similarly, working youths who may need further skills building should be informed about the short-term training so that they can benefit from the program.



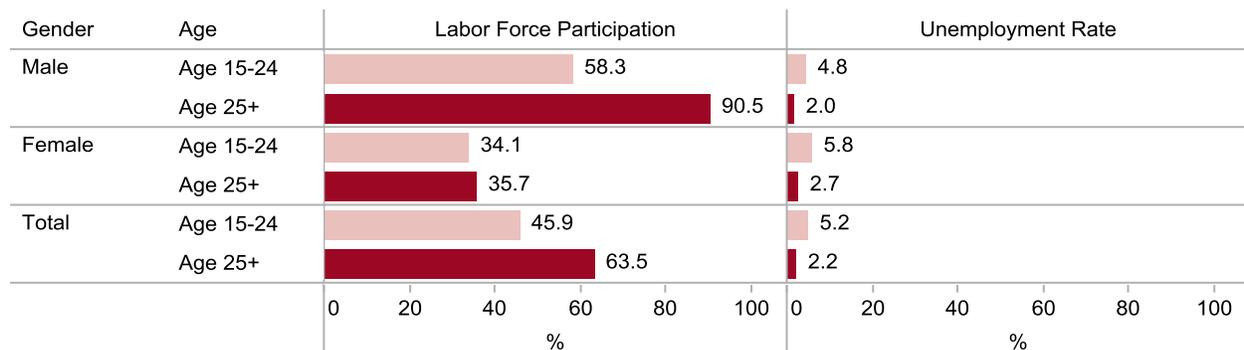
## 1. Sector and Project Context

### 1.1. Labor Market and Economic Context of Bangladesh

Bangladesh has a large and relatively young population—there were 157 million people in 2013 (2.2 percent of world population), and 30 percent of them were below the age of 15. The Bangladeshi labor force is large and growing quickly. The total number of workers in 2010 was 56.7 million and the labor force grew by an average of 1.3 million per year, from 46.3 million in 2003. The labor force participation rate increased during this period from 57.3 to 59.3 percent, due to an increase in the female labor force participation rate from 26.1 to 36.0 percent. Yet, despite a rapid increase of female labor force participation, it is less than half of the male participation rate, which is 82.5 percent.

According to the Labor Force Survey (LFS), the size of unemployed population was 2.6 million and the unemployment rate was 4.5 percent in 2010. The youth (aged 15–24) unemployment rate is slightly higher than that of their elders (aged 25 and above), and labor force participation is lower among young men. The male youth labor force participation rate (58.3 percent) is lower than those who are older (90.5 percent). This can be explained by the fact that most young males are still in school. The female labor force participation rate is about the same for young and older females alike, due to women’s increasing labor force participation, especially among the youth. On the other hand, the unemployment rate is consistently higher for the youth—4.8 percent for male youths and 5.8 percent for female youths, as opposed to 2.0 and 2.7 percent for older males and females—implying difficulty in finding jobs for new entrants to the labor market.

Figure 3: Labor Force Participation and Unemployment Rates by Age Group (2010)



Source: World Bank 2013.

While the unemployment rate remains relatively low—despite a worldwide unemployment rate increase because of the global economic crisis—the underemployment rate seems high. Underemployment is estimated as 20.3 percent in 2010 (World Bank 2012). This is related to the characteristics of Bangladeshi labor force, a large informal sector employment. In 2010, informal employment was estimated at about 88.5 percent of the total number of jobs in the labor market (ADB 2012). Of informal workers, 36 percent are informal employees, 36 percent are self-employed, and 28 percent are family workers. Also, 53 percent of the informal workers are in agriculture and fisheries.

In Bangladesh, international migration has become an increasingly important means for economic growth and employment generation and an important employment opportunity for individuals (Paci and Sasin 2008). The annual number of emigrant workers increased from 104,000 in 1990 to 875,000 in 2008. Although the number sharply dropped after the global financial crisis in 2008, the number again picked up to 598,000 in 2012. The forces driving Bangladeshis to emigrate include push factors such as underemployment and low wages at home, and pull factors such as prospects of higher wages and full employment (World Bank 2012). Statistics show that historically, most migrant workers are less-skilled workers, reflecting that the comparative advantage of current migrant Bangladeshi workers in other countries is their willingness to accept low-profile jobs, including hazardous work with low wages (Maxwell Stamp 2010). Acknowledging this trend, the Government of Bangladesh emphasizes the importance of skills development so that the current low skilled international migrant workers will be replaced by skilled workers.

The Vision 2021 of the Government of Bangladesh gives the highest priority to building a large base of skilled workers in order to achieve a poverty-free middle-income country by 2021. The skills must be calibrated to match the growth and structural transformation of the economy, as well as the expanding demand for Bangladeshi migrant workers in the global economy. To materialize these long-term objectives, the National Education Policy (NEP 2010) emphasized equalizing education opportunities for all children and building productive workers' skills to compete in the global economy, and the National Skills Development Policy (NSDP 2011) provided a scope for operationalizing the skills-development agenda. Similarly, the Government of Bangladesh's sixth Five-Year Plan (FY2011-2015) provides a holistic view of education and skills development as engines of economic growth and social development (World Bank 2013).

## **1.2. Context of Technical and Vocational Education and Training (TVET) in Bangladesh**

The TVET system of Bangladesh is quite diverse and appears to be somewhat fragmented (World Bank 2013). The TVET system consists of (i) various service providers, including public, private, non-governmental organizations (NGOs), and industry trainers; (ii) various target audiences, including secondary and post-secondary students, unskilled youth and vulnerable populations, people with previous work experience, or workers who are currently employed; (iii) various modalities—such as long and short courses, informal training, and on-the-job training; and (iv) various types of skill levels—including an array of industry-specific skills. While such a diversity of opportunities can be an advantage from a perspective of students, absence of effective coordination has been a constraint from the policy perspective until recently. In recent years Bangladesh formed a National Skills Development Council (NSDC). The NSDC, a public-private partnership initiative, developed the NSDP and is working to help establish a robust skills-development system in the country. The NSDP aims to improve the skills development arena's quality and relevance; to establish more flexible and responsive delivery mechanisms; to improve access to skills development for various groups; and to involve industry organizations, employers, and workers in skills training and acquisition processes.

In Bangladesh, there are formal and informal TVET opportunities. Formal TVET consists of Secondary School Certificate (SSC), Higher Secondary Certificate (HSC), and Diploma courses, which requires two, three, or four years of training and education before the award of certificates. These programs are provided by public and private institutions, most of which are under the supervision of Directorate of Technical Education (DTE) or Bureau of Manpower, Employment and Training (BMET), and affiliated with the Bangladesh Technical Education Board (BTEB). The programs include time-bound, institution-based, and graded training with formal certification. Currently, seven ministries offer formal training through their departments or directorates (World Bank and DTE 2013). SSC courses are offered at grades 9 and 10, and upon completion of the program, students can move to a two-year HSC course (grades 11 and 12) or four-

year Diploma course at a polytechnic. SSC vocational graduates also have the option to apply for the academic HSC, depending on their academic performance. About 500,000 students are currently enrolled in 3,000 formal TVET institutions (most of which are private), and a large proportion of the students are male.

### **1.3. Context of Short-Term Training Courses in Bangladesh**

In addition to formal long- or medium-term training programs (i.e., more than 1 year), DTE and BMET provide formal short-term training courses that are certified by BTEB.<sup>4</sup> Among formal training programs, there have been five levels of National Skill Standards (NSS) training programs. The 360-hour NSS basic program is currently the most commonly provided short-term training program. According to BTEB, a certifying body of these programs, there are 57 different trades/technologies offered through the short-term programs (see the list in Annex 2).

### **1.4. Skills and Training Enhancement Project**

Skills and Training Enhancement Project (STEP) is a World Bank- supported project, which started in 2010 for contributing to Bangladesh's medium to long-term objective of developing its human resources as a cornerstone of its strategy for poverty alleviation and economic growth. The national strategies identifies skills as a critical factor for increasing the competitiveness of Bangladeshi economy in the global market, supporting Bangladesh's export- led growth and migrant workers, the main drivers of the Bangladeshi economy. The government is keen to increase the skill levels of the entire population, and to raise the value of the human resource in the global labor market, since a better trained workforce will ensure higher returns and higher per capita remittances of each worker. The project objective is to strengthen selected public and private training institutions to improve training quality and the employability of trainees, including those from disadvantaged socio-economic backgrounds. It supports competitively selected public and private institutions that offer diploma-level and short-term training in increasing the quality and relevance of their technical education programs. The project also supports a series of reforms in the TVET sector and the development of a policy set-up. The project supports the development and implementation of Recognition of Prior Learning (RPL) system, capacity building of Industry Skills Councils (ISCs), and a reform in the secondary level vocational education (SSC-voc) through the piloting of a new apprenticeship program.

Under the component for improving the quality of short-term course institutions, competitively selected 42 public and 8 private institutions are being supported by STEP with an Institution Grant, up to US\$250 (equivalent to BDT 17,500<sup>5</sup>) per student<sup>6</sup> enrolled in a course/trade, for a maximum of 4 courses/trades. This grant is expected to be used for covering: (a) stipends to students, (b) modernization of teaching-learning equipment, (c) professional development of trainers and instructors, (d) students' training material and costs of industry visits of students, (e) improvements in placement, (f) rehabilitation and refurbishment of infrastructure, (g) training of skilled and semi-skilled workers through special courses, and (h) training of the managerial and supervisory staff from industry. All students in all selected short-term training programs in the selected institutions will receive the stipend of US\$10 (equivalent to BDT 700) per month.

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<sup>4</sup> Non-formal training programs, provided by both public and private institutions, offer structured courses with organized learning objectives, but are not affiliated with BTEB (Mohiuzzaman 2013).

<sup>5</sup> According to exchange rate at the time of inception of DPP.

<sup>6</sup> Out of US\$250, US\$60 is earmarked as stipend for a student.

## **2. Survey Objectives, Scope, and Methodology**

### **2.1. Objectives**

The primary objectives of this tracer study is three-fold: (i) to profile the characteristics of short-term vocational students and to understand the demands for and expectations from short-term training, (ii) to assess the labor market outcomes of short-term training courses, especially of those that are supported by STEP, and (iii) to examine the relevance of the short-term training programs through constructive feedbacks of users (i.e., students) and demand-side (labor market) perspectives. Ultimately, this study is expected to contribute to a better understanding of the performance of the program and improvement of the program in the future. To be specific, the survey examines how the training matches the expectations of employers, the needs of the market, and the aspirations of trainees with respects to the quality and relevance of skills. Through the collection of information from institutions, current students, former students, and employers, the survey aims to inform all concerned of the strengths and weaknesses of the short-term training courses and how the training and labor market can increase the efficiency of matching skills demand and supply both in formal and informal sectors. The survey also aims to provide information on the job and skills matching mechanism, including recruitment processes.

### **2.2. Scope of the Survey**

This is the first tracer study conducted for the graduates of TVET institutions in Bangladesh and is the first attempt to reveal the demand for and relevance of short-term training programs in the Bangladeshi labor market. The tracer study is a unique multi-cohort tracer study which combines both prospective and retrospective tracing of the graduates from short term training courses. This survey covers 1,000 students who are currently in training and 2,000 graduates who completed the training course six months (cohort 1) before and 12 months before (cohort 2). This multiple cohort structure of the survey will allow a comparison between the expectations of the currently enrolled students and the reality faced by the graduates of short-term training after 6 or 12 months, and facilitate the flow of a multi-dimensional feedback to the short-term training programs from the users (i.e., students) and demand-side (i.e., labor market) perspectives. Since this is also a prospective tracer study, these cohorts are expected to be interviewed again in 12 months, establishing unique panel data sets of individuals.

The survey also provides unique employee-employer matched data. A sub-sample of graduates who work for wage employment (formal or informal) is assessed by their employers about their job performance. The employers of the graduates are asked why they hired short-term course graduates and what the prospect of hiring workers with such specific technical and vocational skills is.

The tracer study aims to collect objective information about the skills of the graduates. The survey includes modules to capture the literacy and numeracy of the graduates as well as their personality and traits. On the other hand, technical skills are not being assessed through this tracer study simply because it is very difficult to measure the skill levels of graduates in various trades and technologies. While Bangladesh is currently establishing a system of competency-based assessment of skills, the system is still premature to apply in this survey for assessing the performance of graduates.

The field work took place in December 2013 and February 2014 after a pilot testing of instruments in October 2013. During this particular period, the economic situation of the country was slightly difficult in connection with the national election which took place in early January 2014. It has been noted that the movement of the surveyors was somewhat restricted due to a persistent security concern. It should be also considered that the economic activities were generally slower during the whole year of 2013 due to political

unrest all over the country, and such a situation may have affected the labor market outcomes of the particular cohorts that this survey has covered.

### 2.3. Survey Methodology and Data

The tracer study has collected randomly selected samples of 994 current students, 953 (cohort 1) and 928 (cohort 2) former students respectively from 93 trades in 36 institutions (Table 1). Based on the sample frame of 50 STEP institutions (see Annex 1 for the list), sampling was done based on a three-level stratified random sampling, following the strata of (i) trades/technologies, (ii) geographical locations, and (iii) STEP support in public institutions and private institutions. Trades/technologies constitute the primary sampling unit; therefore, the survey is designed to represent the situation for trades, geographical areas, and categories of STEP support while not representing the institutions themselves. Families of trades included in the survey were: (1) AutoCAD and Civil, (2) Auto-mechanics and Mechanics, (3) Computer, (4) Electric, (5) Garments, (6) Refrigeration and Air Conditioning (RAC), and (7) Welding. A more detailed description of the survey design, sample distribution, and weighting scheme is shown in Annex 2.

**Table 1: Number of trades and students sampled**

	Current Students		Former students		
	Number of trades	Student sample	Number of trades	C1 (Jan-Jun, 2013)	C2 (Jul-Dec 2012)
AutoCAD/ Civil	11	110	11	108	108
Auto Mechanics/Mechanics	11	120	12	119	106
Computer	13	154	15	148	143
Electric	18	179	17	164	168
Garment	12	149	13	148	131
RAC	14	160	13	158	152
Welding	13	122	12	108	120
<b>Total</b>	<b>92</b>	<b>994</b>	<b>93</b>	<b>953</b>	<b>928</b>

Source: Prepared by authors.

Note: The numbers of sampled trades are different for the current student and former student modules because some of the trades are not offered for particular cohorts and they were skipped in such cases.

### 2.4. Survey Instruments

The tracer study consists of the following four sets of surveys: (i) current student survey, (ii) graduate trainee survey, (iii) employer survey, and (iv) institution survey. All sets of surveys were conducted through face-to-face interview. The current student survey was designed for capturing the ongoing learning experience at training institutions whereas the graduate trainee survey focuses on activities after graduation from the training institutions. The institution survey aims to uncover supply-side information of short course training. The employer survey was designed to obtain feedback from employers about the performance of the hired short-course graduates and to estimate the potential demand for TVET graduates in their industries.

The employer survey is conducted for a sub-sample of graduates. The data therefore can discuss the employment situation of those who enter labor market, but it does not represent the whole labor market or any specific industries. The field team randomly interviewed former students, and from the interviewed students, only those who are hired by someone, either formally or informally, are sampled again for further employer interviews. The employer survey module collects information on the profile of business, the needs for TVET graduates, and skills assessment of particular short-term training graduates that the firms hired.

Chapters three and four, which discuss the profile of current students and job placement activities, mainly rely on the current student module. Chapter five, which focuses on the labor market outcomes, uses graduate and employer modules. Chapter six relies on the combination of all surveys as it aims to compare the performance of STEP supported and non-supported trades. The institution survey, while it is presented sporadically to make various points, is more extensively covered in Annex 1. The sampling design aims to representatively cover trades within institutions. Therefore, while the coverage of institutions is 36 out of 50 institutions, this report refrains from showing the result of the institution survey as a representation of all the 50 institutions.

### 3. Characteristics of Currently Enrolled Trainees

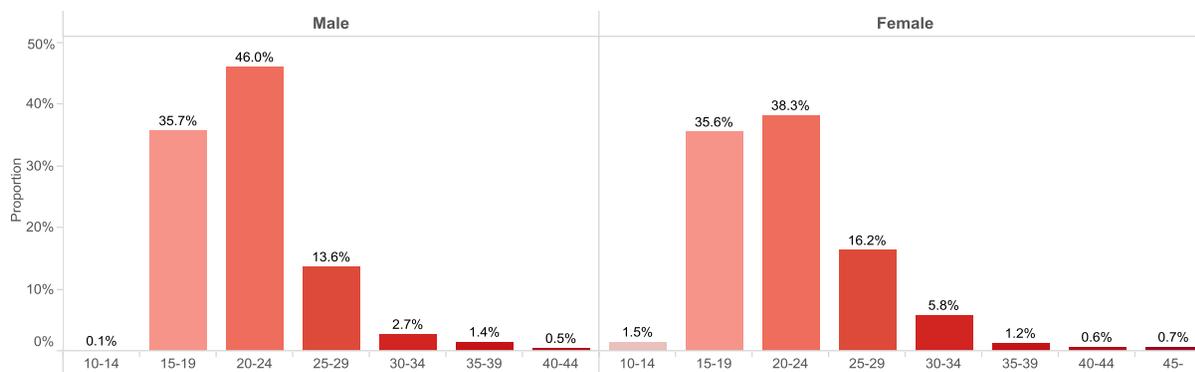
The purpose of this chapter is to describe: (a) who the short-course students are, (b) what training they get, (c) why they joined the short-course trainings and what kind of backgrounds (including academic and prior job experience) they have, and (d) what are the cost and satisfaction of trainings. The main data source for analysis is the current student module of the tracer study.

#### 3.1. Basic Demographic and Background Information

##### Characteristics of students

**Students in the short-term training institutions are mostly young; most of them are aged between 15 and 24 years with the average age of about 22 years.** More than 80 percent of male students and 70 percent of female students belong to the age cohort of 15 to 24 years (Figure 4). Older students with 30 years of age or above are very few. There are no significant differences in the age distribution of students between males and females except for a slightly greater share of older female students aged above 25 years.

Figure 4: Age of students in short-course trainings

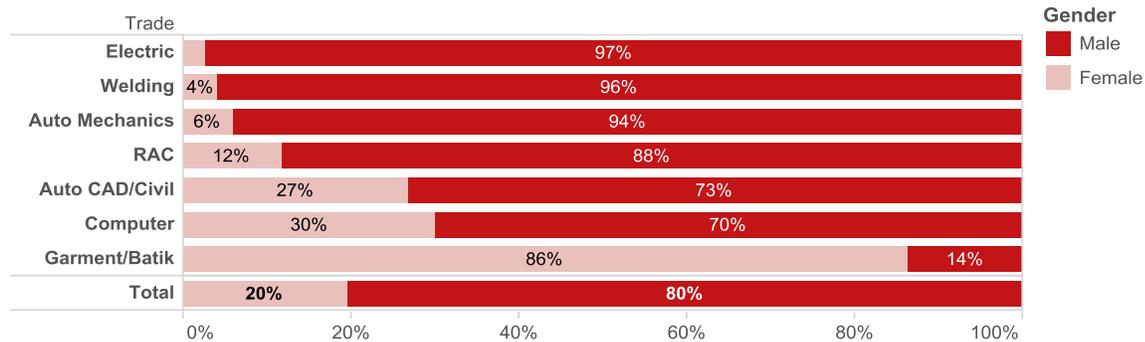


Source: Authors' analysis using the tracer study.

**Females are in the minority among the short-course students, but the proportion of female students varies widely across the trades of training.** Figure 5 presents the proportions of short-course students by gender and trades. Overall, the female students are in the minority by a great margin, accounting for only about 20 percent of all short-course students. The proportions of females are particularly small in several

trades of training which involve heavy tools and machineries such as electric, welding, and auto mechanics. Females account for less than 10 percent in those trades. The proportions of female students are substantially higher in ‘softer’, largely white collar fields such as autoCAD/civil and computer, accounting for about 30 percent of the students. Not surprisingly, garment-related trades are dominated by females. Eighty-six percent of the students in garment trades are female.

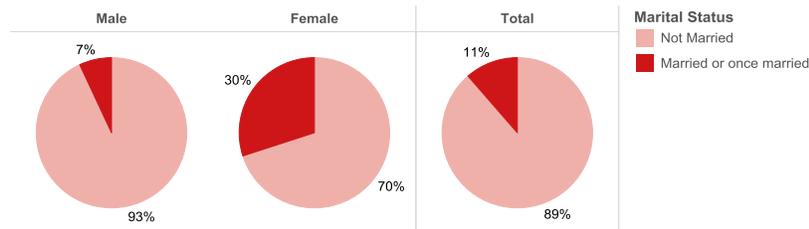
Figure 5: Proportion of students by gender and trades



Source: Authors’ analysis using the tracer study.

**Eleven percent of the short-course students have spouses; the proportion is much higher for female students.** About 30 percent of the female short-course students are married or once married (Figure 6). The proportion of married male students is merely about 7 percent. This implies that one-third of the female students are coming to short-term training for gaining practical skills that are linked to income-earning opportunities after getting married.

Figure 6: Marital status of short-course students by gender



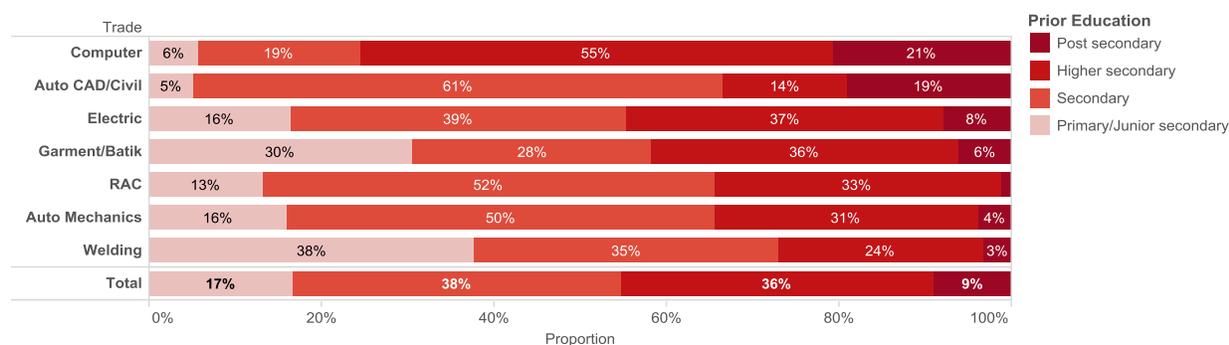
Source: Authors’ analysis using the tracer study.

**While the minimum educational background required is grade 8, students in the short-course trainings are coming from diverse educational backgrounds with the majority having either secondary or higher secondary education qualifications.** Figure 7 shows the educational qualifications that the short-course students had obtained before coming to the short-course trainings. While the minimum qualification required is grade 8, only 16 percent of students are coming with grade 8 education.<sup>7</sup> The majority have either SSC (38 percent) or HSC (36 percent) including SSC/HSC (Voc). The female students have better educational backgrounds as a larger proportion (57 percent) of them have either HSC or post-secondary level qualifications than the male students (45 percent).

<sup>7</sup> Students’ self-reported statistics from the survey show that 1 percent comes to short courses without completing grade 8.

**Noticeable differences are found in the students' educational backgrounds across the trades of training.** Students in welding and garment trades tend to have lower formal educational qualifications than students in other trades. As much as about 38 percent of the students in welding courses have only grade 8 qualification or less (Figure 7). In the garment trades where female students are concentrated, students' educational backgrounds are not very high. Computer trade students are considerably better educated than other students. AutoCAD/civil students seem to be divided between those who are better educated and those who have only junior secondary certificates. Those with better formal education are probably in designing jobs while others with weaker formal educational qualifications are learning skills for civil works.

Figure 7: Education background of short-course students by trades



Source: Author's analysis using the tracer study.

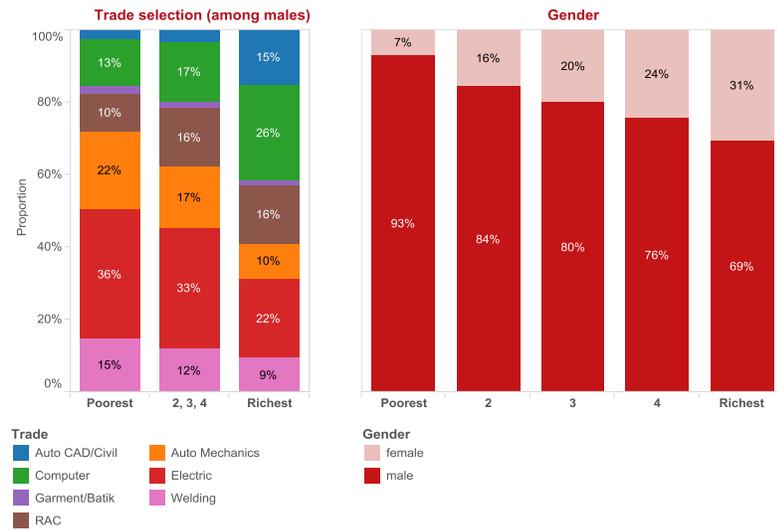
**There are systematic differences in student characteristics across wealth quintile;<sup>8</sup> family wealth levels affect students' selection of trades and female participation.** Differences are particularly salient between the poorest and richest quintiles. Computer and autoCAD/civil trades are much more popular among students in the richest quintile; meanwhile, students from the poorest quintile are more attracted to welding, electric, and auto mechanics trades (Figure 8). Generally, richer students seem to have stronger preferences for the trades for office works.<sup>9</sup> Furthermore, family wealth levels also affect the participation of female students. The proportions of female students increase among students in higher wealth quintiles. Only 7 percent of students in the poorest quintile are women, while female students account for 31 percent of the students in the richest quintile. Richer families are more likely to afford sending girls to short-term vocational trainings.

<sup>8</sup> This wealth quintile is constructed within the pool of short-term training students. The students of the poorest quintile are the bottom twenty percent of the wealth index among the short-term training students. This poorest quintile is not the same as the population's poorest quintile. It is almost certain that the students from the poorest quintile of the population have already dropped out from the schooling system before reaching grade 8, and therefore they would not be able to come to short-term training.

The wealth index is created based on the household commodity assets and the characteristics of the household where a student currently lives, by using the Proxy Means Testing (PMT) technique. Following the poverty identification function from Household Income and Expenditure Survey of 2010, different weights are assigned to each of the commodity variables. The variables used for constructing the index are: construction material of the house, the main source of drinking water, the number of rooms, types of latrines, availability of electricity, television, refrigerator, computer, gas connection, air conditioner, mobile phone, father's educational level, mother's educational level, and father's employment status.

<sup>9</sup> The survey also found noticeable differences of family backgrounds. Students in autoCAD/civil, computer, and garment/batik courses tend to come from better educated families than students in electric, RAC, auto mechanics and welding courses. Those better educated parents are more likely to work in professional occupations – such as managers, professionals, and technicians. On the other hand, parents of students in RAC, auto mechanics, electric and welding households tend to work as non-professional or semi-skilled workers.

Figure 8: Students' characteristics by wealth quintile



Source: Author's analysis using the tracer study.

**Only a small proportion of the short-course students have prior work experience.** Overall, a mere 10 percent of the students reported having any sort of work experience before enrolling in the short-course training programs (Figure 9). Students in auto mechanics trades may be slightly more likely to have prior work experiences. On the whole, as much as 90 percent of youths who come to short-course vocational trainings have never been engaged in any type of work including self-employment and family business. Even for those who do have prior work experiences, the kinds of employment they had appear to be rather unstable and temporary. Forty percent of them were engaged in casual and irregular works, day laborer or domestic work, and 25 percent of them had self-employment or worked for household business. Only about 28 percent of them had been actually employed by some business or public entities.

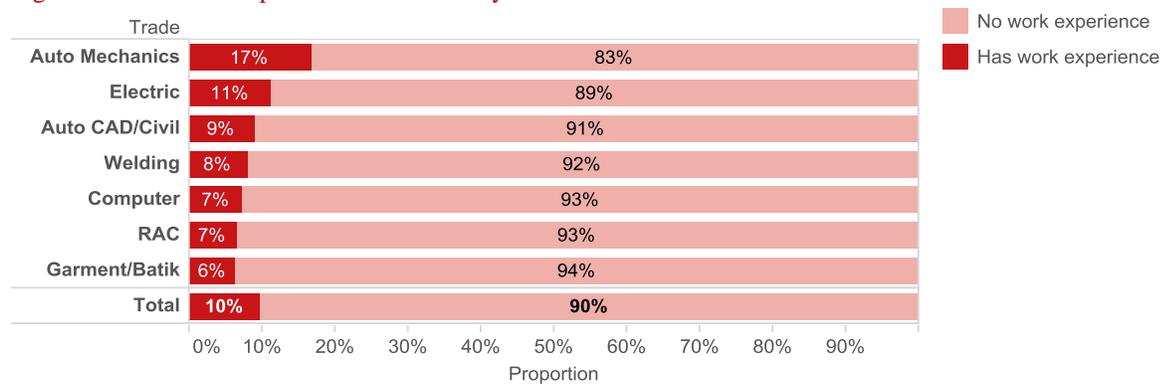
On the other hand, the majority of students do not have any work experience. According to the year of receiving the highest educational degree, only 21 percent of students come to short courses immediately after completing the highest educational degree (i.e., obtaining the degree in 2013<sup>10</sup>). Ninety percent have a time lag of about a year and 40 percent have an idle period of 2 to 4 years between the year of obtaining the last degree and coming to a short-term training course. This implies that quite a large proportion of students actually have experienced some years of being idle or unemployed after completing the highest educational degree. There are about 20 percent of students who spent more than 5 years without work after graduation from the highest education level, but a large part of this group are married women. One in three female students who come to a short course is married. They are relatively older (aged 25 to 35) though their educational qualifications are not necessarily high. It seems short-course training provides a skill-gaining opportunity for women, who have got married after finishing school and spent some years as homemakers.

Among those students with prior work experience, slightly less than a half of them left their prior jobs while the rest retained their jobs during their study at short-term training courses. A small proportion of students, who never had work experience before, have found a job (irrespective of the contract type) while still in

<sup>10</sup> In fact, there are a few cases where the degree year is 2014, indicating that students are coming to short courses while waiting for the final examination in 2014.

short-term training. As a result, about 11 percent of the students are working while in short-term training. One-third of currently working students reported that they would continue to work full-time for the same jobs after completing the short-course trainings.

Figure 9: Prior work experience of students by trades



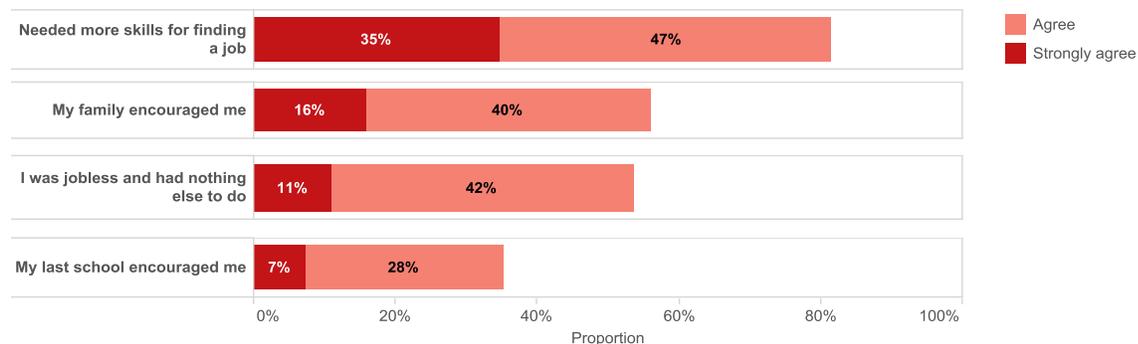
Source: Author's analysis using the tracer study.

### 3.2. Motivation, Aspirations and Satisfaction of Students

#### Motivation and aspirations

**Fifty percent of students agreed that they joined short courses because they were jobless and had nothing else to do.** About 50 percent of the students agreed that they took up the short-course training opportunities because they had no job and nothing else to do. Prolonged unemployment seems to be normal among the short-course students as discussed above, and having no jobs and a desire to acquire professional skills are the key drivers for their joining the short-course trainings. A majority of the students (82 percent) agree that they need more skills and education for finding a good job (Figure 10). Encouragement from families and relatives also seem to be a major factor that led to the participation in short-course programs. General education schools that the students previously attended seem to play a less significant role in their decisions to join short-course programs. From these statistics, it is clear that a short-term training course is an important means for students to access employment opportunities.

Figure 10: Reasons for joining short-course programs



Source: Author's analysis using the tracer study.

**Relevance of the trade to the skills needed for a job search is the most important reason for students to choose the trades of training when joining short-course programs.** For all the trades, the large majority (74 percent) of students agreed or strongly agreed that they chose the trade because the trade was relevant to the job they wanted to find. On the other hand, relevance to their previous education seems to be less important a factor for the selection of trades. Though varied between the trades, only about half of them agreed or strongly agreed that they chose a trade that was relevant to what they studied in their previous education. Many of the students seem to have chosen the trades of short-course training based on their assessment of skills required for prospective jobs with little regard to what they learned in the previous education.

**Most of the short-course students wish to find employment in public or private companies; self-employment is also an important job choice in some trades.** Overall, about 44 percent and 27 percent of the students want to find employment in public sector and private sector, respectively, after graduating from the short-course programs (Figure 11). In particular, the students in auto mechanics, graphic design, and computer trades have a strong preference for employment in public and private companies. For the students in other trades such as garment, RAC, and welding, working for him/herself in self-employment is also an important option in addition to working for companies. About 40 percent, 29 percent, and 35 percent of the students in garment, RAC, and welding trades, respectively, opt for becoming self-employed after graduation. Furthermore, it is interesting to note that about eight percent of the welding trade students expressed their wishes to go to work abroad as migrant workers soon after graduation. Welders are in great demand in countries like Singapore.

Figure 11: Desired economic status after completion of short courses by trade

Trade	Employee (public)	Employee (private)	Self-employed	Working for household business	Worker abroad	Student in another institution
Auto CAD/Civil	57.0%	19.4%	19.3%	0.6%		2.5%
Auto Mechanics	49.1%	27.5%	16.7%	1.5%	1.1%	0.4%
Computer	55.9%	31.9%	10.0%		0.9%	1.4%
Electric	44.4%	27.6%	22.8%	3.3%		0.8%
Garment/Batik	14.9%	34.7%	40.4%	3.9%		2.8%
RAC	48.5%	18.1%	29.0%	3.4%		1.1%
Welding	28.1%	25.0%	35.2%	2.3%	8.3%	
Total	44.1%	27.1%	23.0%	2.2%	1.2%	1.1%

Source: Author's analysis using the tracer study.

**Although students have high aspirations for ideal occupations and wages, they tend to be realistic about the job search duration due most likely to a prolonged experience of joblessness prior to coming to short-term training.** Almost all students who want to be employed aspire to find a professional type jobs and become technicians and professional staff after graduating from the short courses. On average, as much as about 80 percent of those who wish to be employed in companies would look for employment as technicians or professional staff after completing the short courses. Their expectation for wage is also relatively high – the students are hoping for a monthly salary of about BDT 10,000 – 11,000 from new jobs they will find. On average, the short-course students expect to find jobs with a monthly wage of BDT 10,972 (Table 2). The expectations of female students seem to be slightly more modest than those of male students, but the difference in the average expected wages is relatively small (about eight percent). Among the three trades with higher female ratios, i.e., graphic design, computer, and garment, female students in garment trades have the lowest expectations about their future income. Compared with the actual earnings the students had made in their prior employment, their expectations for future salary appear to be quite

ambitious. As shown at the bottom of the table, the average actual salary from prior jobs was BDT 6,636. The average expected monthly pay of BDT 10,972 shows about a 65 percent increase from that amount. They appear to hold high expectations about payoffs to their newly acquired skills and expertise.<sup>11</sup>

**Table 2: Expected amounts of monthly salary by trade and gender**

<b>Trade</b>	<b>Male</b>	<b>Female</b>	<b>Total</b>
Auto Mechanics	11,140	-*1	11,338
AutoCAD/Civil	13,287	10,529	12,546
Computer	10,921	11,159	10,992
Electric	10,804	-	10,805
Garment/Batik	-	9,477	10,348
RAC	10,952	-	10,796
Welding	10,949	-	10,782
<b>Total</b>	<b>11,137</b>	<b>10,298</b>	<b>10,972</b>
(Actual monthly salary in prior employment*2)	5,919	8,058	6,636

Unit: BDT

\*1: the sample size is too small in some categories to calculate representative figures.

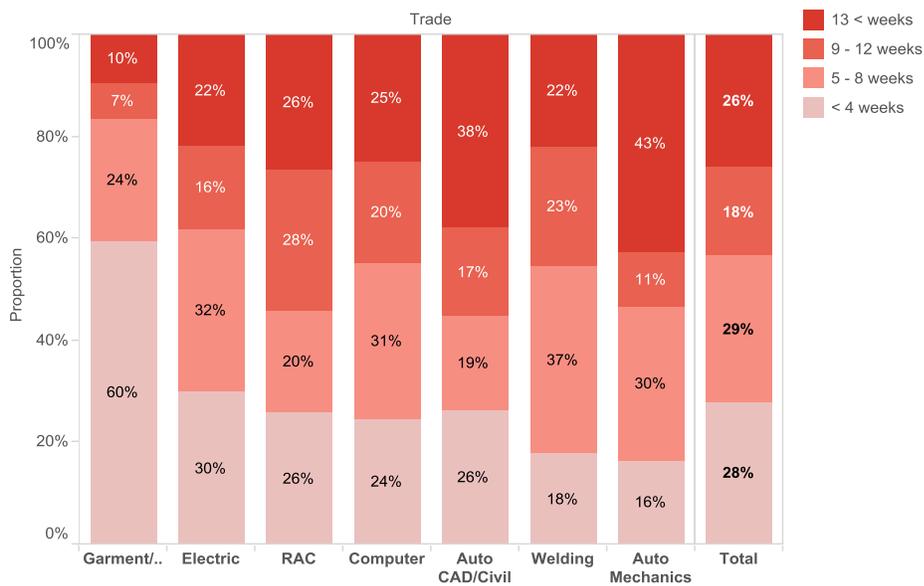
\*2: calculated based on actual monthly salaries for those who had prior work experience.

Source: Author's analysis using the tracer study.

On the other hand, the students are more realistic in terms of how long it will take to find a job; they expect a prolonged job search ahead, except in the garment sector. One-fourth of the students think a job search will take more than 13 weeks (three months) and 47 percent of students think a job search will take between five to twelve weeks. Across trades, one notable difference is found in garment trades. The students in garment trainings tend to estimate shorter periods of job search than students in other trades. Nearly 60 percent of them said they would find a job in less than four weeks after completion of their short courses, and another 24 percent of them estimated that it would take five to eight weeks. This may not be surprising considering the high demand for garment factory workers in today's Bangladesh economy and garment students' preference for private sector employment and self-employment (Figure 11) in which employment is usually quicker to be found. Students in other trades may not be so optimistic. Students in autoCAD/civil and auto mechanics trades are especially pessimistic. Nearly 40 percent of students in those trades estimate that their job search will take more than 13 weeks or 3 months. One of the possible reasons can be their strong preference for public sector employment. For autoCAD/civil students, their better educational background and greater family wealth would allow them to engage in longer periods of job searching.

<sup>11</sup> See Table 9 for the wage that graduates receive.

Figure 12: Estimation of time it will take to find a job after completion of training by trade



Source: Author’s analysis using the tracer study.

### Satisfaction about training and skills acquired

**Overall, short-term training courses provide students with a moderately satisfactory experience.** Students were interviewed at the end of the six-month training course about their levels of satisfaction in four areas, such as the skills acquired, reputation gained through the institution, quality of teachers and quality of facilities. Overall, 73 percent of the students are satisfied with the technical skills they acquired, and only 64 percent are satisfied with the reputation gained through training (Table 3). In terms of the quality of teaching, 69 percent of the students are satisfied with the quality of teachers, and 63 percent are satisfied with the facilities. These indicate that about thirty percent of the students were not too satisfied with their experience of the short-term training, and the quality of teaching and skills provided may need to be improved further.

**Students at private training institutions are generally more satisfied than students at public training institutions.** At the private institutions, 86 percent of the students have said they are either highly satisfied or satisfied with the technical skills acquired through their short-course programs, whereas the ratio goes down to 69 percent among students in the public institutions (Table 3). Private institutions also excel in regard to reputation gained for students, quality of teachers, and quality of facilities. By trade, computer trades seem to provide a high level of satisfaction to students while garment trades give a relatively low level of satisfaction. While the differences in trades offered by public and private institutions should matter to the overall level of satisfaction, generally private institutions give a better level of satisfaction to students. Differences in the students’ satisfaction in private and public institutions are also evident in trades such as electric where the students of private institutions have shown more satisfaction. At the same time, in a few trades such as auto mechanics and garment/batik, students’ satisfaction seems to be greater in public institutions. Low levels of satisfaction shown by students in garment/batik trades are worrisome as the trade has the greatest number of short-term courses in the STEP-supported institutions. Perhaps, the quality of training may not have kept up with the expectation due to rapid expansion of the trade in the past years.

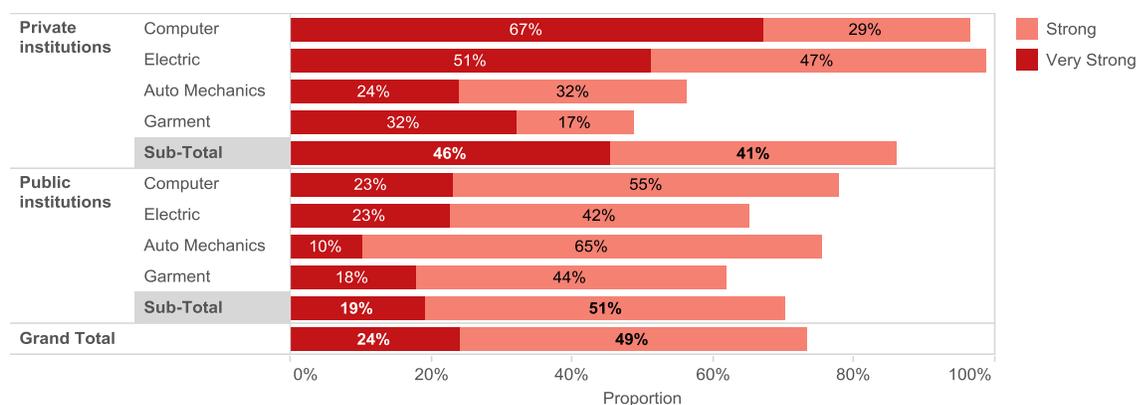
Table 3: Percentage of students satisfied with respective areas, by type of institution and trade

	All	By type		By Trade			
		Private	Public	Computer	Electric	Auto mechanics	Garment
Skills acquired	73	86	69	87	71	69	54
Reputation	64	84	60	73	62	68	70
Quality of teachers	69	88	64	82	65	73	64
Quality of facilities	63	75	60	72	59	68	52

Source: Author’s analysis using the tracer study.

One of the key elements of satisfaction seems the labor market relevance of training. Students in private short-course training providers regard the training curriculum more relevant to labor market needs than students in public training providers. Figure 13 below summarizes students’ opinion about how relevant their curriculum contents are to labor market needs. Eighty-six percent of the students in private institutions agreed that their curriculum was relevant to labor market needs, while only 70 percent of the students in public institutions did so. Especially, the curriculum of computer trades and electric trades at private institutions are regarded as highly relevant to labor market needs, which may have contributed to the high rates of their satisfaction about the skills and reputation gained. However, students’ assessments of the curriculum of auto mechanics and garment trades are not as high. They are also somewhat lower for private institutions, which is consistent with students’ satisfaction about the skills gained. For both private and public institutions, garment trades are one of the weakest in terms of the relevance of curriculum.

Figure 13: Students’ opinion about levels of relevance of curriculum to labor market needs by type of ownership and trade



Source: Author’s analysis using the tracer study.

### 3.3. Cost and Financing of the Short-Course Trainings

#### Cost and financial support

**Almost everyone in the STEP-supported trades in public schools are exempted from tuition fees while most of them bear the transportation costs.** Table 4 shows how much students are paying for tuition, textbooks/learning materials, and transportation by the sampling categories. Not surprisingly, in STEP-supported trades in public schools, as much as 84 percent of the students are fully exempted from tuition

fees, and 16 percent are paying fees.<sup>12</sup> Meanwhile, the majority (80 percent) of students in non-STEP-supported trades are paying tuition fees; however, there still are a good number of students who are exempted from tuition fees (for other reasons than the STEP support). In private institutions, the sample included students of both supported and non-supported trades, so only 22 percent of them are paying the fees. The majority of short-course students are not paying for textbooks and other learning materials. Of all students irrespective of courses, 76 percent reported paying no money for buying textbooks and learning materials. On the other hand, most of the students are paying transportation costs for commuting to the institutions. The costs for transportation may well be the only schooling expense for most of the students in the STEP-supported trades as they are not paying for tuition fees and learning materials.

**Table 4: Percentage of students paying tuition fee, textbooks, materials, and transportation**

	<b>Public, STEP non-supported trades</b>	<b>Public, STEP supported trades</b>	<b>Private</b>	<b>All</b>
Tuition fees	80%	16%	22%	34%
Textbooks & learning materials	32%	23%	15%	24%
Transportation	75%	79%	81%	78%

Source: Author's analysis using the tracer study.

**There are considerable variations in the amounts of tuition fees charged by short courses depending on the trades.** The trades which require heavy equipment and machineries (i.e., auto-mechanics, RAC, and welding) have considerably higher tuition charges than other trades. The most expensive trade is welding with charges about BDT 5,600 (for the six month course), which is more than double the amounts charged by other softer trades such as graphic design (BDT 1,860) and computer (BDT 1,946) trades (Table 5). On the other hand, garment trades charge very little if none at all. The average tuition fees charged at non-supported garment trades which do charge tuition fees is merely BDT 220. This is most likely due to the intensive vocational supports from development partners as well as active skills development investments by private garment companies. As for the costs for textbooks and learning materials, it is found that short-course students are spending only insignificant amounts of money to purchase books and materials even when they spend any money at all. On average, excluding the majority who do not spend at all, they spend only about BDT 500 for textbooks and learning materials. Expenditures for commuting appear to be the major expense item for many short-course students. On average, they spend about BDT 2,000 for covering transportation costs (for the entire six months period), which is more or less equivalent to the amounts of tuition fees for graphic design and computer trades. This shows that, for the STEP-supported students, a monthly stipend of BDT 700 (a total of BDT 4,200) should be able to cover the expense of textbooks, materials and transportation.

<sup>12</sup> Students in supported trades pay only nominal tuition fees of less than BDT 1,000.

Table 5: Average amounts of schooling expenses by trade\*1

Trade	Expense categories		
	Tuition fee*2	Textbook/materials	Transportation
Auto Mechanics	5,240	630	2,535
AutoCAD/Civil	1,860	759	2,301
Computer	1,946	348	1,846
Electric	2,528	687	1,961
Garment/Batik	220	200	1,772
RAC	4,075	424	2,269
Welding	5,622	517	2,178
Total	2,480	524	2,093

Unit: BDT

\*1: the average figures are calculated for those who do pay for each item, excluding those who are not paying.

\*2: the averages for tuition fees are calculated based on data from public non-STEP supported trades as the tuition fees at STEP-supported trades are subsidized heavily or exempted fully.

Source: Author's analysis using the tracer study.

## 4. Job Placement

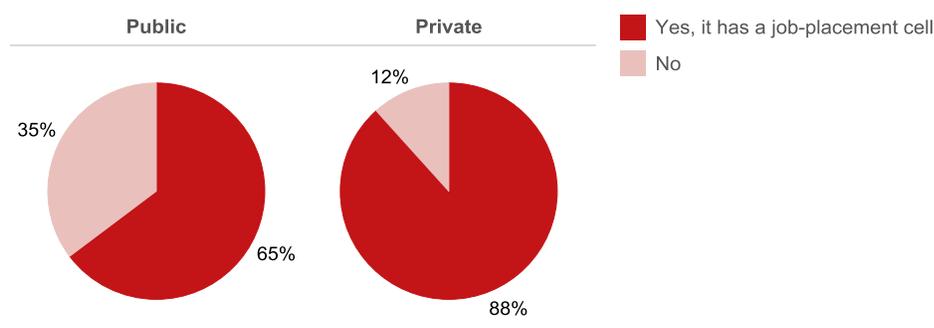
The purpose of this chapter is to describe and analyze job placement services offered by the institutions, and to describe other training like apprenticeship that students may have. The main data sources for analysis are the current student module and institution module of the tracer study. STEP has supported the establishment of job-placement cells in all short-term course training institutions, and it is important to monitor the performance of those job placement cells.

### 4.1. Job Placement Services

#### Services offered and utilized

**While most institutions claim that they have established job-placement cells in the institutions, they are not well known to the currently enrolled students.** The statistics tell that 35 out of 36 surveyed institutions have established the job-placement cells (see Annex 1). However, as shown in Figure 14 below, respectively, only 65 percent and 88 percent of students in public and private institutions knew that job-placement cells were in service in their institutions. Job-placement cells and their services seem to be widely available for short-course students both in public and private institutions, but the availability of the service is not well understood by the students, especially in public institutions. One explanation can be an inadequacy of staffing. Among the 36 institutions, four institutions assign only one staffer and 12 institutions assign only two staff to their respective job-placement cells. Due to lack of staffing in many of the institutions, students may not benefit from information. While almost all the students (92 percent) who were aware of the existence of job-placement cells said that their institutions were regularly sharing job-opportunity related information with students, only about half of the students who did not know about the job-placement cells were receiving information related to jobs from the institution. In order to provide necessary employment-related information to students, it is important that the institutions promote the existence of job-placement cells through regular information sharing and awareness raising.

Figure 14: Students' responses about establishment of job-placement cells by ownership



Source: Author's analysis using the tracer study.

**Private institutions are making various job-placement services available to students more frequently than public institutions.** Short-term training providers are providing a variety of job-placement services to students, including career counseling, organizing job fairs, and linking students with prospective employers in the industries. Figure 15 below shows students' responses on how frequently their institutions provide such services. In general, private institutions appear to be providing more intensive job-placement services. For instance, as much as 80 percent of students in the private institutions are receiving career counseling services very frequently either on a daily or a weekly basis; however, most of students in the public institutions receive career counseling services on a monthly basis or even less frequently. Services to help students to get in touch with industries are extremely important tools for job-placement support. However, public institutions provide such services far less frequently than private institutions. Only 21 percent of students in public institutions receive services to link them with industries on a daily or a weekly basis, whereas 46 percent of students in private institutions do so on a daily or a weekly basis. Organizing job fairs requires institutions to have good networks with industry stakeholders. The ability of public institutions to organize job fairs seems to be limited as students in public institutions participate in job fairs far less often than students in private schools.

Figure 15: Job-placement support services provided to students by ownership

	Career Counseling		Link students & industries		Job Fair	
	Public	Private	Public	Private	Public	Private
Not provided at all	8%	0%	27%	12%	37%	13%
a few times a year	37%	6%	40%	26%	39%	25%
on monthly basis	29%	13%	11%	17%	12%	18%
on weekly basis	13%	53%	14%	12%	9%	11%
on daily basis	13%	27%	7%	34%	3%	33%

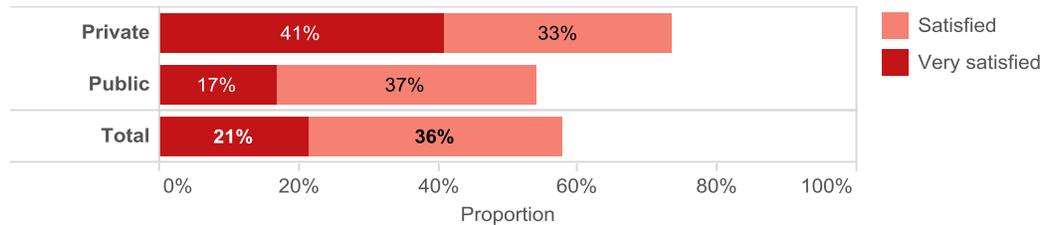
Source: Author's analysis using the tracer study.

### Students' opinion about job placement

**Students' level of satisfaction with the experience of short-term training is moderately correlated with the job-placement support.** One of the main reasons for the relatively low satisfaction of students with the experience of short-term training programs is their low satisfaction with job-search support from the institution. Overall, 57 percent of the students are satisfied with job-search support from institutions.

Generally, students think private institutions have strength in their capacities for job-placement services and networking with industries, which leads to a very high level of satisfaction at private institutions – with 41 percent of their students being very satisfied with the job-search support services (Figure 16). Meanwhile, public school students who said they were very satisfied with job search support services were only 17 percent. There seem to be a lot of capacity building needed at public institutions for strengthening the implementation of job-search support services.

Figure 16: Students’ satisfaction with job-search support from institutions by ownership



Source: Author’s analysis using the tracer study.

## 4.2. Apprenticeship and Other Training Experiences

### Participation in apprenticeship

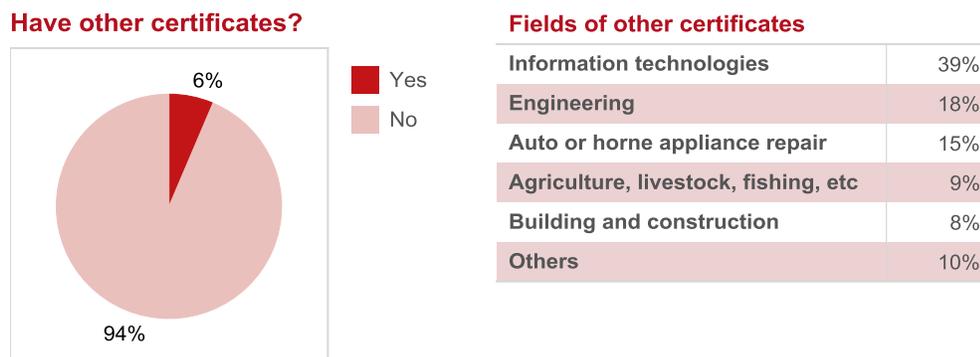
**Short-course students with any apprenticeship experience are extremely few.** In total, merely 3 percent of the short-course students have any experience of doing any apprenticeship before coming to the short-course programs.<sup>13</sup> Given their rather long years of being jobless before coming to the short-courses, this extremely low level of apprenticeship participation indicates a lack of readily accessible apprenticeship opportunities even for youths with secondary or higher secondary school certificates despite the government’s legislation for apprenticeship programs. Thirty percent of those who did have some apprenticeship experience found the opportunity through their institutions, and others (18 percent) found it through applying for a job and job placement agencies. Informal channels such as networks of friends and families also seem to be common ways to find apprenticeship opportunities (17 percent).

### Industry certification

**A small number of short-course students have other industry-recognized certificates prior to joining the short-course programs.** About 6 percent of the students said they had other officially recognized certificates. Those certificates are expected to aid them in finding suitable employment in future on top of the certificate and skills they will acquire through the short courses. Fields of certificates vary widely; however, certificates of information technology related skills appear to be most popular. Thirty-nine percent of those who have other certificates have IT-related ones (Figure 17). IT skills certificates are likely to be helpful qualifications for a wide range of job opportunities.

<sup>13</sup> Apprenticeship and internship opportunities are also limited in the formal sector, despite current legislation encouraging apprenticeship. Chapter XVIII of the Labor Act (2006) regulates the structure and legal preconditions of formal apprenticeship training. It encourages apprenticeships for enterprises with more than 50 employees and provides incentives, including income tax relief for all costs incurred by apprenticeship training and a rebate. The scheme is still uncommon, however, and many employers are unaware of the legislation (Cordier et al. 2012). According to the Enterprise-based Skills Survey, about 3 percent of formal sector enterprises offer apprenticeship/internship opportunities, and such opportunities are mostly provided by large enterprises (World Bank 2013). On the other hand, Education Watch 2012 reports that the proportion of youths aged 10–24 who participated in apprenticeship training was 5.7 percent, most of which take a form of informal apprenticeship (CAMPE 2013).

Figure 17: Other industry-recognized certificates and fields of other certificates



Source: Author's analysis using the tracer study.

## 5. Labor Market Outcomes of Short-Term Training Course Graduates

This chapter aims to describe and analyze labor market outcomes of short-term training graduates. Labor market outcomes discussed include, labor force participation, employment status, and earnings. The chapter will discuss the status of graduates after 6 or 12 months of completing the short-training courses and analyze what factors are associated with successful labor market outcomes. The main data source for analysis is the graduate module of the tracer study.

### 5.1. Employment Status

**The labor force participation rate of short-term training graduates is relatively low – around 50 percent – after 6 months and 12 months of completing the program.** The labor force participation rate is the proportion of graduates who are either working or unemployed (i.e., economically active). For cohort 1 (after 6 months) and 2 (after 12 months), it is 50.8 percent and 49.3 percent respectively. It is quite low, but not too surprising because the average age of the short-term training students is around 22 years and many still have an option of pursuing further education. The government LFS 2010 also showed that the labor force participation rate was 46 percent for the youths aged 15 and 24, so the information is more or less consistent. However, given that the program is specifically targeted to those who are interested in going into the labor market, this 50 percent labor force participation rate sounds not very high. Interestingly, the distribution of status is quite similar between 6 months and 12 months after graduation. After six months, 21.3 percent of the graduates are working as wage employees, 4.1 percent as self-employed, and 7.0 percent as casual employees. Thus, a total of 32.4 percent graduates are working while 18.4 percent are unemployed. Combining 32.4 percent of the working population and 18.4 percent unemployment gives a 50.8 percent labor force participation rate among the short-term training graduates after 6 months of completing the training. The remaining 49 percent are out of the labor force. Of them 37.7 percent are students, 5.7 percent are homemakers, and 6.3 percent are considered being idle (Figure 18). Due to a similarity in the status of cohort 1 and cohort 2 graduates, the rest of the analysis focuses on only cohort 1 (6 months after graduation).

**Box 1: Definition of status used in this study**

**This survey uses the total number of graduates from short-term training programs as the ‘survey population.’**

**Labor force:** The number of people available for work, which includes both the employed and the unemployed.

**Labor force participation rate (LFP):** The ratio between the labor force and the overall size of the cohort. In this study, the ratio of employed and unemployed as opposed to the graduates of short term training.

**Working status:** All people working, including wage employed, self-employed and casual employed, during the last seven days.

**Unemployed:** All people who are either employed (including wage, self, and casual) or not currently employed but actively seeking work during the last seven days.

**Employment rate (conventional):** The percentage of the labor force that is employed. The denominator is the labor force which does not include non-labor force.

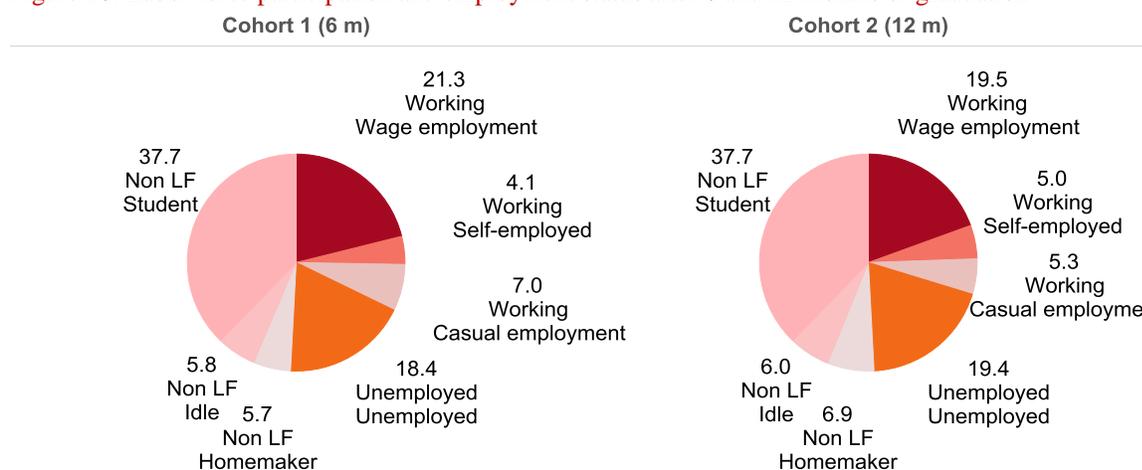
**Rate of employment among graduates:** The percentage of the graduates of short-term training who are employed. The denominator is all graduates of short-term training. Similarly, this study uses a term, rate of unemployed among graduates.

**Discouraged worker:** A person who is currently not actively seeking employment as a result of being unsuccessful in finding a job.

**Non-labor force:** Total survey population other than the labor force. The categories within non-labor force include discouraged workers, housekeepers or domestic workers, idle people, and students.

**Idle:** The people who are not engaging in any economic activities, searching for a job, studying, nor doing domestic work. In this survey, those who are waiting for employment are also included in this group if they are not currently doing any of the listed activities.

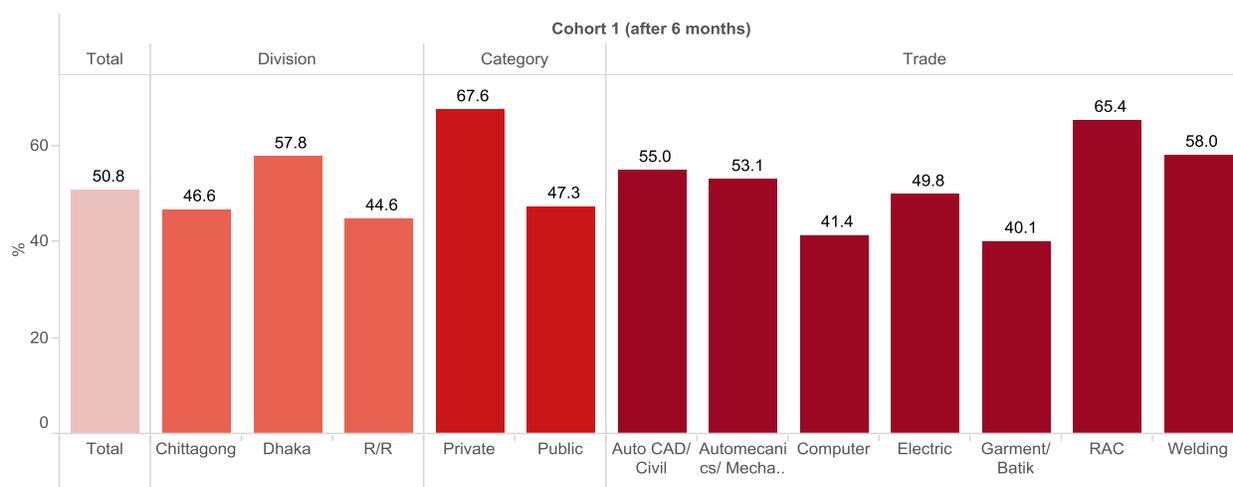
**Figure 18: Labor force participation and employment status after 6 and 12 months of graduation**



Source: Authors’ analysis using the tracer study.  
 Note: These statistics include all the graduates in the denominator.

As seen in Figure 19, there are differences across regions, types of institutions, and trades. Focusing on the group of graduates who completed training six months ago, 50.8 percent joined the labor force. By region, the labor force participation rate is the highest in Dhaka, at around 58 percent whereas it is 47 percent and 44 percent in Chittagong and Rajshahi/Rangpur, respectively. By institution type, 68 percent of graduates from private institutions are participating in the labor force, which is much higher than that of public institutions which have 47 percent participation rate. By trades, RAC graduates show the highest participation rate, at around 65 percent, whereas computer and garment trade graduates tend to show lower participation rates, at around 41 and 40 percent, respectively. The relatively low rate of labor force participation is not an intended outcome of many of the short-term training students as 99 percent of the current students were actually expecting to be working after completing the training as shown in Figure 11.

Figure 19: Labor force participation rate after 6 months of graduation, by region, type of institution, and trades



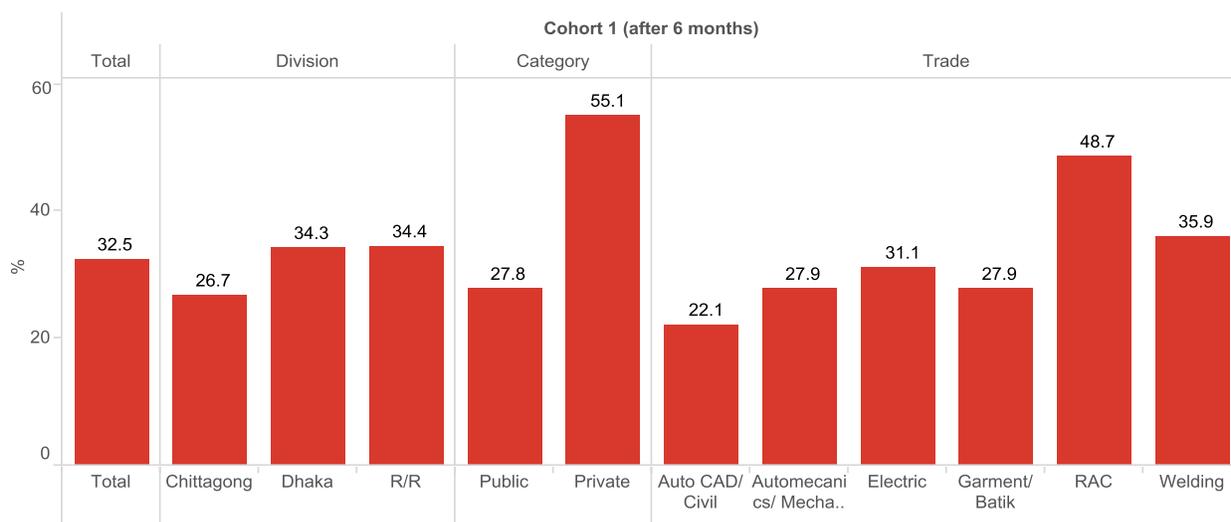
Source: Authors' analysis using the tracer study.

**The proportion of short-term course graduates working after six months is 32.5 percent,<sup>14</sup> and varies by region, institution type, and trade.** The estimated proportion of working population is consistent with the rates of employment reported by institutions through regular monitoring channels.<sup>15</sup> Geographically, the rate of employment is consistently around 34 percent in Dhaka and Rajshahi and Rangpur, and 26 percent in Chittagong. By type of institutions (category), there is a clear difference of labor market outcomes between public and private institutions. The proportion of working graduates is almost twice as high among private institutions as public institutions. Fifty-five percent of private institution graduates found jobs while it is 28 percent in public institutions. By trade, refrigeration and air conditioning (RAC) tends to exhibit the highest rate of employment, reaching 49 percent. While other trades show somewhat similar employment results, the graduates of autoCAD/civil tend to have difficulties in finding employment – at 22 percent. This may be a result of the market size, where there is not a big demand for autoCAD graduates at this moment, or it could mean that this level of skills is not expected from short-course graduates but from different grades, such as diploma level.

<sup>14</sup> The proportion of working students is 29.9 percent after 12 months. This is slightly lower than the more recent cohort (after six months of graduation).

<sup>15</sup> By using a conventional definition of employment rate, (i.e., excluding non-labor force population from the denominator), the employment rate is 64 percent for cohort 1 and 61 percent for cohort 2.

Figure 20: Percentage of short-term course graduates working after 6 months



Source: Authors' analysis using the tracer study.

Note: These statistics include all the graduates in the denominator.

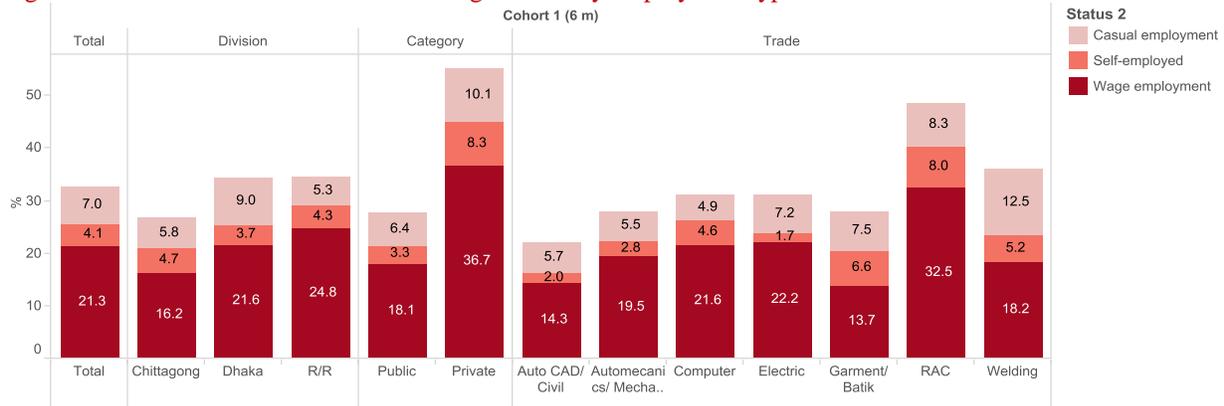
**While 32.5 percent of graduates found a job, engaging in wage employment seems relatively limited.**

Among the graduates who found jobs within six months, 21 percent have wage employment and 4 percent are self-employed. Seven percent of them have casual or informal employment,<sup>16</sup> mainly working as laborers or irregular paid workers, or working for their own family business, whether being paid or unpaid.<sup>17</sup> On the other hand, there seems to be higher proportions of self-employed workers among graduates of private institutions; 8.3 percent and 11.3 percent of graduates from private institutions engage in self-employment as opposed to some 2 to 4 percent from public institutions. Compared with the expectations of students (see Figure 11), the wage employment share must be disappointing for them. Forty-four percent wanted to work as public sector employees, and 27 percent as private sector employees. In reality, job opportunities for the public enterprises and the government sector are probably very limited and competitive, so 44 percent of the students who wished to work as public sector employees had unrealistic expectations in this regard. By employment type, graduates of RAC and garment trades are more likely to be self-employed than other trades. It is probably that the demand for RAC skills is not only wholesale but also at the retail level, so it is easy to start up one's own business by targeting retail customers. On the other hand, the share of casual employment seems higher among welding and RAC graduates – reaching 12 percent among welding graduates, implying that these skills are demanded in businesses but not on a full-time employment basis.

<sup>16</sup> In this survey, informal/casual work includes working for family business, unpaid household business support, casual and irregular paid worker, day laborer, and domestic worker in a private household.

<sup>17</sup> There are no consistent differences in these employment types across geographical areas between two cohorts except that the proportion of finding casual employment is large in Dhaka in cohort 1 but it is not the case in cohort 2.

Figure 21: Breakdown of short-term course graduates by employment type after 6 months



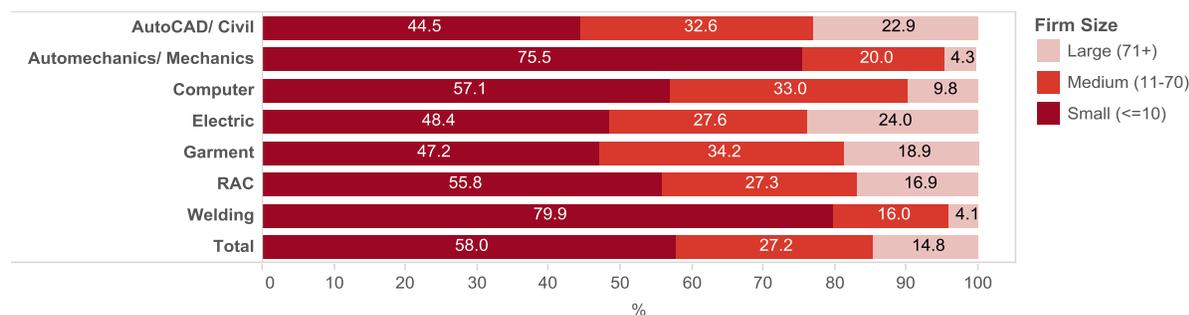
Source: Authors' analysis using the tracer study.  
 Note: These statistics include all the graduates in the denominator.

## 5.2. Wage Employment and the Self-Employed

**A significant proportion of those who find wage employment work in small enterprises.** Among the graduates who found wage employment, 58 percent found jobs in small informal enterprises with less than 10 employees while 27 percent found jobs in medium enterprises (with workers between 11 – 70) and 15 percent worked in large enterprises (with more than 71 workers). According to the assumption used for the Business Registry of the Bangladesh Bureau of Statistics (BBS), establishments with less than 10 employees are considered as informal establishments for practical purposes to understand the proxy formal sector.<sup>18</sup> Under this proxy assumption, the majority of short-term training course graduates work in small informal enterprises. The proportion of working in small businesses is particularly large among graduates of welding and auto-mechanics/mechanics trades, both exceeding 75 percent.

<sup>18</sup> Formal establishments may require different criteria, such as business registration and tax profile. The BBS used conventional criteria for their business survey.

Figure 22: Percentage of wage employed graduates by size of establishment, by trade



Source: Authors' analysis using the tracer study.

Note: The denominator used for this statistics is only wage employed graduates.

## Job search

**Informal personal network is the main median of finding wage employment as 66 percent of the employed graduates found jobs through their own personal networks.** Among those who currently have a job, 66 percent said they found jobs through their personal network and only 34 percent reported that they used formal channels. Within the formal channels, 25 percent are through public media advertisement and those who found a job through the connection of their school was only 8.4 percent, indicating a relatively limited role of schools for job search. By trade, graduates of electric and garment trades tend to benefit from school support more than other trades. Use of formal channels is particularly less common among the graduates of auto-mechanics and welding, where respectively only 8 and 9 percent actually used formal channels to find a job. Among informal channels, family/relatives and friends are equally common. Thirty-two percent used networks of family and relatives to get jobs and 30 percent found jobs through friends. By trade, while computer, electric, garment, and RAC show a relatively high share of using formal channels (in the case of computer trade, more than half of them find a job using a formal channel), use of personal networks is much more common for autoCAD, auto-mechanics/mechanics, and welding. Almost half of the autoCAD and auto-mechanics graduates rely on family/relatives network to find a job.

Table 6: Use of different channels of job search among working former graduates

	Formal channels				Personal network				Total
	Media advertisement	Through the school	Others	Sub-total	family/relatives	friends	Other networks	Sub-total	
Auto- CAD/ Civil	11.5	1.8	1.8	15.1	46.8	36.2	1.8	84.9	100.0
Auto-mechanics/Mechanics	4.8	3.5	0.0	8.3	46.2	42.8	2.7	91.7	100.0
Computer	39.6	9.9	0.6	50.2	26.9	21.3	0.6	48.8	100.0
Electric	27.9	13.8	0.5	42.2	23.5	28.4	6.0	57.9	100.0
Garment/Batik	26.7	15.1	1.9	43.6	32.5	25.9	0.7	59.2	100.0
RAC	34.0	4.6	0.7	39.2	32.3	20.9	9.1	62.3	100.0
Welding	7.5	2.1	0.0	9.5	38.8	50.2	1.5	90.5	100.0
<b>Total</b>	<b>25.4</b>	<b>8.4</b>	<b>0.6</b>	<b>34.4</b>	<b>32.1</b>	<b>29.8</b>	<b>4.0</b>	<b>65.9</b>	<b>100.0</b>

Source: Authors' analysis using the tracer study.

Note: Others include public and private employment services and job fairs.

Other networks include school alumni and the same village.

**The average time spent for a job search is much less if the graduates used informal network – on average the search time is 5.4 weeks for informal channels and 7.3 weeks for formal channels.** This is not surprising because formal search channels require more procedural steps, such as submission of CVs and interviews. Therefore, if job seekers are desperate for finding a job, use of informal channels is much more practical. The longest average weeks observed in the case of formal channel of recruitment among AutoCAD/civil graduates are almost 15 weeks. On the other hand, in none of the trades, the average time for finding a job takes more than four weeks (i.e., about a month).

### **Average monthly starting salary**

**The average monthly starting salary of short-term course graduates is BDT 5,162 for those who find jobs, and it varies across trades.** AutoCAD and civil graduates, although they find it more difficult to get jobs, tend to enjoy a higher monthly starting salary, at BDT 6,356 per month. Computer, garment, and welding graduates tend to start with a lower salary, which is lower than BDT 5,000 per month. The average monthly starting salary also varies by formal and informal sector. Except for the autoCAD/civil trades which show a slightly higher salary in the informal sector, generally the informal sector salary is much lower than formal sector workers. The garment trade graduates get a particularly low starting salary – at BDT 2,865, almost half of the salary given in the formal sector – when they are in the informal sector. The average monthly starting salary is in fact much lower than the students’ expectation before finishing the short-term training (see Table 2). On average, students’ expectation was BDT 10,972 per month, so students are getting less half of what they expected. As discussed later, the lower wage rate than the expectation is a reason for not accepting job offers for some students (see Figure 24).<sup>19</sup>

**Table 7: Average monthly starting salary, by sector and trade**

	<b>All</b>	<b>Formal</b>	<b>Informal</b>
AutoCAD/ Civil	6,356	6,211	6,718
Auto-mechanics Mechanics	5,071	5,811	3,707
Computer	4,629	4,888	3,337
Electric	5,606	5,601	5,625
Garment Batik	4,886	5,734	2,865
RAC	5,261	5,649	4,277
Welding	4,707	5,005	4,384
<b>Total</b>	<b>5,162</b>	<b>5,470</b>	<b>4,335</b>

Source: Authors’ analysis using the tracer study.

Note: The formal sector includes firms with more than 10 employees or small firms that have business registration.

### **Self-employment**

**The most common economic activities of self-employment are commerce and repair industry.** Four.one percent of cohort 1 and 5.0 percent of cohort 2 graduates decide to be self-employed. Compared to current students’ expectations (see Figure 11), in which 23 percent wanted to work as self-employed, the proportion of graduates who actually found their own businesses is much smaller. There are a number of constraints in starting up businesses, including credit constraints and constraints related to their own business skills such as management. Institutions are currently not providing such business related supports, so those graduates who wished to start up their own businesses might not know what to go about that. Among the successfully self-employed graduates, the most common sector is commerce (wholesale, retail)

<sup>19</sup> The study collected information on imputed earnings on self-employment, but due to the self-reporting nature of information, the imputed wage calculated from gross cost and gross earning information does not seem to be very accurate for comparison with wage employment.

and repair industry, reaching 30 percent of the share. On the other hand, graduates of the garment trade start their businesses in manufacturing – most likely producing clothes by themselves. By number, the graduates of the electric trade, followed by RAC, are the largest group finding self-employment.

**Table 8: Proportion of self-employed graduates, by economic sector and trade**

Trade	Economic sectors					Total %	Total N
	Agriculture, forestry and fishing	Manu- facturing	Electricity, gas, water	Commerce, repair	Others		
AutoCAD Civil	0	0	0	9	91	100	<b>43</b>
Auto- mechanics/Mechanics	14	0	0	60	26	100	<b>142</b>
Computer	6	0	0	31	63	100	<b>159</b>
Electric	7	7	37	14	35	100	<b>323</b>
Garment/Batik	0	62	0	11	27	100	<b>195</b>
RAC	16	0	25	43	16	100	<b>299</b>
Welding	34	6	0	39	20	100	<b>152</b>
<b>Total</b>	<b>12</b>	<b>12</b>	<b>15</b>	<b>30</b>	<b>32</b>	<b>100</b>	<b>1,312</b>

Source: Authors' analysis using the tracer study.

Note: This statistics concerns only self-employed graduates.

### 5.3. Unemployed and Non-Labor Force

**The percentage of graduates being unemployed after six months of completing the short course is considerably high especially in public institutions, calling for the needs for further employment support for the graduates.** The proportion of graduates being unemployed after six months is 18 percent.<sup>20</sup>

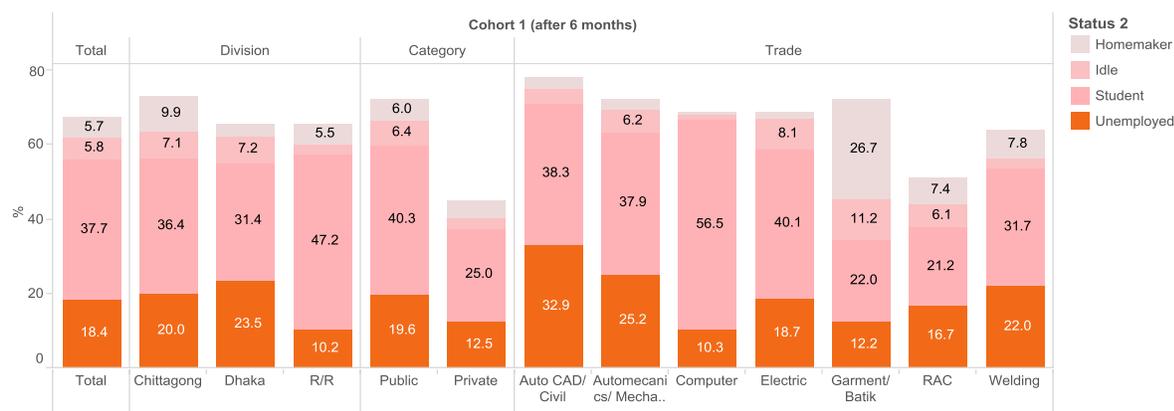
<sup>21</sup> Relatively high proportions of the unemployed are found in Dhaka and Chittagong when compared to Rajshahi and Rangpur while the proportion of students is very high in Rangpur and Rajshahi. As discussed in the next section, this is partly due to a high share of students coming to short-term training while waiting for admission to the next level of education. It seems that graduates in Rajshahi and Rangpur tend to pursue further education instead of looking for a job – 47 percent of graduates from Rangpur and Rajshahi continue as students while only 31 percent of graduates in Dhaka do. The unemployment rate is lower among private institutions. Only around 13 percent graduates from private short-term courses are unemployed while 20 percent of public institution graduates are. The difference between public and private institutions in terms of labor force participation and employment rate is stark. Among the idle population, there are a few graduates who are waiting for going abroad for work. By trade, autoCAD/civil graduates face the highest rate of unemployment after 6 months – 33 percent.<sup>22</sup> Generally, unemployment rate is lower in the garment trade but this is largely because a large proportion of graduates from the garment trade are female and they stay at home. The computer trade shows the largest share of continuing students, resulting in a relatively low unemployment rate. It is likely that many of the unemployed give up on looking for a job and come back to school or decide to keep themselves out of the labor market.

<sup>20</sup> The proportion is 19 percent among cohort 2 (after 12 months).

<sup>21</sup> By applying a conventional definition of unemployment rate, the unemployment rate (= the number of the unemployed/total labor force), which excludes non-labor force from the denominator, is around 36 percent.

<sup>22</sup> Overall, there is a general tendency that the share of unemployment is smaller in cohort 2 (12 months after graduation) than in cohort 1 (six months after graduation), but conversely the share of the non-labor force increases. In fact, the share of the unemployed among autoCAD/civil graduates drops substantially after 12 months, from 33 percent to 12 percent. Although there might be an effect of a different economic condition, it could be possible that many unemployed graduates stop looking for a job and decide to be back in school.

Figure 23: Proportions of unemployed and non-labor force after 6 months, by region, trade and type of institution



Source: Authors' analysis using the tracer study.

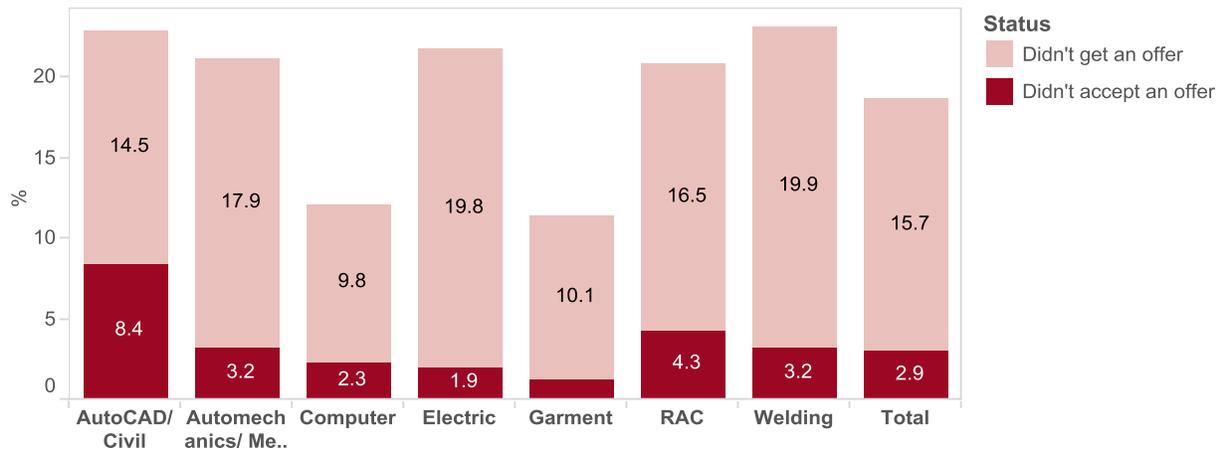
Note: These statistics include all the graduates in the denominator.

**Unemployed graduates have applied for 7.3 jobs on average during the first six month after graduation, but they are still looking for jobs.** Eighteen percent of the graduates are still unemployed after 6 months, but during the period of job search, they applied for 7.3 jobs on average. The number of jobs that the unemployed graduates applied is twice as high as the number that successful applied – 3.4 jobs on their average. The number of applications tends to be large for electric (11.6 jobs) and mechanics (8.9 jobs), while the number of applications is relatively small for autoCAD/civil (2.8 jobs) and welding (3.8 jobs) graduates. For autoCAD/civil trades, the graduates may not have found enough openings in the market.

**Three percent of graduates chose to be unemployed by rejecting an offer that they received or quitting a job that they once accepted.** While 18 percent of graduates are identified as unemployed (not working, looking for a job) after six months, those who did not get any offer at all are 15 percent and 3 percent actually received offers. Two-thirds of those who rejected an offer reported that they did not accept offers because of low salary and one-third reported that the job condition, contract type or location was a reason for not accepting an offer. The proportion of not accepting offers is relatively high among graduates of autoCAD, at 8.4 percent, implying that there is a mismatch of students' expectation and market value for the skills.<sup>23</sup> On the other hand, such non-acceptance cases are minimal among garment and electric graduates. The statistics show that about 20 percent of electric and welding graduates are unemployed and not getting any offers. This raises an important concern about the demand and supply mismatch since one out of five graduates of these trades are either not competitive in the market or simply that the labor market does not have immediate wage employment opportunities for them.

<sup>23</sup> Low salary was the most common reason for rejecting offers by autoCAD/civil graduates.

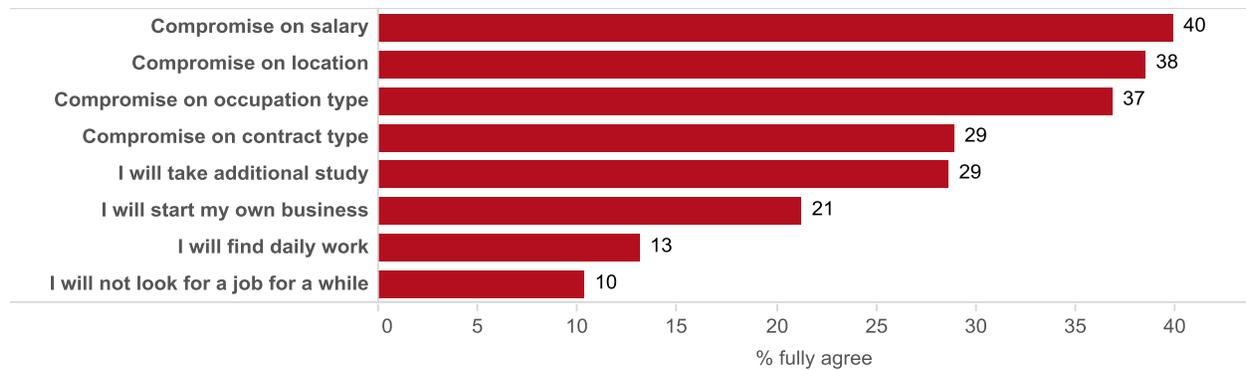
Figure 24: Breakdown of unemployment graduates by receiving an offer or not



Source: Authors' analysis using the tracer study.  
 Note: These statistics include all the graduates in the denominator.

**As a next strategy for finding a job, the unemployed graduates are somewhat willing to compromise on salary, occupation, and location, but less likely to start up own business or accept daily laborer work.** Unemployed graduates are asked to rate the likelihood of adopting the following strategies as next step.<sup>24</sup> Forty percent of the unemployed graduates agreed on compromising on salary. Thirty-eight percent and 37 percent of them said they are willing to compromise on location and occupation type. On the other hand, starting up own business and finding daily work are less favorable options – only 21 percent and 13 percent said those could be their options. Doing additional study or training is a possible option for some of them while 10 percent reported that they don't look for a job for a while. The sum of these two groups, about 30 percent, is likely to become discouraged labor force.

Figure 25: Perception of the unemployed for a next step of job search



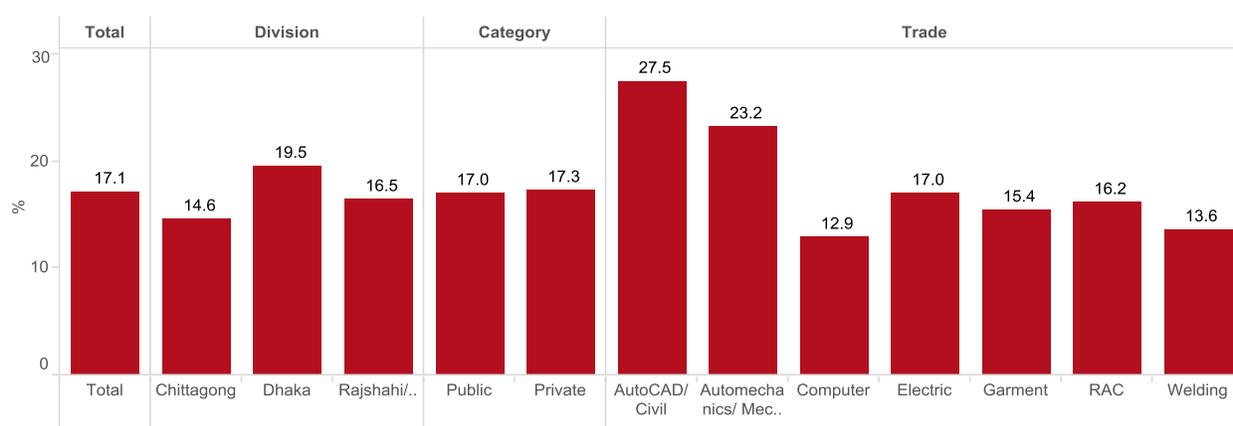
Source: Authors' analysis using the tracer study.

<sup>24</sup> The unemployed graduates are asked to rate the possibility of the next step on a scale of 1-10 (10 as a fully relevant option), and the answers with higher than 8 are considered as agreed.

## Discouraged non-labor force

**Seventeen percent of the graduates, who were unsuccessful in finding a job and decided to do something other than working or job hunting, can be considered discouraged non-labor force.** A total of about 10,000 graduates from cohorts 1 and 2 (about half of the graduates) are not in the labor force after 6 or 12 months of completing the short-term training. While 8,400 of them chose to be out of the labor force, 1,700 of them ended up being out of the labor force as a result of unsuccessful job searching. They looked for jobs and had a wish to be working, but could not find any jobs or the jobs that they want. Therefore, they are temporarily out of the labor force by not looking for jobs. In fact, 48 percent of those who are discouraged decided to be studying again; however, 29 percent of those discouraged became idle and 23 percent decided to be homemakers. While there is no clear trend of discouraged non-labor force between types of institutions, the share seems slightly high in Dhaka when compared to the two other regions. By trade, autoCAD and auto mechanics tend to show a higher rate of discouraged non-labor force than other trades.

Figure 26: Proportion of discouraged non-labor force among all graduates



Source: Authors' analysis using the tracer study.

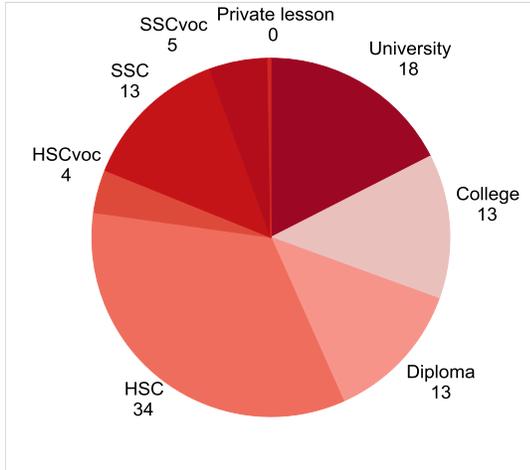
Note: These statistics include all the graduates in the denominator.

## Continuing students

**HSC level education and post-secondary education are common destinations among continuing students after completion of short-term training.** Although the continuing level of education depends on the academic qualifications obtained prior to coming to a short training course, a large proportion of students actually continue with HSC level education or post-secondary level education. Thirty-four percent of the continuing students reported that they moved on to the HSC level, 31 percent reported that they entered post-secondary bachelor level education at either a university or a college, 13 percent continued with a post-secondary diploma level course. This variety in the destination of continuing education shows that many students actually had a fairly high academic background prior to the short-term training which allows them to continue with higher level education. It is also interpreted that they come to the short-term training course for gaining an extra skill while waiting for admission to the next level of education. Because the academic requirements for short-term training is grade 8, some of them actually continue with SSC level education. However, while it is difficult to deny access of the already highly educated students to short-term training, it is more productive for the economy if the short-term training gives priority seats to the poorer people with a lower level of education who otherwise do not have any further opportunities of training and skills development. It is probably important to analyze if the intended target beneficiaries of

the short-term training program, the youth who are going to the labor market immediately after the training, did not lose an opportunity because of these relatively better off students coming to the short-term training course.

Figure 27: Percentage of continuing students by destination level of education



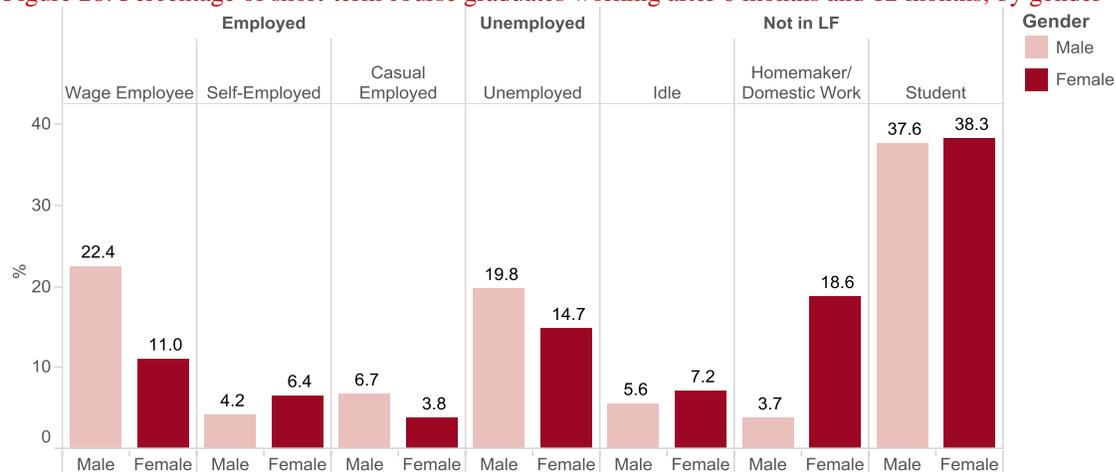
Source: Authors' analysis using the tracer study.  
 Note: These statistic concerns only continuing students.

## 5.4. Labor Market Outcomes and Personal Characteristics

### Gender

**The rate of finding wage employment is higher among male graduates.** Eighteen percent graduates from the previous 2 cohorts are female. The share of female graduates is largest in garment, which is 82 percent, followed by computer and autoCAD/civil, which is 25 percent. Twenty-two percent male graduates found wage employment, which is twice as high as female graduates, 11 percent. On the other hand, the rate of self-employment is higher among females, 6 percent as opposed to 4 percent among males. The unemployment rate is higher among male graduates, 20 percent compared to 15 percent among female graduates. It is likely that women find themselves as homemakers or engage in domestic work – 18 percent – while men still keep looking for jobs. This is likely to be correlated with the marital status of the women. As statistics have shown, 30 percent of the female students are married or once married (Figure 6). If their husbands are working, they have the flexibility of staying at home without finding employment. The proportion of continuing students is about the same at around 38 percent.

Figure 28: Percentage of short-term course graduates working after 6 months and 12 months, by gender



Source: Authors' analysis using the tracer study.

Note: These statistics include all the graduates in the denominator.

**Male graduates generally earn a higher average monthly salary than female graduates.** Among the wage employed workers, men tend to get BDT 5,244 as their starting monthly salary, which is higher than what women get: BDT 4,422. The difference in the wage rate is consistently higher among male graduates across all trades, and the difference seems relatively large for autoCAD/civil (a difference of BDT 2,200) whereas the difference is relatively small among RAC graduates (a difference of about BDT 200). The difference must be a combination of various factors, including the type of employment, location, skills and academic background prior to a short course, and prior job experience. However, from the results of the tracer study, it seems there is a general preference for male workers in terms of both access to wage employment and wage rate.

Table 9: Average starting monthly salary by gender and trade

	Male	Female	Total
AutoCAD/Civil	6,789	4,431	6,356
Auto-mechanics/ Mechanics	5,071		5,071
Computer	4,747	3,881	4,629
Electric	5,606		5,606
Garment	5,244	4,681	4,886
RAC	5,269	5,034	5,261
Welding	4,753	3,512	4,707
<b>Total</b>	<b>5,244</b>	<b>4,422</b>	<b>5,162</b>

Source: Authors' analysis using the tracer study.

### Prior work experience

**Prior work experience serves as a big advantage for short-term course graduates in finding a wage employment.** About 10 percent of the short-term course graduates have work experience prior to coming to the short-term training. Among them, the rate of finding wage employment is 52 percent, more than twice as high as those who have no work experience before. Part of the reasons is that some of them had a connection with employers. Twenty percent of wage employed graduates said that they were working for the same employers as before they came to the short-term training. By trade, prior job experience is most

closely correlated with RAC and computer graduates, showing 63 percent of them finding wage employment.

Table 10: Proportion of graduates finding wage employment, with or without prior job experience

	% Finding wage employment			Number of Graduates		
	No prior job experience	Prior job experience	Total	No prior job experience	Prior job experience	Total
AutoCAD/Civil	11.3	39.1	15.6	1,015	188	1,203
Auto-mechanics/Mechanics	21.6	39.2	23.5	2,796	333	3,129
Computer	19.5	62.8	21.8	3,972	228	4,200
Electric	23.3	52.8	25.9	4,628	447	5,076
Garment	21.2	51.4	24.6	1,910	243	2,153
RAC	32.7	63.5	36.2	2,385	306	2,690
Welding	19.2	51.5	22.7	1,730	208	1,938
<b>Total</b>	<b>22.2</b>	<b>51.7</b>	<b>25.0</b>	<b>18,436</b>	<b>1,954</b>	<b>20,390</b>

Source: Authors' analysis using the tracer study.

Note: These statistics include all the graduates in the denominator.

### Academic performance and cognitive skills

**Academic performance and cognitive skills play an important role for graduates in finding wage employment.** Overall, 32 percent of graduates with the highest GPA (A+) find wage employment whereas the proportion is 27 percent among A or A- achievers and 21 percent among below B+ achievers. The pattern of high academic achievers getting wage employment is prominent especially among Electric graduates. While slightly over a half of A+ holders got wage employment, the rate of finding wage employment is about a quarter among A or A- holders and only one in five among B+ or less academic achievers. A similar pattern is observed among autoCAD/civil and garment graduates. An apparent exception is welding where the wage employment rate is higher among low academic achievers – 25 percent among below B+ graduates while 5 percent among A+ holders. This may be partly correlated with the proportion of graduates who continue with schooling.

Table 11: Proportion of graduates finding wage employment, by GPA and trade (%)

	A+	A or A-	Below B+	Total
AutoCAD/Civil	35.9	12.3	12.0	15.6
Auto-mechanics/Mechanics	28.3	23.2	22.0	23.5
Computer	22.8	23.7	7.7	21.8
Electric	50.5	26.4	19.6	26.0
Garment	33.1	29.8	20.2	24.6
RAC	38.1	40.1	32.1	36.2
Welding	5.2	15.5	24.9	22.7
<b>Total</b>	<b>31.5</b>	<b>26.5</b>	<b>21.4</b>	<b>25.0</b>

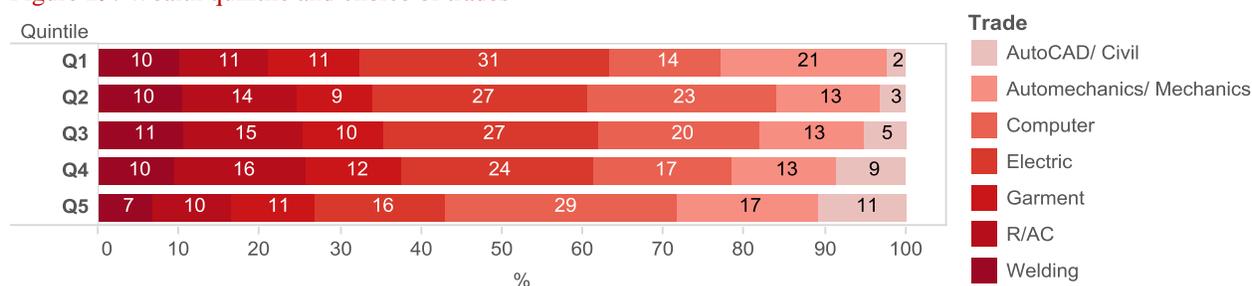
Source: Authors' analysis using the tracer study.

### Wealth

**Household wealth is correlated with the students' choice of trades and consequently with graduates' current status.** A wealth index has been constructed based on the household assets and household

characteristics, and wealth quintile has been created. The students of the richest quintile tended to choose more white-collar skills, such as autoCAD/civil and computer (11 percent and 29 percent, respectively, as opposed to 2 percent and 14 percent for the poorest quintile) while the poorer students choose more blue-collar skills such as auto- mechanics and electric. The selection of trades must have influenced the current status of those graduates. While wage employment is relatively flat except for the poorest quintile, the rate of unemployment follows a U-shape, where the rate goes down gradually from the poorest quintile to quintile 4, but jumps up to 21 percent among the richest quintile. The graduates of the richest quintile may afford to be unemployed because they do not have an urgency in finding a job, and the trades that they choose have relatively limited employment opportunities (autoCAD/computer) as we have already discussed. Self-employment was more common among middle quintiles maybe because self-employment requires some capital to start up a business with, which may not be available for the poorest quintile. Among the non-labor force, the share of homemakers/domestic workers gradually decreases from the poorest to the richest quintile.

Figure 29: Wealth quintile and choice of trades



Source: Authors' analysis using the tracer study.

Table 12: Distributional share of current status of graduates by wealth quintile (%)

	Poorest	Quintile 2	Quintile 3	Quintile 4	Richest	Total
Wage Employee	15.6	21.6	21.1	22.1	21.4	20.3
Self-Employed	2.2	3.7	7.3	6.8	3.1	4.6
Casual Employed	6.6	6.3	5.0	6.0	7.0	6.2
Unemployed	21.6	18.5	17.8	15.0	21.4	18.9
Idle	6.5	6.0	4.5	7.8	4.7	5.9
Homemaker/Domestic Work	10.8	6.0	5.2	4.7	4.6	6.3
Student	36.6	37.9	39.1	37.5	37.8	37.8
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Source: Authors' analysis using the tracer study.

Note: These statistics include all the graduates in the denominator.

## 5.5. Perspectives of Employers who Recruited Short-Term Training Graduates

Out of 953 cohort 1 graduates and 928 cohort 2 graduates, 218 and 191 individuals are found in wage employment by the former student module of this tracer study. From the pool of wage employed graduates, 114 and 111 graduates have been randomly selected and their employers were surveyed by the employer module. Overall, 225 out of 409 wage employed graduates were interviewed, raising the coverage rate to 55 percent.

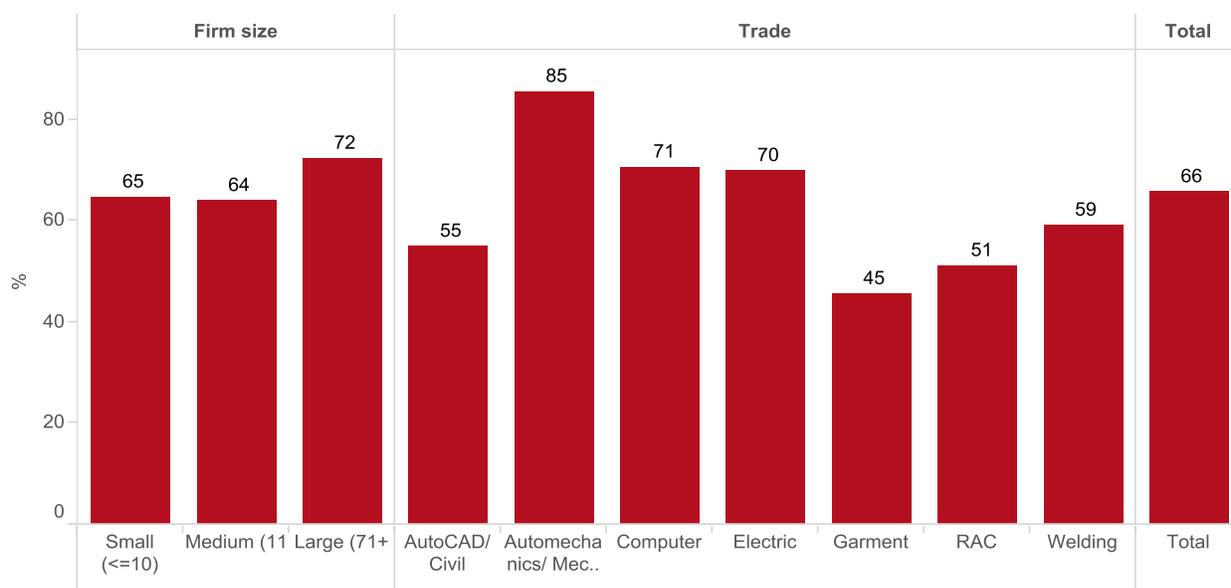
**Table 13: Sample size for employer survey module**

	<b>Cohort 1</b>	<b>Cohort 2</b>	<b>Total</b>
Total graduates	953	928	1881
Wage employment	218	191	409
Employer sampling	114	111	225
Proportion of wage employment interviewed	52%	58%	55%

Source: Authors’ analysis using the tracer study.

**Two-thirds of the firms that hired short-term graduates were looking for graduates from TVET institutions for their vacancies.**<sup>25</sup> Because the survey includes only firms that hired short-term course graduates, this statistic does not represent the entire labor market. However, a great majority of the firms interviewed were actually looking for graduates of TVET institutions specifically, expecting some specific technical or vocational skills. Overall 66 percent said they were looking for TVET graduates for specific posts. The proportion is slightly higher among large firms – 72 percent. It could be possible that the division of tasks is clearly defined and specific skills are demanded for specific posts in large establishments. By trades of short-course graduates, Auto-mechanics and mechanics, with 85 percent, seems most highly specialized skills where employers’ demand is also very specific to the skills. On the other hand, garment industries may not require vocational skills most likely because the firms can train the workers relatively easily and there are plenty of laborers available in the market. Although autoCAD/civil is a highly specialized skill, employers are not necessarily demanding TVET graduates for their posts. It could be that there is a skills mismatch for these graduates – although the graduates have autoCAD skills, they got posts that did not necessarily require their autoCAD skills.

**Figure 30: Proportion of firms that looked for TVET graduates specifically for their posts**



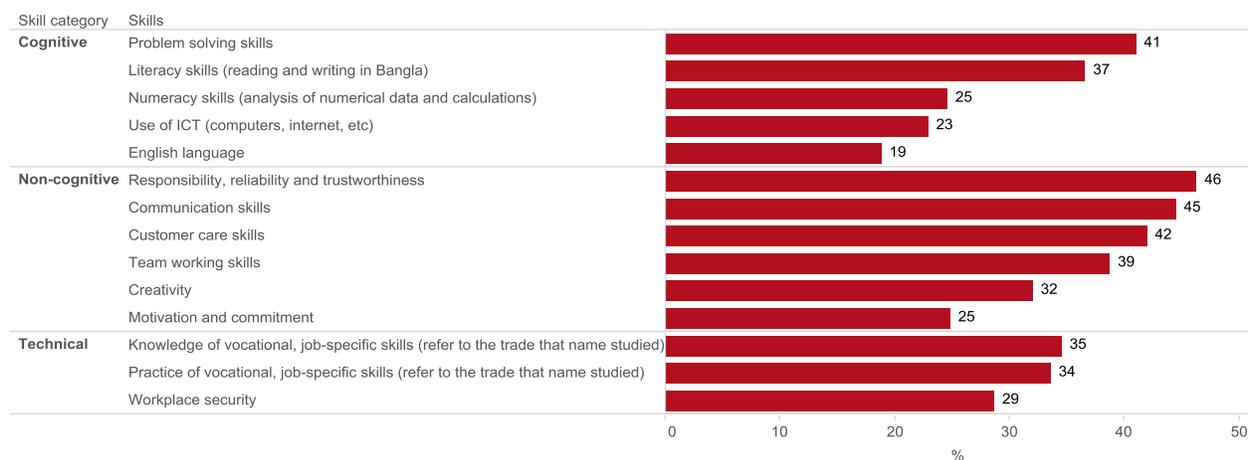
Source: Authors’ analysis using the tracer study.

<sup>25</sup> As per the questionnaire design, this refers to TVET graduates in general.

## Assessment of skills

**The employers of short-term course graduates do not always see the workers’ technical skills as their primary strength.** Employers were requested to assess the following sets of skills by a scale of 1-10 (10 being the highest). Figure 31 shows the proportion of employers which reported that the graduate identified by this survey is fully sufficient with the skill (with higher than or equal to eight on the scale). According to the employers’ assessment, the category of non-cognitive skills generally shows a higher rating. Forty-six percent of employers said the particular worker was fully sufficient with responsibility; 45 percent and 42 percent reported full sufficiency in communication and customer care skills. On the other hand, the rating of the technical skills category was relatively lower. Thirty-five percent said knowledge of the job-specific skill was fully sufficient and 34 percent said practical skills specific to the job was fully sufficient. Workplace safety is even less sufficient – with only 29 percent of employers rated fully sufficient.

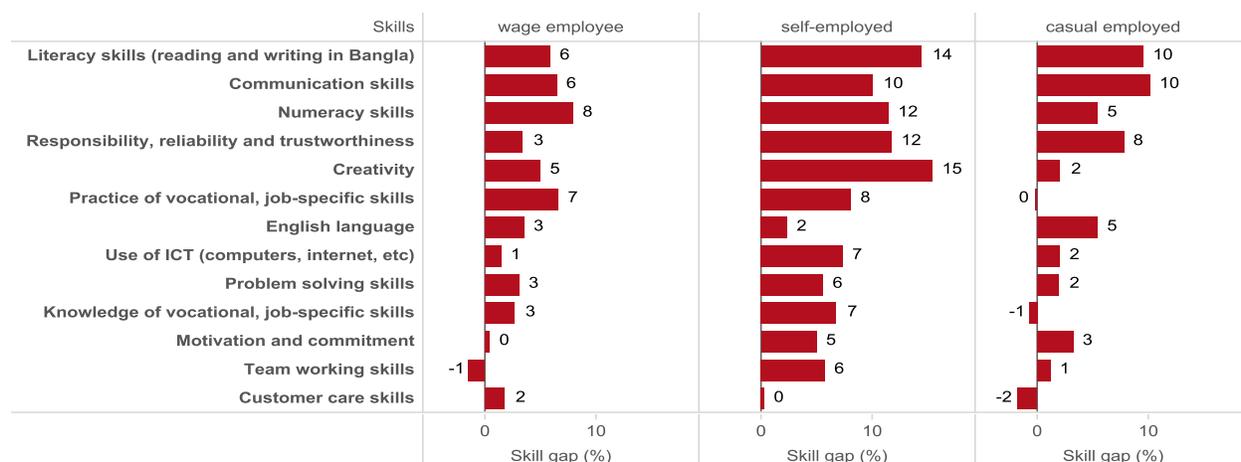
Figure 31: Proportion of employers which gives fully sufficient ratings to each of the graduates’ skills



Source: Authors’ analysis using the tracer study.

**From workers’ point of view, wage workers are generally confident in the skills that they have while self-employed workers tend to see more gaps between the skills level required and what they have.** Figure 32 shows the perception of skills gap that wage employed, self-employed, and casual employed workers face. In terms of literacy skills, 6 percent wage employees feel their skill level is short of what is required. The proportion is slightly larger among casual employed workers at 10 percent. On the other hand, 14 percent of the self-employed workers feel that their skills are not up to what is required, seeing a wider skills gap. Self-employed workers tend to feel more skills gaps than other workers in respective skill areas. Fifteen percent feel they are lacking creativity while only 2 percent of the casual employees feel the same. Because the skills that self-employed workers have to perform are diverse and they are solely responsible for the business outcomes, they see more of skills shortages than wage employees or casual employees, who tend to have restricted responsibilities around their own tasks.

Figure 32: Areas of skill gaps perceived by graduates, by status of employment



Source: Authors' analysis using the tracer study.

Note: Negative numbers indicate graduates feel their skill level is higher than what is required.

## 6. The Contributions of STEP Support to Trainee Enrollment and Labor Market Outcomes

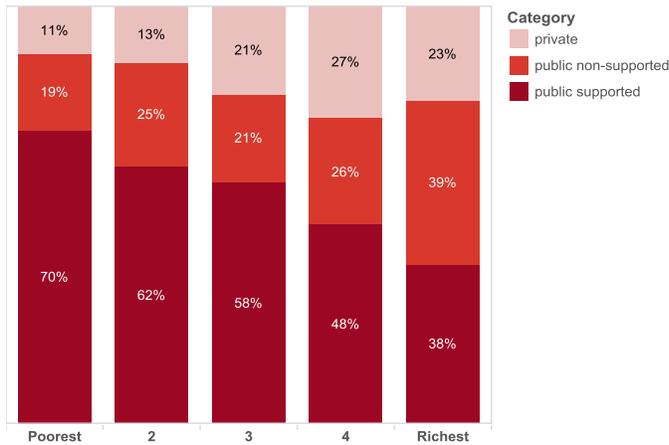
One of the main objectives of this tracer study was to assess the labor market outcomes of short-term training courses, especially of those that are supported by STEP. A more rigorous assessment of performance difference is expected when the second round of tracer study is conducted in two years while this assessment focuses on differences in observed performances and characteristics between STEP-supported and non-supported trades. It should be noted that one institution offers both supported and non-supported courses. Institutions that fulfill the minimum qualification requirements were invited to submit a development proposal for the specific courses which they would like to focus on, and the proposal was used to select both the institution and the courses that would be offered by the selected institutes. Institutions were encouraged to do a local labor market research for identifying the trade that would best fit in the local labor demands. The sampling design of the survey accounts for this variance and samples by trade and not by institution. A review of key statistics has highlighted some differences in labor market outcomes between STEP supported trades in public institutions and non-supported trades in public institutions. This section attempts to examine what have contributed to the differences in labor market outcomes between STEP-supported and non-supported trades.

### Comparison of Students' Family Backgrounds between STEP-Supported and Non-Supported Trades

**STEP-supported courses are successful in targeting poorer students with disadvantaged household backgrounds.** As much as 70 percent of students in the poorest quintile are studying free of charge under the STEP support in public institutions. The shares of students in the STEP-supported courses gradually decline in the higher wealth quintiles. Because tuitions are free and stipends are provided in STEP-supported courses, poor students who might otherwise not afford the training chose to join the STEP-supported courses, thus pushing up the ratio of enrollment in STEP-supported courses among poorer

students. Coinciding with the wealth status, support from STEP has also enabled more students with less well-educated household heads to enroll in short-course vocational trainings. The educational background of household heads of students in STEP-supported trades is weaker compared to those in non-STEP-supported trades – 18 percent of the household heads of students in STEP-supported trades have no formal education as against only 10 percent students in non-STEP-supported trades.

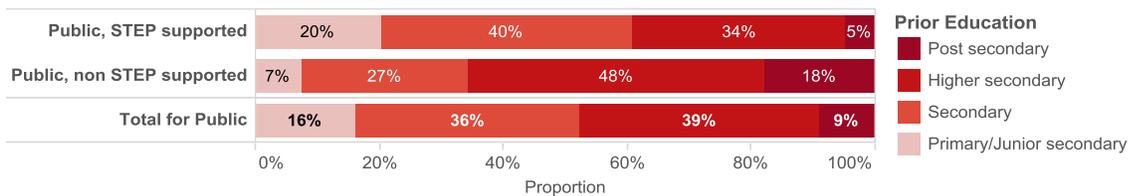
Figure 33: Status of STEP support by wealth quintile



Source: Author’s analysis using the tracer study.

**STEP supported courses are also successful in enrolling educationally disadvantaged students.** Prior formal educational qualifications of some of the students in STEP-supported courses are minimum. Twenty percent of students in STEP-supported courses only have junior secondary certificates which is a minimum requirement for enrollment in short-term vocational courses (Figure 34). The ratio of such students in non-supported courses is much lower at seven percent. The proportion of those who have only secondary school education is also considerably higher in STEP-supported courses. This finding clearly indicates the success of the STEP support in terms of encouraging vulnerable youths to take up job training opportunities under full subsidy and stipend support.

Figure 34: Educational qualifications of students by STEP support



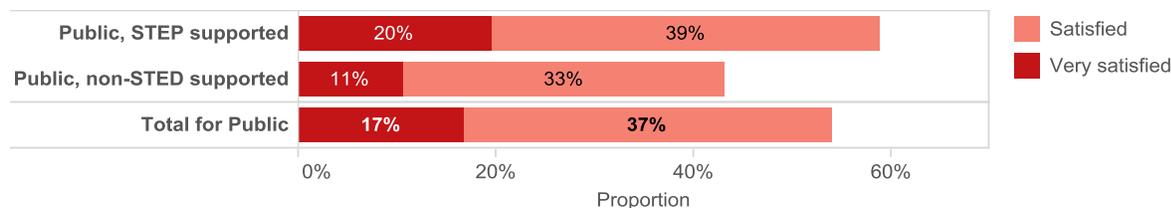
Source: Author’s analysis using the tracer study.

## Comparison of Student Satisfaction with Job Placement Services

**Students from STEP-supported trades have a higher level of satisfaction with job-search than students of non-STEP-supported trades.** Twenty percent of students in STEP-supported courses said they were very satisfied with the job search support they receive, while only 11 percent students in non-STEP-supported courses are very satisfied. The somewhat higher satisfactions shown by students in STEP-

supported trades may be attributable to some of the activities organized by the institutions using the STEP fund such as workshops and job fairs, or to general improvements to facilities made under the STEP support.

Figure 35: Students' satisfaction with job-search support from institutions by ownership and STEP support



Source: Author's analysis using the tracer study.

Students in STEP-supported trades in public institutions are benefiting from job search support somewhat more frequently than those in non-STEP-supported trades. Most of the students in the public institutions receive career counseling services on a monthly basis or even less frequently. However, STEP-supported courses in public schools may be somewhat more active with job-placement services like career counseling and job fairs. For instance, 60 percent of the students in STEP-supported trades in public schools receive career counseling services regularly at least on a monthly basis; while only 44 percent of those in non-STEP-supported trades receive such services on the same frequencies (Figure 36) in spite of the fact that they just belong to different trades of the same public institutions. STEP-supported students also seem to receive other types of job-placement services somewhat more frequently. STEP's support may have encouraged teachers in the supported trades to pay more attention to job-placement activities. Such differences may have contributed to higher satisfactions with job search support services among students in STEP-supported courses.

Figure 36: Job-placement support services provided to students by STEP support

	Career Counseling		Link students & industries		Job Fair	
	Public, non-STEP supported	Public, STEP supported	Public, non-STEP supported	Public, STEP supported	Public, non-STEP supported	Public, STEP supported
Not provided at all	19%	2%	24%	29%	33%	39%
a few times a year	37%	37%	51%	36%	49%	34%
on monthly basis	24%	31%	6%	14%	8%	14%
on weekly basis	8%	15%	10%	16%	6%	11%
on daily basis	12%	14%	10%	6%	5%	2%

Source: Author's analysis using the tracer study.

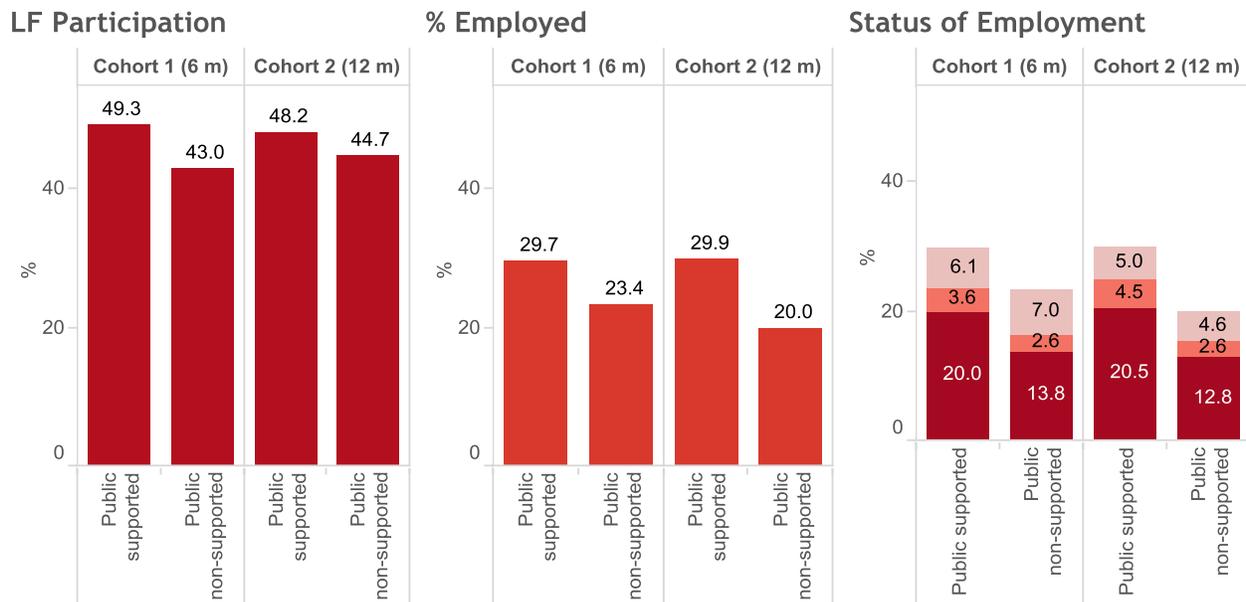
Note: The statistics show the response from students based on their experience and perceptions, so they may not accurately reflect what institutions offered.

## Comparison of Labor Market Outcomes

While all institutions offer both STEP-supported and non-supported trades/courses at the same time, the STEP-supported courses perform better than non-supported courses in terms of labor market outcomes. First of all, the labor force participation rate is higher among graduates of STEP-supported trades (49 percent after 6 months) than among graduates of non-supported trades (43 percent after 6 months). The difference is about the same among the cohort of 12 months later. Second, students from STEP-supported

courses have a higher proportion of those who are working than students from non-STEP-supported courses. About 30 percent graduates from STEP-supported courses were working after 6 months of graduation against 23 percent of graduates from non-STEP-supported courses (Figure 37). The difference grew larger among those who graduated 12 months ago: 30 percent for STEP-supported students against 20 percent for non-STEP-supported students. One of the reasons for such differences is the higher proportion of non-STEP-supported students who are still in school pursuing higher education. At the same time, more intensive and satisfactory job search support services that STEP-supported students were able to avail themselves of may also explain at least part of the differences in ratios of working. Third, looking at the status of employment, graduates of supported trades seem to be more successful in finding wage employment. Twenty percent of them are in formal wage employment after 6 and 12 months while 14 or 13 percent of them are in wage employment from non-supported trades. The STEP-supported courses, established in the selected institutions based on their study of labor market demands, seem to be producing the right results compared to non-supported courses that existed from before.

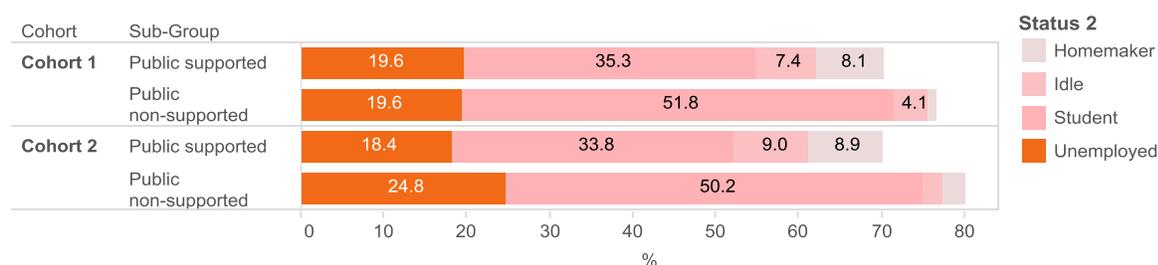
Figure 37: Percentage of short-term course graduates by working status after 6 months and 12 months



Source: Authors' analysis using the tracer study.

**One in four graduates from non-supported trades is still looking for a job after 12 months.** Coinciding with the low rate of employment, a large proportion of graduates after 6 months or 12 months is either unemployed or out of the labor force. Among the cohort of graduates after 6 months, the unemployment is about the same for both supported and non-supported trades. However, among the cohort of graduates after 12 months, the unemployment rate is 25 percent among non-supported trades while it is 18 percent among supported trades. One salient difference is the share of continuing students. The share of students after 6 months and 12 months among non-supported trades is over 50 percent while the share is about 34 to 35 percent among supported trades.

Figure 38: Percentage of short-term course graduates by non-working status after 6 months and 12 months



Source: Authors' analysis using the tracer study.

**Despite higher ratios of being in jobs, graduates from STEP-supported courses tend to have lower wages compared to those from non-supported courses.** When employed, the graduates of STEP-supported courses, on average, started out with smaller monthly salaries and are currently making smaller monthly earnings. Considering all the differences discussed in this chapter, however, such wage differences may not be surprising. In particular, their formal educational qualifications differ widely, which may explain a great deal of the wage disparities as wage scales are often linked with one's educational qualification. Also, students in STEP-supported courses are found to be from poorer families, which explains why they are more likely to take up whatever job opportunities are available even if they are a bit less well-paid to avoid prolonged joblessness. A further investigation is required to better understand this point.

Table 14: Average starting and current monthly salaries of employed male short-course graduates by STEP support

	Starting Salary	Current Salary
Public, STEP-supported courses	5,065	6,455
Public, non-STEP-supported courses	7,804	8,489
<b>Total</b>	<b>5,366</b>	<b>6,679</b>

\* Unit: BDT

\*\* The figures are averages of male graduates in all trades except computer trades. Female data were excluded due to unbalanced distributions, and computer trade was excluded due to the lack of sample for STEP-supported graduates from computer grade.

Source: Authors' analysis using the tracer study.

## 7. Conclusions

### 7.1. Key Findings and Policy Implications for Improving Short-term Training

**Short-term training plays an important skills development role in the Bangladeshi education and training system in this era of demographic dividend.** Skills development is one of the priorities for national economic development strategies. The total number of workers in 2010 was 56.7 million and the labor force grew by an average of 1.3 million per year. Looking ahead, a demographic transition continues to present growth opportunities by creating a demographic dividend.<sup>26</sup> Female labor force participation has been increasing as a consequence of girls' increased access to education. Yet, the Bangladeshi economy has a number of structural constraints, including a relatively high youth unemployment rate and a high underemployment rate. While there are increased opportunities of international migrant work, a great

<sup>26</sup> A higher share of the working-age population and a declining dependency ratio will contribute to a faster per capita growth.

number of youths are still struggling to find jobs. In this context, the short-term training program is one of the important instruments for bridging the gap between the needs of the labor market for increasing the pool of skillful workers and the aspiration of the students for finding good jobs. The program provides opportunities for anybody who has more than grade 8-level formal education to gain practical skills that can be practiced at workplaces after a short duration of training. It is one of the few training opportunities for those who have less education, and therefore is an important option for the policy makers in balancing the educational opportunities across different socio-economic groups of people.

**There is a great potential for making the short-term training course even better.** While the program has been successfully producing a number of skillful graduates, short-term training could potentially produce much better outcomes if some of the bottlenecks are removed. The study has identified four possible areas where improvements can be made to short-term training, which are:

1. Making the job matching mechanism more functional;
2. Improving the targeting of students;
3. Improving the labor market relevance of the training programs; and
4. Increasing the awareness of the programs to businesses and youths.

### **Making the job matching mechanism more functional**

**The most serious bottleneck for the short-term training program is the insufficient job-matching function.** The employment rate among the graduates tells the story: only some 30 percent of students can find a job after completing the short-term training even though almost everybody is coming to the short-term training course with the wish to find a job after the training course. Although this outcome results from a combination of factors, one of the most serious weaknesses, as identified by the survey, is the job-matching function of the short-term training institutions. While 35 out of 36 surveyed institutions said that they had a job placement cell and provided frequent supports to students, 35 percent of the students in public institutions did not know that a job placement cell existed in their institutions. This situation calls for urgent improvement in the job finding function of institutions. While the NSDP emphasizes the quality of trainings and employability of trainees, it gives relatively less emphasis on the role of institutions in assisting students' smooth and successful transitions from training to employment. Given the finding of this survey that many short-course students are struggling with job placement, the importance of institutional support for job-matching should be more emphasized within policy dialogues for skills development.

**In reality, most graduates need to rely on their personal networks for finding a job.** Only 8.4 percent of the workers reported that they found a job with support from the institutions, which means only about 2.5 percent of all graduates of short-term training courses got a job with support from the institutions. While students should be skillful enough to explore their own job opportunities and to find jobs by themselves, this finding signals that the role of institutions in matching students with decent jobs is very limited. In fact, two-thirds of the graduates who found jobs reported that they used their own personal network for finding a job. Personal network is a common channel for finding a job, especially in a labor market with widespread informal economy. However, from a labor market productivity perspective, this may not be an efficient way of matching skills with the demands because job seekers may not be able to find work that value their skills while employers may not find workers who have desired skill sets. To better match skill supplies to the industry demands, a more functional job matching role is expected between the institutions and industries.

**A great proportion of graduates end up being discouraged non-labor force as a result of unsuccessful job hunting.** As evident from the comparative statistics of current and former students, 99 percent of the currently enrolled short-term course students are wishing to enter the labor market after completing the course while more than 60 percent of the graduates are unsuccessful in finding jobs within 6 months or 12 months of completing the course. Seventeen percent of the graduates are considered as discouraged non-

labor force, who failed to find a job and went out of the labor force. Many of them come back to schools or just stay home. This is a big loss for the economy. A lot of motivated young workers coming out of training institutions with practical skills are not finding an opportunity to perform their technical skills.

**Job placement support that is currently provided by institutions is ineffective in rationalizing students' expectations.** Mismatches arise also between the labor market expectation and students' expectations. Overall 3 percent of the graduates do not accept the job offers that they receive. This fact demonstrates the gap between expectations of students and the labor market. This rate of non-acceptance is as high as 8.4 percent among autoCAD/civil graduates. Such a mismatch of expectation may be mitigated by improving job placement support at institutions. If students were able to do better market research before entering into the labor market, they could have had reasonable expectations about the jobs. Institutions can provide better counseling to those willing-to-work students and explore more suitable options for them so that they do not end up putting a lot of efforts in finding a job that they may not accept due to unexpected employment conditions.

**Proposed solutions include rationalizing students' expectations through career counseling and building more business connections, which could be implemented better by assigning a dedicated staffer or creating a post for a career counselor job placement expert.** The effectiveness of the job placement function largely depends on the role of institutions. The direction, partly supported by STEP, is clear that job support needs to be strengthened in order to enhance the labor market outcomes of short-term training. On the other hand, the practice of job placement support seems to vary across institutions. The job placement support activities, frequency of supports, awareness of such support by students, will need to be improved to a certain standard at all institutions. It is important to strengthen career counseling to each student because only one-third of graduates are finding a job after completing the short-term training even though the majority is interested in working. It is important to guide students in how to identify occupations and sectors that they fit, what the up-to-date labor market situation is in the sector that students are interested in, and how to write CVs and prepare for job interviews. At the same time, it is also important that the institutions build stronger ties with industries. There is a tendency that the number of industry partners increases by the experience of the head teachers at the institution. Industry relationship is particularly important for the short-term training as most of the students are coming to the institutions for getting skills for jobs. Stronger industry linkage will not only increase the immediate job placement, but also build the reputation of the institution in the local labor market and it will enhance the job placement of future students. Improvement in the job placement function is particularly important for public institutions. Institutions and policy makers, if necessary, should consider creating a dedicated post for career counselor or job placement expert in order to facilitate all these activities, especially at public institutions. It is important that institutions understand that job placement is also a core responsibility of training institutions, in addition to the provision of training.

### **Improving the targeting of students**

**The targeting of students should be improved so that the poor and less-educated youth population, which is in great need of acquiring basic breadwinning skills, can be the core beneficiaries of the short-term training programs.** One factor that seriously hampers the potentials of the short-term course is inefficient targeting of students. While the program is meant for students who are going to the labor market, quite a large number of students are coming with relatively high educational qualifications, including HSC, diploma, and bachelor degrees. The programs are open to anybody who is interested in acquiring practical skills; yet there is a possible risk that intake of those academically well-qualified students crowd out some of the potential students who were in desperate need of acquiring breadwinning skills. Considering that these programs are six-month short courses and regarded as entry-level vocational or technical skills, it is important, from a sector policy perspective, to improve the targeting of beneficiaries by focusing on the relatively less educated and who are more likely to enter the labor market after the

program. This finding of the survey resonates with the government policy. NSDP articulates the urgent need for making vocational trainings more inclusive for people with low levels of education, and makes several ambitious suggestions such as abolishment of the grade 8 prerequisite and introduction of courses for less well-educated people.

**Focusing on less-educated youths will improve the system-wide equity of educational opportunities.**

The World Bank (2013) pointed out that there was a trend of increasing inequalities of skills development opportunities associated with the level of formal education. Those who attain higher levels of education tend to take more post-employment training opportunities and pursue self-learning opportunities whereas those who have limited formal education often do not get any formal post-employment training and do not seek for self-learning opportunities. In this system-wide context of education in Bangladesh, it is important that the short-term training opportunity is targeted to those who otherwise do not have any skills development opportunities if they do not come to the training. Short-term training should give priority to the less educated, who are usually poorer and unskilled or semi-skilled, so that the training system provides important opportunities to those who otherwise do not have a chance for skills development. Looking ahead, recently initiated Recognition of Prior Learning (RPL) program can be taken into consideration when accepting students. RPL certifies basic skills acquired through practical experiences, and many of the beneficiaries of RPL are expected to be youths with low educational qualifications. RPL certification, therefore, can identify youths with weak educational qualifications (possibly below grade 8) who are skilled enough to be accepted and trained in the short-term vocational training courses. Making RPL certificate holders qualified to enroll in short courses even if they have less than grade 8 certificates would give essential skills development opportunities to less-educated youths while maintaining the quality of trainings.

**Improving the labor market relevance of the training programs**

**The overall low labor force participation rate among short-term training graduates and the high unemployment rate among them signal serious skills mismatch.** These mismatches are partly due to the quality of skills that short-term training graduates acquire and to the ineffective job matching mechanism. While constantly more than 30 percent of graduates are finding jobs, the labor force participation rate is relatively low for the short-term training as a whole, and the unemployment rate among the labor force participants is quite high. The fact that 16 percent of the graduates do not get any offers after 6 months or 12 months of completing the program raises a serious concern about the quality of skills provided by the training program as well as the ineffectiveness of job matching mechanism. The unemployed graduates have applied on average for 7.3 positions after six months of graduation, but they are unsuccessful in finding any jobs. It should be understood that their skills are not up to the mark for the employers, and therefore an improvement in their skills acquired is necessary.

**The labor market relevance of the short-term training cannot be improved without having teachers who know industries.** While the labor market relevance of training programs is one of the priorities of the government strategy, there are still mismatches of skills due to lack of relevance. Improving industry partnership and inviting guest lecturers is one approach to continuously responding to the ever-changing labor market demands for skills. At the same time, it is also important to recruit teachers with industry experience, rather than continuously hiring teachers with diploma but without experience. According to the survey, almost 80 percent of the teachers have less than three years of industry experience and 31 percent of them have no industry experience at all. The recruitment policy should reflect the importance of industry experience and should aim at increasing the ratio of teachers with industry experience. The quality of the teaching force is one of the pillars of NSDP. The policy sees the need for updating teachers' practical knowledge and skills, and suggests the introduction of 'return-to-industry' programs for teachers. The finding of the survey fully supports the importance of such an initiative.

**Enhanced collaboration with industry partners will improve the relevance of curriculum and the quality of job-placement services.** It is revealed in the survey that institutions' capacities to establish and take advantages of networks with industries still have large rooms for improvement especially for public institutions. Firstly, institutions should have at least one industry partner for each of the courses that they offer. The survey shows that some public institutions have no or few industry partners while others enjoy a large pool of industry partners. Along with raising the awareness of employers about the roles of short-term vocational trainings, they should also be mobilized as potential industry partners to help the institutions to improve the quality of training for their future employees. Existing industry networks can also be exploited more fully to involve industry partners in the delivery of trainings such as designing of curriculum and inviting guest lecturers. Establishing and strengthening industry relations units in public institutions will be important to facilitate the promotion of industry collaboration. Institution Management Committees (IMCs) at each institution will need to play a bigger role in this area.

**Linking short-term training certificates with the NTVQF will enhance the credibility of the training and graduates' skills.** It seems from the survey that industries and students are not too keen about the difference of different skill training programs which are made available by different providers in various forms. In order to improve the outcomes of short-training courses, enhancing the credibility of the short-term course certificate is necessary. The government is currently developing the NTVQF and setting up a system of competency-based skills framework. It is important to link the short-term training with relevant NTVQF level and accredit the short-term training programs. RPL also needs to be closely aligned to the NTVQF framework and existing training programs.

**It is important to incorporate some elements of business skills training which are especially practical and useful for self-employed workers.** In Bangladesh, 88 percent of workers are in the informal sector labor market, who are often found in forms of self-employment or small or family enterprises. From this survey, graduates who started their own businesses seem to give relatively lower ratings about the skills they acquired from the training program, and it is probably because they are exposed to harsher business environments and see the needs for business management skills. It is known that running businesses require management skills other than technical ones, such as marketing, human resource management, financial management, and so forth. While 23 percent of the short-term training students are interested in self-employment, less than 5 percent of graduates actually become self-employed. Providing practical start-up business knowledge can remove some of the impediments that students face when deciding to start up their own businesses.

**Opportunities should be kept open for private provision of short-term vocational trainings.** As demonstrated in this survey, private short-term training providers are generally outperforming public training providers in terms of the relevance of trainings and labor market outcomes. NSDP also emphasizes the importance of strengthening private training provision in Bangladesh's skills development sector. Responsiveness to market needs and commitment to promoting students' employment are clear advantages of private institutions. Despite the negligible differences in students' prior education attainment between private and public institutions, a considerably higher proportion of students from private institutions successfully transitioned to wage employment after graduation. Job-placement services of private institutions are regarded as more active and effective. While quality assurance of the private institutions is critical, encouraging the private provision of vocational trainings and extending generous pro-poor subsidies to private institutions would likely improve the labor market outcomes of graduates while ensuring the equitable access to quality vocational trainings.

## **Increasing the awareness of the programs among the businesses and the youth**

**It is critical to increase the awareness of employers about TVET graduates and short-term training.** One of the interesting findings of this survey is that quite a large proportion of employers responded that they were interested in hiring graduates of TVET institutions. This is not too surprising because the employer survey is conducted only among the employers who hired short-term training graduates. However, this is a unique finding in comparison to larger labor market surveys, such as labor force surveys or enterprise skills surveys. The enterprise skills survey, conducted by the World Bank in 2012, found relatively limited demands for TVET graduates even among manufacturing or industry sector enterprises. The low social status of TVET is also recognized by NSDP as a big challenge for the sector. One of the possible explanations for this difference is lack of awareness. The employers who know about the skills of TVET graduates are probably more in favor of recruiting TVET graduates because they are technically solid and ready for the real work. On the other hand, TVET is still associated with an image of academic inferiority to the general public. In order to overcome such a negative perception and promote the usefulness of practical skills to enterprises which are in fact lacking skillful workers, it is important to conduct more of awareness campaigns among the businesses and industries. Once employers understand the skill level of the short-term training graduates or simply know about such programs, they are more likely to value the short-term training and TVET. Specific skills are demanded for the firms that know about TVET graduates; therefore, promoting or marketing the advantage of having specific technical skills to the employers is an important action that the government should take.

**Awareness about the short-term training program should be increased among the working youth.** One of the main target groups of the short-term training is the working youth, who has grade 8 level education but not formal training experience. To build up the skill pool in the Bangladeshi labor market, building their skills is critical as they will continue to work in the labor market for the next 40 years. To attract the working youth population, raising awareness about the programs and financial compensation is necessary. The stipend scheme, as provided by STEP, is effective in bringing those students to the formal training programs. As revealed by the survey, the employment rate of short-term graduates with prior job experience is much higher than graduates without prior working experience.

**Increased job placement support should be provided to female students in addition to an effort of increasing their enrollment.** While the number of female students seems to be increasing, their labor force participation rate is relatively lower than male students. Female students are more likely to be married already, and if they do not find a job after training, they tend to remain out of the labor force. In order to increase social awareness about training programs for women and to promote their labor force participation, building up successful cases is a key. Building up successful cases of female training, employment or self-employment will help more women see them as role models and it will encourage more women to get into skills development and the labor market.

## **7.2. Lessons Learned from STEP Interventions**

**STEP support has been effective in targeting the neediest group of youths.** STEP assists poor students, who are in desperate need of acquiring skills for entering into the labor market, to participate in the short-term training through incentive schemes and quality improvement support to the institutions. The survey shows this targeting policy has resulted in an important difference in the characteristics of students in STEP-supported and non-supported trades even within the same institution. On average, students in STEP-supported trades are poorer in terms of household background, less academically qualified, and more prone to entering the labor market after the training program than students in non-supported trades. After six months of completing the training, the labor force participation rate is 49 percent among supported trades as opposed to 43 percent among non-supported trades. The percentage of graduates employed is 30 percent

against 23 percent among non-supported trades. The share of wage employment is 20 percent among supported trades, surpassing the 14 percent share of non-supported trades. Since the program objective is to provide skills to the youth who drop out of school early with the practical skills to perform in the labor market, this finding supports the effectiveness of the STEP approach in targeting the right population and improving the labor market outcomes.

**STEP's simple poverty-targeted stipend model can be easily replicated and can produce better outcomes.** The poverty-targeted stipends enable a group of poor, young, and less educated people, who are otherwise unable to afford a six months of training, to take training to build up their skills. The study has shown that this model works well to support the needy population and produces favorable employment outcomes. The model also proves that it is effective to re-enroll the working youth to come back to training program for their further skills development. In Bangladesh, the majority of the labor force is less educated and do not have formal training experience. This model of support will be able to target such a poor and less educated population and will lead to an overall better productivity of the labor force.

**STEP's support to institutions seems to have a positive impact on students' employment; however, STEP's impacts on students' employment and job-search behavior merit further investigation.** The survey has revealed that former students of STEP-supported courses in public schools are more likely to have found jobs than those of non-supported courses, but they, on average, settle for lower wages. Perhaps more satisfactory job-search support services at supported courses is one of the reasons for such differences; however, given that only a small minority of graduates found jobs through institutional support, the impact of improved job-search services can go only so far. Students in the supported courses are poorer, which makes it sensible for them to accept less well-paid but easier-to-find jobs. However, the ratios of employed graduates are constantly higher for graduates of the supported courses in every wealth quintile except in the richest, meaning that employment rates of supported students are higher even among the not-so-poor. As job-search behaviors and employment decisions involve highly complex decision-making processes, and the impacts on students' employment are a central issue for STEP's support to short-course training institutions, further investigations will be warranted through next rounds of tracer studies to enhance the understanding about how STEP support is affecting students' job-search and employment.

### **7.3. Implications and Possible Challenges for the TVET Sector**

**The country faces systemic labor market constraints, including a high youth unemployment rate, a high underemployment rate associated with a widespread informal labor market, and overall low levels of skills due to lack of training and education.** These systemic problems are combined outcomes of today's education, training, economic, and social situations. Not one single sector can solve these systemic constraints; however, there are a number of important things that the training sector can contribute to. One of the priorities of short-term training in this context is to give breadwinning skills to the poor less-educated youths, who are otherwise entering the labor market without skills.

**Another important contribution of the short-term training is re-skilling of the existing workforce.** It is commonly perceived that the role of the education and training sector is for children who are not yet working. However, in this approach, the dropped-out students are often out of the reach for further skills development opportunities, and the average skill level of the labor force will remain low because those young dropout workers will continue to work in the labor market for the next 30 to 40 years. In order to bring up the average skill levels of the Bangladeshi workers, re-skilling of the existing labor force is critical. NSDP also stresses the importance of re-training and outlines policies to expand working adolescents' access to quality skills trainings. Recognition of Prior Learning (RPL) is one initiative that the Government of Bangladesh has recently started to provide to the existing labor force, but its provision is still limited. Short-term training has already succeeded in bringing those youths who worked before to get further

training. This is an important vehicle today for delivering skills to a large pool of unskilled existing work force.

**The current short-term training is not accessible for youths who do not complete grade 8.** Although the short-term training program requires grade 8 level education, only about 50 percent of youths (aged 15-19) actually completed grade 8 in 2010 (World Bank 2013). This means the students who have completed grade 8 are in a better position, and the other half of students who already dropped out do not even have access to short-term training programs. NSDP clearly states that the government will introduce, among others, reforms to remove the grade 8 prerequisite for entering formal vocational training courses. Actions need to be taken to support the reforms so that the majority of Bangladeshi youth who do not have grade 8 certificates will be able to access much-needed skills development training.

**The short-term courses certified by BTEB should be continuously updated and upgraded to catch up with the labor market demands.** Today, 57 trades are certified by the BTEB while there are hundreds of different vocational and technical skills demanded in the labor market. While it is not necessary to offer every single skill through short-term training courses, it is important that BTEB continuously reviews and upgrades the list of certified courses for meeting the ever-changing needs of the labor market. Taking advantage of its low-cost edge over competitors, Bangladesh has the potential to become the “next China” with its potential export growth of labor-intensive manufactured products (World Bank 2012). In this context, it is important that training institutions produce enough variety and quality of skills to meet this upcoming demand.

**To improve the policy planning, it is important to generate more sector knowledge about the short-term training and overall TVET sector.** One of the difficulties faced when conducting this study was the lack of a comprehensive list of short-term training institutions and trades taught. While BANBEIS collects basic statistics about TVET programs, the database is not enough for providing information about the number of students by different levels of TVET training or by trades. Currently, the skill sector does not have a complete picture of how many institutions provide what types of training to whom. In order to improve the overall service delivery of training programs, developing a holistic database of training institutions and programs is necessary. The census of training institutions may be required at one point for improving the policy planning for the skills sector.

**Public and private partnership between institutions should be promoted for mutually complementing the weaknesses.** The study has shown that differences of strengths and weaknesses of public and private institutions. Private institutions demonstrate much stronger industry connections and higher labor market outcomes. Public institutions can take lessons from these experiences to better serve their own students. On the other hand, the advantage of public institutions is the variety of trade offers and often the availability of better equipment and machineries. While sometimes public and private institutions are competitors in the same local market, there are successful cases of public and private partnership where private institutions send their students to public institutions for using industry-specific machinery that the private institutions do not have. The central government can play some role in facilitating such public and private partnership for better service to the population of the country.

**The TVET sector should be better coordinated and streamlined for improving the credibility of skills that trainees acquire, especially in quality assurance and certification.** Skill trainings in Bangladesh are offered in myriad ways, involving different training providers, target populations and training pathways. While expansion of training facilities through different providers has the benefits of reaching different population segments, lack of coordination among key agencies is likely to contribute to non-optimal outcomes in resource utilization and skills development. According to a sector mapping study, 20 ministries are also involved in providing some kind of skills training with different qualification types. Lack of coordination undermines the credibility of qualifications that trainees get. For example, there are a number

of very short-term training courses (2-12 weeks) for migrant workers, but their qualifications are often unrecognized by foreign employers because such programs are not certified by trustworthy bodies. It is important to streamline the qualifications across different types of training so that employers can better trust the credibility of qualifications.

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## Annex 1: Educational Services at Training Institutions

### A1.1. General Characteristics of Institutions

The purpose of this annex is to give an overall description of the surveyed short-course training providers. Under STEP, 42 public and 8 private short-training institutions that have been competitively selected, are supported with an Institution Grant. These 50 institutions are the sampling frame for the survey. Because the sampling strategy was designed to sample trades, the survey did not aim to obtain a representative sample of institutions. However, as Table 15 shows, most of the institutions in the four surveyed geographical regions are covered by the survey. The main data source for analysis is the Institution module.

Table 15: List of 50 STEP-supported Short-Course Training Institutions

No.	Division	Institutions	Management	Institution Type	Sampled
1	Barisal	TTC, Barisal	Public	TTC	-
2	Barisal	TTC, Patuakhali	Public	TTC	-
3	Barisal	MTTC, Barisal	Public	TTC	-
4	Barisal	TSC, Barisal	Public	TSC	-
5	Chittagong	TTC, Chittagong	Public	TTC	Yes
6	Chittagong	TTC, Comilla	Public	TTC	Yes
7	Chittagong	TTC, Noakhali	Public	TTC	Yes
8	Chittagong	MTTC, Chittagong	Public	TTC	Yes
9	Chittagong	TTC, Bandarban	Public	TTC	Yes
10	Chittagong	TTC, Rangamati	Public	TTC	Yes
11	Chittagong	National Institute of Technology, Chittagong	Private	Private	Yes
12	Dhaka	Dhaka Polytechnic Institute, Tejgaon, Dhaka	Public	Polytechnic	Yes
13	Dhaka	Bangladesh Institute of Marine technology, Naraongonj	Public	Polytechnic	-
14	Dhaka	Mymensingh Polytechnic Institute	Public	Polytechnic	-
15	Dhaka	TTC, Bangladesh-German, Mirpur	Public	TTC	Yes
16	Dhaka	TTC, Bangladesh- Korea	Public	TTC	Yes
17	Dhaka	TTC, Mymensingh	Public	TTC	Yes
18	Dhaka	TTC, Tangail	Public	TTC	Yes
19	Dhaka	Sheikh Fazilatunnesa Mujib Mohila Technical Training Centre	Public	TTC	Yes
20	Dhaka	TTC, Narshingdi	Public	TTC	Yes
21	Dhaka	TTC, Jamalpur	Public	TTC	Yes
22	Dhaka	TTC, Faridpur	Public	TTC	Yes
23	Dhaka	TTC, Keranigonj	Public	TTC	Yes
24	Dhaka	Ahsania Mission Vocational Training Institute for Working Children	Private	Private	Yes
25	Dhaka	Ahsania Mission Syed Saadat Ali Memorial Education & Vocational Training Center	Private	Private	Yes
26	Dhaka	Centre for Technology Transfer (CTT)	Private	Private	Yes
27	Dhaka	Montage Training & Certification (Bangladesh)	Private	Private	Yes
28	Dhaka	Peace and Rights Development of Society (PRDS)	Private	Private	Yes
29	Khulna	Kustia Polytechnic Institute	Public	Polytechnic	-
30	Khulna	TTC, Khulna	Public	TTC	-
31	Khulna	MTTC, Khulna	Public	TTC	-
32	Khulna	TTC, Jessore	Public	TTC	-
33	Khulna	TTC, Khulna Shipyard	Public	TTC	-

No.	Division	Institutions	Management	Institution Type	Sampled
34	Rajshahi	TTC, Bogra	Public	TTC	Yes
35	Rajshahi	TTC, Natore	Public	TTC	Yes
36	Rajshahi	MTTC, Rajshahi	Public	TTC	Yes
37	Rajshahi	TTC, Rajshahi	Public	TTC	Yes
38	Rajshahi	TTC, ChapaiNowabgonj	Public	TTC	Yes
39	Rajshahi	TTC, Pabna	Public	TTC	Yes
40	Rajshahi	TMSS Technical Institute	Private	Private	Yes
41	Rangpur	Thakurgaon Polytechnic Institute	Public	Polytechnic	Yes
42	Rangpur	Dinajpur Polytechnic Institute	Public	Polytechnic	Yes
43	Rangpur	TTC, Dinajpur	Public	TTC	Yes
44	Rangpur	TTC, Lalmonirhat	Public	TTC	Yes
45	Rangpur	TTC, Thakurgaon	Public	TTC	Yes
46	Rangpur	TTC, Rangpur	Public	TTC	Yes
47	Rangpur	Minal Computer Training Academy, Thakurgaon.	Private	Private	Yes
48	Sylhet	TTC, Sylhet	Public	TTC	-
49	Sylhet	MTTC, Sylhet	Public	TTC	-
50	Sylhet	TSC, Habiganj	Public	TSC	-

As indicated in Table 15, 36 short-course providers were included in the survey among which seven institutions are in Chittagong, 15 are in Dhaka, and 14 are in Rajshahi/Rangpur. Seven institutions are private ones; and among them four are located in Dhaka.

### Trades Offered

A wide range of trades are being offered at the 36 institutions, and the trades related to garment and dress making involve the largest number of courses and enrollments. Among 242 identified courses in the 36 surveyed institutions, 57 courses (about 24 percent) are related to the garment and dressmaking business, enrolling about 2,700 students (about 23 percent) out of 11,541. The provision of short-term trainings for garment skills seems to have become quite intensive in today's Bangladesh, reflecting the steady labor demands for garment workers. Computer-related courses are also attracting many students, enrolling about 1,600 students in 35 offered courses. The number of teachers for auto-mechanics and mechanics courses seems to be rather small relative to the numbers of students enrolled in the courses. This may indicate more severe shortages of teachers in those trades.

**Overall, 62 percent of the courses offered in the 36 institutions receive grant funds from STEP.** Some trade sub-categories, including civil construction, mobile phone servicing, garment/batik, radio and television servicing, and food and beverage have high STEP support coverage ratios of more than 70 percent (Figure 39). For some reason, some of the traditional male-dominated, blue-collar trades like auto-mechanics, carpentry, and plumbing have a lower coverage of STEP support (35 percent for auto-mechanics, 15 percent for carpentry, and 20 percent for plumbing). On the other hand, trades where females are concentrated such as garment/batik and computer are receiving the STEP support more frequently.

Figure 39: Trades offered at the 36 institutions

Trade	Sub-category	# of courses	Enrollment	Teachers	% of STEP Supported courses
<b>Auto CAD / Civil</b>	Auto CAD / Architectural Desi..	10	398	30	50%
	Civil Construction	14	750	50	93%
	<b>Total</b>	24	1,148	80	75%
<b>Auto Mechanics</b>	Auto Mechanics	15	1,298	52	33%
	General Mechanics	5	357	15	40%
	<b>Total</b>	20	1,655	67	35%
<b>Computer</b>	Computer & Applications	35	1,622	117	63%
	Mobile Phone Servicing	9	335	30	78%
	<b>Total</b>	44	1,957	147	66%
<b>Electric</b>	Electronics & Electrical Works	32	1,239	119	63%
	Solar Home System	4	160	13	50%
	<b>Total</b>	36	1,399	132	61%
<b>Garment/Batik</b>	Garment / Dress Making	47	2,272	185	77%
	Leather Craft	6	240	19	83%
	Embroidery & Pattern Making	4	185	11	75%
	<b>Total</b>	57	2,697	215	77%
<b>RAC</b>	Radio and Television Servicing	6	280	20	100%
	Refrigeration and AC	4	120	15	50%
	<b>Total</b>	10	400	35	80%
<b>Weilding</b>	Welding	14	548	55	64%
	<b>Total</b>	14	548	55	64%
<b>Other</b>	Plumbing & Pipe Fittings	6	205	21	17%
	Mid Level Service	5	238	17	60%
	Food and Beverage	4	195	16	75%
	Carpentry, Masonry, Painting	15	840	50	20%
	Others	7	259	22	29%
	<b>Total</b>	37	1,737	126	32%
<b>Grand Total</b>		242	11,541	857	62%

Source: Author's analysis using the tracer study.

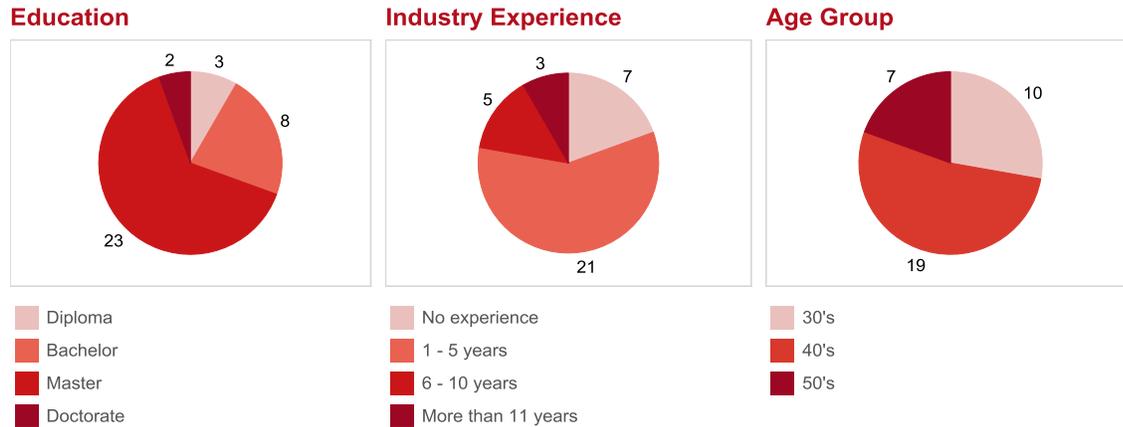
## A1.2. General Characteristics of Teachers

### Head Teachers

The typical profile of head teachers includes having a master's degree, one to five years of industry experiences, and being in their 40s. Out of 36 head teachers, 23 of them (about 64 percent) have master's degrees; and at least a bachelor's degree seems to be a minimum requirement to become a head teacher. In addition, industry experience seems to be an important asset for becoming head teachers. The majority of them have at least one to five years of industry experience while some have far longer years of such

experience. Seniority may play a part in one becoming a head teacher as the majority of the head teachers are in their 40s or above; nonetheless, 10 head teachers are still in their 30s. Overall, it can be said that becoming head teachers at vocational training institutions often requires high educational qualifications in addition to substantial prior experience of working in the industries.

Figure 40: Characteristics of head teachers of the 36 institutions

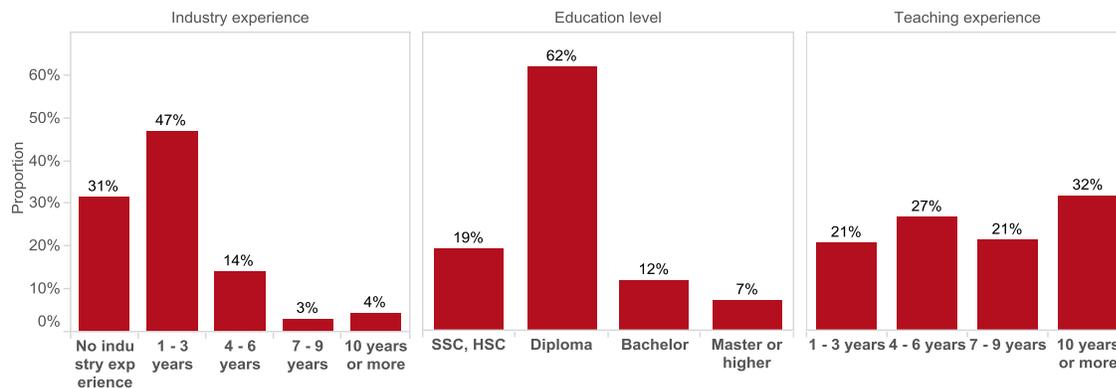


Source: Author's analysis using the tracer study.

## Teachers

**The majority of short-course instructors have limited relevant industry experiences and educational qualification.** Considering the fact that instructors are directly teaching practical skills to students, it is somewhat surprising that as many as 31 percent of the instructors in the 36 surveyed institutions have no relevant industry experience. Another 47 percent have less than three years of experience, which most likely means they were still novice workers when they left the workplace to become instructors. This may cause challenges for some instructors in terms of imparting high quality practical skills that meet labor market demands. Their educational qualifications do not seem particularly high as 62 percent of them have diploma degrees only and 19 percent have only SSC or HSC qualifications. Only 19 percent of the instructors have bachelor's degrees or higher. Lack of sufficient industry experience among instructors reconfirms the need for providing continuous teacher training in the latest practical skills as well as strengthening information exchanges with industries.

Figure 41: Characteristics of instructors in the 36 institutions



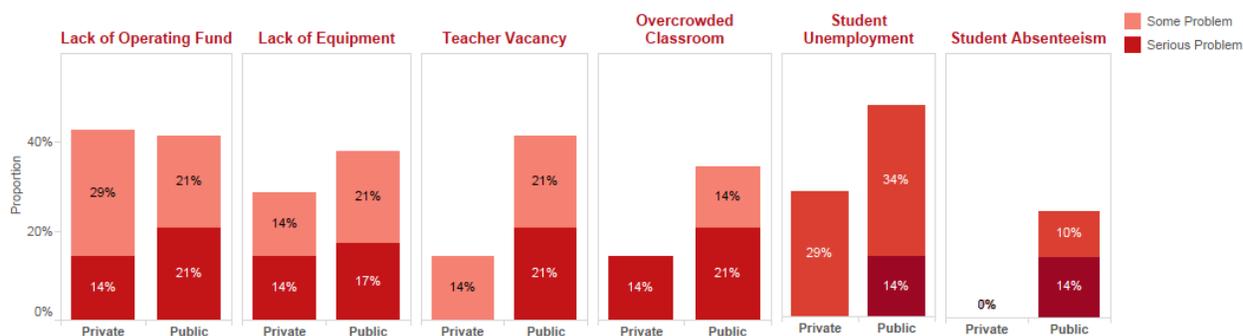
Source: Author's analysis using the tracer study.

### A1.3. Self-Assessment of Institutions

#### Opinion about Challenges

Lack of operational funds, teacher vacancy, and lack of equipment are common problems in the short-term training institutions; and the problems are often more serious in public institutions. The head teachers of the 36 institutions were asked to rate the degree of seriousness of problems they face at their institutions. The figure below summarizes the responses from the head teachers. Lack of operational funds and lack of equipment are identified as almost equally serious problems by both public and private institutions. However, other problems such as teacher vacancies and overcrowded classrooms are identified as more serious problems at public institutions. The difference in the perception of the problems between public and private institutions is particularly large with regard to the problem of teacher vacancy. The problems regarding students seem to be considerably more serious at public institutions. The head teachers were also asked about problems related to students' employment and absenteeism. In particular, the problem of student unemployment is rated high by public institutions. This is consistent with the finding of the previous chapter about the lower employment rates among graduates from public institutions than those among the graduates from private institutions. The head teachers of public institutions seem to be well aware of such situations. Students' absenteeism may not be viewed as problematic as the unemployment problem by the head teachers; however, again public institutions tend to have more serious issues of students' absenteeism compared to private institutions as all the private institutions reported having no problem with students' absenteeism.

Figure 42: Perception about seriousness of problems of institutions by ownership



Source: Author's analysis using the tracer study.

### A1.4. Job Search Support Services

Most of the institutions reported that they had established job-placement cells to strengthen job search support services, but the size of manpower assigned to job-placement cells might be too small. Thirty-five out of 36 institutions claimed that they had functioning job-placement cells. The numbers of staff assigned to job-placement cells range widely from only one to 10 staff; however, the majority have less than three staff members assigned to job-placement cells. Though there is no common yardstick for the size of manpower to be allocated to job-placement cells, one or two staff members seem too few to handle complex and time-consuming tasks of communicating and negotiating with industry stakeholders as well as coaching students about job-search. It is possible that many of the job-placement cells are short-handed. As discussed in the previous chapter, there are some gaps in the students' perception about the presence of job-placement cells. Students who found jobs through institutions are also few.

Training institutions are keen on maintaining an extensive range of partnerships with relevant industries; private institutions seem to be more committed in this regard. Partnership with industries is one of the key element of job-placement support. The 29 institutions (22 public and 7 private) identified above as having industry partnership for job-search support were further asked about the kinds of industry partnership they maintain. Most of them (27 institutions) answered that they had some sort of agreements with industries for giving preferred candidacy to their graduates when they had job vacancies (Figure 43). This would give the graduates good competitive advantages over other job seekers in the labor market as social networks often play an important role in job placement in Bangladesh. Having arrangements for apprenticeship as well as joint curriculum development with industry stakeholders are also common approaches to industry partnership. Such collaboration with industries would contribute a lot to improving the employability and practical skills of students through gaining hands-on practical experience and development of more relevant curriculums. Inviting industry stakeholders as guest lecturers seem to be somewhat more difficult to implement as fewer institutions managed to have guest lecturers.

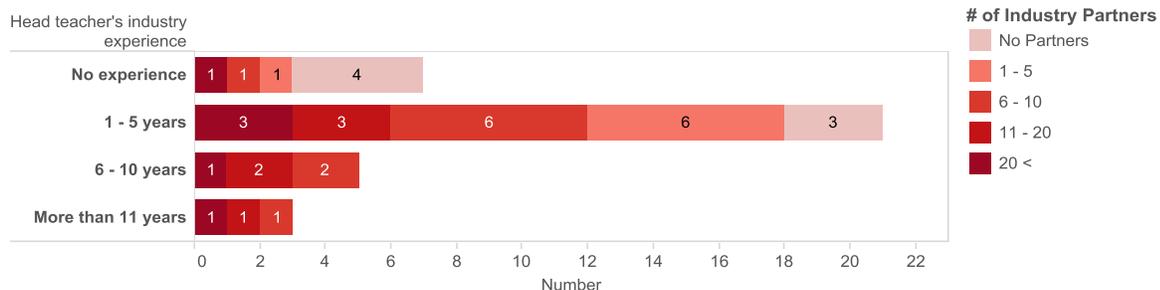
Figure 43: Types of partnerships and collaborations with industries by ownership

	Preferred candidacy	Apprenticeship	Curriculum developed by industry	Guest lecturer
Private	7	6	6	7
Public	20	19	18	11
Total	27	25	24	18

Source: Author’s analysis using the tracer study.

**The extent of industry partnership may be closely associated with head teachers’ personal networks and industry experiences.** Below is shown the numbers of industry partners that the institutions claimed to have through their head teachers’ industry experience. More than half of the institutions whose head teachers do not have industry experience are found to have no industry partners, whilst the large majority of the institutions whose head teachers have at least 1 – 5 years of industry experience have quite a few industry partners. Apparently, head teachers with longer years of industry experiences are more likely to be able to find the greater numbers of industry partners, possibly because they can leverage his/her social networks or because they are more aware of the importance of such partnerships.

Figure 44: Number of industry partners by head teachers’ industry experience



Source: Author’s analysis using the tracer study.

## Annex 2: Sampling Methodology

The frame for the tracer study was based on the roster of short-course training institutions supported by STEP, collected in 2012. STEP provides support to 50 institutions in the country, of which 42 are public and 8 are private. The supported 50 institutions offer a total of 367 courses. A total of 12,346 students were enrolled in the first semester of 2012, of which 9,043 are male and 3,303 are female.

**Table 16: Number of short-term courses offered and students enrolled in the 50 STEP institutions**

	No. of trades	Number of students		
		Male	Female	Total
AutoCAD/Civil	36	530	375	905
Auto-mechanics/Mechanics	38	1,165	44	1,209
Computer	50	1,682	833	2,515
Electric	70	1,853	364	2,217
Garment/ Batik	41	183	1,021	1,204
Refrigeration/AC	39	1,683	517	1,320
Welding	26	1,203	117	776
Others	67	744	32	2,200
<b>Total</b>	<b>367</b>	<b>9,043</b>	<b>3,303</b>	<b>12,346</b>

Source: Authors' calculation using STEP Short Course Training Institutions Roster.

The sampling methodology for this tracer study is a stratified random sampling. In a simple random sample, all members of the population have the same probability of being selected and no weighting of the observations is necessary. In a stratified random sample, all population units are placed within homogeneous groups and simple random samples are selected within each group. This method allows computing estimates for each of the strata with a specified level of precision while population estimates can also be made by properly weighting individual observations. Stratified random sampling was preferred over simple random sampling for the tracer study for several reasons. First, because of the diversity of trades and technologies, it was important for the survey to have a good enough number of samples for the key industrial sectors. It would have been difficult to assess the effectiveness of the institutions and individual performance without having a sufficient number of samples from specific trades and geographical locations. Second, one of the main interests of the survey from the perspective of the project management is to understand the implication of the project support for the labor market outcomes. Therefore, stratification included the supported and non-supported trades, in addition to the trades and geographical areas.

In consideration of various interests and technical requirements, the sampling is designed in a three-level stratification, following (i) trades/technologies, (ii) geographical locations, and (iii) project support. The 50 project-associated institutions offer a total of 367 courses, of which 200 courses are directly receiving support and 167 courses are not supported. There are 76 different trades offered in the 50 institutions.<sup>27</sup> Since one of the objectives of the survey is to understand employment rates by different trades or industry groups, the trades were classified into eight major groups, which are: (1) AutoCAD and Civil, (2) Auto-mechanics and Mechanics, (3) Computer, (4) Electric, (5) Garments, (6) Refrigeration and Air Conditioning, (7) Welding and (8) Others. The seven identified groups comprise 82 percent of the trades offered in the STEP-supported institutions (300 trades out of 367). The survey includes trades that fall under these seven major trade families.

<sup>27</sup> BTEB lists 57 names of trades on their website, but there are more than 57 different names of the trades offered at the institutions, which may call some trades by different names. The list of BTEB short-term training is listed in Table 19 and **Error! Reference source not found.**

The second stratum considered in the sampling scheme is the geographical distribution because the local labor market condition can be an important factor for the employment rate and labor market outcomes. Bangladesh is administratively divided by seven divisions. In order to focus on the industry concentration, the survey covers three geographical areas: (i) Dhaka division, (ii) Chittagong division, and (iii) Rajshahi and Rangpur divisions. The reason for combining Rajshahi and Rangpur is the similarity of labor market conditions of these two neighboring divisions that used to be one division until a few years ago. The total number of trades covered by the survey is there for 233 trades in seven industry families and in four divisions (three geographical groups). These 233 trades enroll 7,738 students, which is 63 percent of the total short-term course students of the frame data.

Table 17: Number of courses offered, by trade and division

	Surveyed divisions					Non-Surveyed divisions				
	CTG	DHA	RAJ	RGP	Sub-Total	BAR	KHU	SYL	Sub-Total	Total
AutoCAD/ Civil	7	15	5	1	28	2	4	2	8	36
Auto-mechanics/Mechanics	8	15	5	5	33	2	1	2	5	38
Computer	9	11	7	8	35	8	5	2	15	50
Electric	10	27	10	9	56	4	6	4	14	70
Garment/Batik	6	16	4	2	28	7	4	2	13	41
Refrigeration/AC	6	14	4	7	31	4	2	2	8	39
Welding	4	12	3	3	22	0	3	1	4	26
<b>Sub-Total</b>	<b>50</b>	<b>110</b>	<b>38</b>	<b>35</b>	<b>233</b>	<b>27</b>	<b>25</b>	<b>15</b>	<b>67</b>	<b>300</b>
Others	12	30	7	4	53	1	13	0	14	67
<b>Total</b>	<b>62</b>	<b>140</b>	<b>45</b>	<b>39</b>	<b>286</b>	<b>28</b>	<b>38</b>	<b>15</b>	<b>81</b>	<b>367</b>

Source: Authors' calculation using STEP Short Course Training Institutions Roster.

Note: CTG=Chittagong, DHA=Dhaka, RAJ=Rajshahi, RGP=Rangpur, BAR=Barisal, KHU=Khulna, SYL=Sylhet

The third stratum, whether receiving STEP support or not, is added to the 233 trades included in the final sampling frame. Due to stark differences between private and public institutions and the absence of a sufficient number of private institutions that are supported by STEP, three categories are created here, including (i) supported trades in public institutions, (ii) non-supported trades in public institutions, and (iii) trades in private institutions.

The target number of sample size is 100 trades and 1,000 students (from each cohort). The distribution of targeted samples is shown in Table 18. The actual number of interviews conducted, by cohort and by sampling strata, is shown in Table 19.

Table 18: Targeted sample number of trades and graduates

	Public Supported				Public Non-Supported				Private				Grand Total
	CTG	DHA	R/R	Total	CTG	DHA	R/R	Total	CTG	DHA	R/R	Total	
Population of trades													
Auto-CAD/Civil	2	2	2	7	2	11	2	17	1	0	0	4	28
Auto-mechanics	5	9	6	20	3	6	2	11	0	0	2	2	33
Computer	1	1	1	3	5	8	10	23	3	2	4	9	35
Electric	5	11	16	32	4	10	1	16	1	6	1	8	56
Garment/Batik	6	4	3	13	1	6	3	9	0	6	0	6	28
Refrigeration/AC	3	9	9	21	2	3	0	5	1	2	2	5	31
Welding	2	6	5	13	1	6	0	7	1	0	1	2	22
<b>Total</b>	<b>24</b>	<b>42</b>	<b>43</b>	<b>109</b>	<b>18</b>	<b>51</b>	<b>19</b>	<b>88</b>	<b>8</b>	<b>17</b>	<b>11</b>	<b>36</b>	<b>233</b>
Sampled trades													
Auto-CAD/Civil	2	2	2	6	2	2	2	6	1	0	0	1	13
Auto-mechanics	2	2	2	6	2	2	2	6	0	0	2	2	14
Computer	1	1	1	3	2	2	2	6	2	2	2	6	15
Electric	2	2	3	7	2	2	1	5	1	2	1	4	16
Garment/Batik	2	2	2	6	1	2	2	5	0	3	0	3	14
Refrigeration/AC	2	2	3	7	2	2	0	4	1	2	2	5	16
Welding	2	2	3	7	1	2	0	3	1	0	1	2	12
<b>Total</b>	<b>13</b>	<b>13</b>	<b>16</b>	<b>42</b>	<b>12</b>	<b>14</b>	<b>9</b>	<b>35</b>	<b>6</b>	<b>9</b>	<b>8</b>	<b>23</b>	<b>100</b>
Sampled students a/													
Auto-CAD/Civil	20	20	20	60	20	20	20	60	10	0	0	10	130
Auto-mechanics	20	20	20	60	20	20	20	60	0	0	20	20	140
Computer	10	10	10	30	20	20	20	60	20	20	20	60	150
Electric	20	20	30	70	20	20	10	50	10	20	10	40	160
Garment/Batik	20	20	20	60	10	20	20	50	0	30	0	30	140
Refrigeration/AC	20	20	30	70	20	20	0	40	10	20	20	50	160
Welding	20	20	30	70	10	20	0	30	10	0	10	20	120
<b>Total</b>	<b>130</b>	<b>130</b>	<b>160</b>	<b>420</b>	<b>120</b>	<b>140</b>	<b>90</b>	<b>350</b>	<b>60</b>	<b>90</b>	<b>80</b>	<b>230</b>	<b>1000</b>

Source: Prepared by authors.

Notes: a/ Displayed sample size is from each cohort.

CTG- Chittagong, DHA-Dhaka, R/R- Rajshahi and Rangpur

Table 19: Final sample distribution by cohort, trade, geographical area, and project intervention

Current Students	Public Supported				Public Non-Supported				Private				
	R/R	CTG	DHA	Sub-Total	R/R	CTG	DHA	Sub-Total	R/R	CTG	Dha	Sub-Total	
AutoCAD/Civil	20	20	20	60	10	20	20	50					110
Auto-Mechanics	20	50	20	90			10	10	19		1	20	120
/Mechanics			10	10	50	20	20	90	34		20	54	154
Computer						9		9	10	30	10	50	179
Electric	50	30	40	120		20	10	30		39		39	149
Garment	40	20	20	80					20	20	10	50	160
RAC	30	40	20	90									
Welding	30	40	20	90		22		22	10			10	122
<b>Total</b>	<b>190</b>	<b>200</b>	<b>150</b>	<b>540</b>	<b>60</b>	<b>91</b>	<b>80</b>	<b>231</b>	<b>93</b>	<b>89</b>	<b>41</b>	<b>223</b>	<b>994</b>

Cohort 1	Public Supported				Public Non-Supported				Private				
	R/R	CTG	DHA	Sub-Total	R/R	CTG	DHA	Sub-Total	R/R	CTG	Dha	Sub-Total	
Auto-CAD/Civil	40	20	20	80		18	10	28					108
Auto-Mechanics	30	49	20	99			10	10	10			10	119
/Mechanics		10		10	50	9	30	89	30		19	49	148
Computer	30	30	28	88	9	8	9	26	10	30	10	50	164
Electric	40	30	30	100		9		9		39		39	148
Garment	30	38	19	87			21	21	20	20	10	50	158
RAC	30	38	19	87					10			10	108
Welding	28	50	20	98									
<b>Total</b>	<b>198</b>	<b>227</b>	<b>137</b>	<b>562</b>	<b>59</b>	<b>44</b>	<b>80</b>	<b>183</b>	<b>80</b>	<b>89</b>	<b>39</b>	<b>208</b>	<b>953</b>

Cohort 2	Public Supported				Public Non-Supported				Private				
	R/R	CTG	DHA	Sub-Total	R/R	CTG	DHA	Sub-Total	R/R	CTG	Dha	Sub-Total	
Auto-CAD/Civil	30	20	20	70	10	18	10	38					108
Auto-Mechanics	30	36	20	86			10	10	10			10	106
/Mechanics					59	10	28	97	29		17	46	143
Computer	30	29	30	89	10	10	10	30	10	29	10	49	168
Electric	39	20	30	89		13		13		29		29	131
Garment	28	40	20	88			20	20	20	14	10	44	152
RAC	30	50	20	100			10	10	10			10	120
Welding	30	50	20	100									
<b>Total</b>	<b>187</b>	<b>195</b>	<b>140</b>	<b>522</b>	<b>79</b>	<b>51</b>	<b>88</b>	<b>218</b>	<b>79</b>	<b>72</b>	<b>37</b>	<b>188</b>	<b>928</b>

Table 20: List of Basic Trade short-term training courses (3-6 months) certified by BTEB

1	Acting and Presentation	31	Hair Dressing
2	Air Hostess and Cabin Crew	32	Hardware and Networking
3	Aminship	33	House Keeping
4	Apparel Merchandising	34	Industrial Sewing Machine and Maintenance
5	ARC & Gas Welding	35	Interior Decoration (Gypsum Decoration)
6	ARC Welding	36	Machinist
7	Auto-Mechanics	37	Maintenance of Electrical Equipment
8	AutoCAD	38	Masonry and Rod Binding
9	Aviation Management	39	Mobile Phone Servicing
10	Bash Bate And Pati Shilpo	40	Motor Cycle and Mishuk Mechanics
11	Building and Architectural Drafting	41	Pastry and Bakery Production
12	Building and Architectural Drafting with AutoCAD	42	Plumbing and Pipe Fitting
13	Certificate in Pattern Making	43	Radio and Television Servicing
14	Civil Construction	44	Refrigeration and Air Conditioning
15	Computer Office Application	45	Rod Binding and Masonry
16	Computer Operator	46	Secretarial Science
17	Computer Programming	47	Ship Fabrication
18	Database Programming	48	Tig and Mig
19	Diesel Mechanics	49	Tiles & Setting
20	Drafting Civil	50	Travel Tour Operation
21	Dress-Making and Tailoring	51	Travel Tourism & Ticketing
22	Driving cum Auto Mechanics	52	Turner
23	Electrical House Wiring	53	Welding
24	Food & Beverage Production	54	Welding 4g
25	Food & Beverage Service	55	Welding 6G
26	Food Processing and Preservation	56	Welding And Fabrication
27	Furniture and Cabinet Making	57	Work Study Production Planning & Control for Apparel Manufacturing
28	General Electrician		
29	General Mechanics		
30	Graphics Design and Multimedia Programming		

Source: [http://www.bteb.gov.bd/page.php?action=trade\\_technology](http://www.bteb.gov.bd/page.php?action=trade_technology)

## Survey Weights

The sampling weight has been calculated based on the probabilities of selecting trade and individuals within the selected trade. First, trade weight has been calculated as an inverse of the probability that a sampled trade is selected in the population. Let  $P_{ij}$  be the probability of the trade of trade  $i$  in geographical area sector  $j$  and status of the project support  $k$  to be surveyed. This probability can be calculated as

$$P_{ijk} = x_{ijk}/X_{ijk}$$

And the weight is calculated as:

$$w_{ijk} = 1/P_{ijk}$$

With  $X$  being the total number of trades in the cell  $ijk$  (e.g., number of AutoCAD trades in public-supported courses in Dhaka division) and  $x$  being the number of trades actually surveyed in this cell  $ijk$ .  $X$  is obtained from the roster of Short-Course training courses, the Sample Frame of this survey, and the sum of the weights equals to the roster.

Second, student weights for representing the each of the sampled trades are calculated as:

$$w_{ct} = 1/P_{ct}$$

where

$$P_{ct} = n_{ct}/N_{ct}$$

$P_{ct}$  is the probability of workers to be surveyed in trade  $t$  in cohort  $c$ , and  $n_{ct}$  is the number of students surveyed in trade  $t$  in cohort  $c$ , which was assigned to be maximum of 10.  $N_{ct}$  is the total number of students in trade  $t$  in cohort  $c$ . The student weights were calculated separately for each cohort because of different sample size for each cohort. The combined probability weight for student for each cohort included in the global sample can simply be written as  $w_{ctijk}$ , which is obtained by:

$$w_{ctijk} = w_{ct} * w_{ijk}$$