Effectiveness of Technical Training Program of the Bangladesh Government Towards Employability in the Job Market

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ABSTRACT

Technical training programs are one of the crucial components to enhance the employability in Bangladesh job market by integrating in-hand experience to ameliorate qualified manpower. The major objective of the study was to evaluate the effectiveness of government technical training programs and their impact on employability in the job market. The study was designed following a mixed method approach where 240 participants responded to the survey questionnaire based on purposive sampling along with a semi-structured interview of 10 participants and 2 KII from different Skills for Employment Investment Program (SEIP) training programs. The study revealed that the technical training programs in Bangladesh have sluggish growth in integrating the skilled labor force in the market. Based on the results of the chi-square test ($p < 0.05$), the study found association between the participants' gender and their capacity to obtain employment after completing the technical training program. Based on correlation ($p < 0.05$), there is a significant difference between educational qualification and level of satisfaction. Ordinal logistic regression indicates that, the odds (.004) of engagement in technical training course are 99.6% less when participants have a very low level of satisfaction. The study found that this program helps to create employment opportunities. Participants pointed out major obstacles including lack of workshop and lab facilities (84%), inadequate market orientation (71%), inadequate qualified trainers (72.5%), and poor monitoring mechanism (67%) regarding the efficacy of the programs. The findings serve as an important roadmap for the general public, technical institutions, NGOs, government authorities, local administrators and policymakers to enhance the supply of skilled manpower in the national economy.

Keywords: Bangladesh; Technical Training; Efficacy; Employability.

INTRODUCTION

In view of achieving the status of a middle-income country, Vision 2021 was grasped under the leadership of Prime Minister Sheikh Hasina which was also a crucial target of the 6th Five Year Plan (FY2011-FY2015). Poverty reduction, being one of the key intentions, led to figuring out factors that will help reach the goal, and consequently "Employment" stood out as the ultimate tool for propping the load of poverty to an end (GOB, 2011). Hence, a plethora of reform initiatives regarding Technical and Vocational Education and Training (TVET) programs were undertaken by the government of Bangladesh. Skill training programs can be the key to the solution for unemployment (Das, 2021). Although the initiatives were more supply-driven than demand-driven and were meant to turn the population into manpower, it was firmly embraced by the masses. Also being skilled doesn't only make personally benefited, it was an overall impact on the country's economy (Karim, 2019).

Not to mention the Bangladesh Technical Education Board (BTEB) that started its journey through the

establishment of the Directorate of Technical Education in 1960 and then The East Pakistan Technical Education Board in 1967 in order to develop technical and vocational education. Hence, TVET has become one of the major educational mechanisms to transform these students into an employable workforce. Apart from this initiative, there are several informal and non-formal training programs run by 23 ministries and different NGOs as well which are not BTEB affiliated. The report projected that enrolment under TBET would be 20.82% by the year 2020 (BTEB, 2016).

Skills for Employment Investment Program (SEIP), one of many training programs, is funded by the GOB and ADB and comes under the "National Skill Development Policy 2011". It aims to deliver programs that can expand the scope of employability. To reach this goal SEIP provides training on- Sewing Machine Operations, Food and Beverage Production (Cooking), Information System Security Management, Motor Driving with Basic Maintenance, Graphic Design Using Photoshop & Illustrator, Footwear & Leather goods Design & Development with CAD-CAM, Tiles and Marble Works, Weaving Technology, Apparel Merchandising, Painting, Electronics, Plumbing, Software Design and Architecture etc. These training programs are being implemented by 13 leading industries and associations of Bangladesh namely- Bangladesh Garment Manufacturers' and Exporters' Association (BGMEA), Bangladesh Knitwear Manufacturers' and Exporters' Association (BKMEA), Bangladesh Textile Mills Association (BTMA), Leather Goods & Footwear Manufacturers' & Exporters' Association of Bangladesh (LFMEAB), Bangladesh Association of Construction Industry (BACI), Real Estate and Housing Association of Bangladesh (REHAB), Bangladesh Engineering Industry Owners' Association (BEIOA), Bangladesh Association of Software and Information Services (BASIS), Bangladesh Association of Call Centers and Outsourcing (BACCO), Association of Export Oriented Shipbuilding Industries of Bangladesh (AEOSIB), Bangladesh Agro Processors' Association (BAPA), Bangladesh Women Chamber of Commerce and Industry (BWCCI), Tourism and Hospitality ISC (T&H ISC) and Bangladesh Road Transport Corporation (BRTC). A report on the evaluation of SEIP graduates in upskilling training programs by Industry Associations under Tranche 2- shows most of those who were SEIP graduates under these programs either got promoted or got their wages raised (SEIP, 2023).

Sheikh Fazilatunnesa Mujib Mohila Technical Training Centre (SFMMTTC), another significant training institute under the Ministry of Expatriates' Welfare and Overseas Employment Bureau of Manpower, Employment, and Training, commenced its journey in 2001 in order to develop an economic and social status for the nation through producing skilled women worker for the global competent workforce with the financial assistance of Government of Bangladesh and technical assistance of BMET. Producing national and international standard skilled female workforce for both local and global markets being the supreme objective, it provides both paid and free training courses like- Basic Computers, Web Design, Graphic Design, Architectural Drafting with Auto-CAD, Garments Manufacturing, Electronics, Dyeing Printing and Block Batik and House Keeping- some of them being SEIP-sponsored (sfmmttc.gov.bd). In this regard, it has done a praiseworthy job over the past couple of years. Annual Performance Agreement 2023-24 of SFMMTTC shows- up until 2023 it has provided skill development training in various occupations of international standards to 19,000 people (SFMMTTC, 2023).

Bangladesh German Technical Training Centre (BGTTC), established in 1965, aims at improving the quality of TVET trainees, delivering advanced training to the technical trainees, undertaking action to improve the skills of the trainers as the Technological Development, providing employment to the trainees at home & aboard as their skills and performing to the Technical and socio-economic Development of the country. Therefore, several technical training courses for instance- Welding, Automotive, etc., and even courses on language (Korean) are being provided (bgttc.gov.bd).

There are many more of these training programs undertaken by the government and NGOs. A report by ADB (2015) shows the workforce of Bangladesh is projected to be 95 million by 2030. This is where the interrogation mark comes in, raising the question of whether there are going to be enough employment

opportunities for this vast number of workforces. A quality vocational and educational training program will be the key for sustainable development (Hoque, 2016). This is why it is vital to grow a skilled workforce in order that they can fit themselves in both nationally and internationally (Alam, 2008). Understanding the effectiveness and outcome of these training programs will help in knowing where Bangladesh stands and will stand in the near future in terms of gaining employability in the job market. The findings will uphold facts that will figure the errors out and establish the room for improvement for better implementation of policies regarding these training programs at the same time it will pilot for pondering high-priority questions regarding relevant issues of the state.

Objectives of the Study

The general objective of this study is to measure to what extent technical training is effective in ensuring employability in the job market. Along with this objective, this study also has following objectives:

1. To estimate the degree to which technical training assures employability in the labor market.
2. To describe the current status of technical training in Bangladesh.
3. To identify major challenges and give plausible suggestions.

LITERATURE REVIEW

Aring (2011) studied various approaches to technical and vocational education and training based on an analysis of the performance of these programs in relation to the components of extremely effective workforce development. Developing nations have a limited amount of time to get this right before the youth divide and become an adult unemployed generation. Insufficient abilities that are valued in both local and global economies limit job opportunities, income, and economic growth. Demand-driven technical training programs may be one of the most crucial resources for preparing young people for life both inside and outside of the classroom. However, it appears to be very different in developing countries than in developed countries, as these programs are crucial in preparing individuals for productive livelihoods. Technical training imparts the knowledge and abilities needed to develop, produce, install, maintain, assist, and execute a particular technology or a related product, service, or application. The majority of their systems derive advantages from strong interaction and integration with the private sector, as well as the education system. They also benefit from substantial investment from the private sector, industry-wide skill standards, and an integrated method of developing curriculum which leads to well-paying technical jobs in the economies, and other intermediaries who bring together the various stakeholders to hold each other accountable and share benefits.

Rahman et al. (2012) explored that, in addition to the TVET institutions under the jurisdiction of the DTE and BTEB providing technical labor, there are other institutes managed by NGOs, the commercial sector, PPPs (public-private partnerships), and development partners that provide certain important industries with workers with vocational and technical training. The paper has recognized eight industries in the nation that support progress and require a high degree of labor and expertise. These industries involve pharmaceuticals, garments, food production, furnishings, ceramics, leather-based and textiles, machinery for transportation, and information technology. The RMG and textile sectors have the biggest supply of technicians across a range of specialties across all the other industries. Typically, freshmen occupy entry-level roles. In addition, the RMG market offers industry-led courses that develop current workers into skilled workers and managerial-level staff into professionals prepared for advancement in their careers. Bangladesh-German Technical Training Center (BGTTC), which operates as a collaboration, provides technically skilled labor for a range of short-term training programs, including mechanics, electrical work, construction, garments, welding, plumbing, and industrial machinery operations. Several workers who are looking for job placement in the Middle Eastern and European countries typically take part in these training programs.

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Haoladar et al. (2016) studied that, as Bangladesh aspires to become an economy with middle incomes by 2021, technical training and education are becoming more widely acknowledged as an essential instrument for growth in the economy. The government is implementing a number of initiatives to raise enrollment in technical training programs and enhance the standard of this field. The TVET framework, courses, instructor credentials, and current measures to improve training programs maintain relevance, encourage enrollment, and increase female involvement are given the main focus. The bulk of technical training programs in Bangladesh are offered by public, commercial, and non-governmental organizations (NGOs) at the diploma and certificate levels in fields of specialization. It is mostly government-regulated, but business involvement in creating standards and bolstering formal training for apprenticeships are currently top priorities in the country. Programs at the certificate levels have a subject-based curriculum. Government entities and donor organizations are launching a number of programs to boost enrollment, promote female involvement, and promote gender parity in TVET.

Importance of Technical Training in the Context of Bangladesh

Ahmed (2010) discussed that the national development plan of Bangladesh places a high priority on human resources development because, as reported, the country has limited natural assets. In fact, it's widely held that a nation's true riches depend less on its natural assets and more on the caliber of its citizens' education and capacity to apply their expertise to the advancement of the country. Economists have highlighted the growing significance of human resources as a distinct element in economic growth and rivalry. A global labor market is expected to emerge during the following phase of globalization, and civilizations will face numerous challenging issues related to labor market integration. In addition, remittances from the outside account for a major portion of Bangladesh's GDP.As a result, technical training is given top priority in the country's most recent national policy. Since skilled labor is in demand in global job markets, the nation can boost foreign exchange revenues by supplying its trained workers. As a result, the government wants to teach the vast workforce of the nation while taking the demands of the domestic and global labor markets into account. Additionally, it intends to implement a contemporary apprenticeship training program across the nation.

Alam & Sharmin (2023) discussed that technical training programs have enormous potential that is obvious everywhere, even in Bangladesh, where the focus is mostly on developing individual abilities for adequate employment. Several studies have shown that the capacity and competence of human capital are influenced by the different levels of hard as well as soft skill advancement. The technical training system of Bangladesh has the potential to significantly contribute to the growth of the country's economy by producing and supplying mid-level skilled labor to meet the expanding demands of both the domestic and international labor markets. The breadth of technical training in Bangladesh is still very limited as compared to the current general education system and even secondary madrasa education, despite the sector's critical potential to advance both our national and economic growth. This stream works better in terms of giving job chances to children who are at risk of dropping out of the additional educational streams.

Impact of Technical Training Program in Bangladesh Job Market

Alam (2008) studied that, Bangladesh requires an equal share of laborers across all professions so that its large population can participate in a variety of occupations and support economic development. Furthermore, people who naturally engage in a variety of occupations will likely pursue their own careers, which could contribute to the advancement of democracy, respect, and social justice. Technical and Vocational Education (TVE) has the potential to play a significant role in national progress. To optimize the benefits of sustainable growth through TVE, students ought to be offered contemporary and timely TVE programs that offer the finest hands-on expertise in pertinent fields.

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Iqbal (2022) explored that technical training institutes in Bangladesh provide technical, professional, and career-focused courses to prepare students for the demands of the job market in the 21st century. Bangladesh has already invested in contemporary, proficient TVE programs even though they are costly because these will help produce the necessary human resources that will support both labor market participation and national development. However, it appears that Bangladesh is still failing to make the necessary strides toward moderation, innovation, or the provision of modern TVE programs. As things stand right now, technical training courses in Bangladesh only offer outdated programs and subjects. He proposes that Bangladesh should provide modern courses like IT, computer science, electronic commerce, and so forth.

Challenges of Technical Training Programs in Bangladesh

Hossain (2018) discussed that professional labor is a necessary component of sustainable growth in a country with a large population like Bangladesh. The primary instrument for enhancing skills is technical education, which refers to work-based as well as training-oriented courses. Technical training programs in Bangladesh face numerous obstacles, but it also has opportunities for economic progress through the development of skilled labor. According to the study, the following factors contribute to the poor quality of technical training programs in Bangladesh: the absence of qualified and experienced instructors; inadequate number of classrooms; scarcity of labs and gadgets; lack of students' exercises and practical experience from the instructors; absence of transparency and regularity from the instructors; lack of integrity from the students themselves. **Tansen (2012)** investigated that the majority of trainees and trainers are dissatisfied with the lack of labs, tools, and other facilities in the institutions. The study expressed that technical training is essential for Bangladesh, and it is observed that the primary barrier to recruiting qualified instructors in technical training institutions is the lower wage scale. Because of this, even after having enough technical training institutions (both public and private organizations), the country's skilled labor force is not growing at an adequate rate.

Research Gap

Over the recent years, Bangladesh has seen an academic focus on the study of technical training programs along with its challenges and potentials. The impact and enhancement of technical training programs in terms of increasing human capital, general awareness, and other issues that trainees, trainers, and stakeholders encounter are all covered in an extensive body of literature. The majority of the papers studied on technical training programs provided by the private institutes and NGO, which differs from the government technical training programs. Additionally, most of these studies didn't provide any theoretical foundation for measuring the effectiveness of the technical training programs. This paper attempted to portray the impact of government technical training programs in the job market of Bangladesh along with the behavioral aspects of these programs on the trainee. The satisfaction level of the beneficiaries was also assessed regarding the technical training programs provided by Bangladesh government to measure its efficacy, which highly relies on aspects like engagement & interaction of the program, whether the necessary contents are aligned with their needs or not, if the logistics are sufficient enough, networking opportunities provided by the authority, etc. A conceptual framework is also adapted by using the factors of Kirkpatrick Model to measure the effectiveness of the existing training programs, which may assist the government technical training institutes in providing feasible solutions to overcome the challenges.

Conceptual Framework

The conceptual framework of the paper is depicted by using the Kirkpatrick Model, where four stages of evaluation are being assessed within the training method: reaction, learning, behavior, and results.

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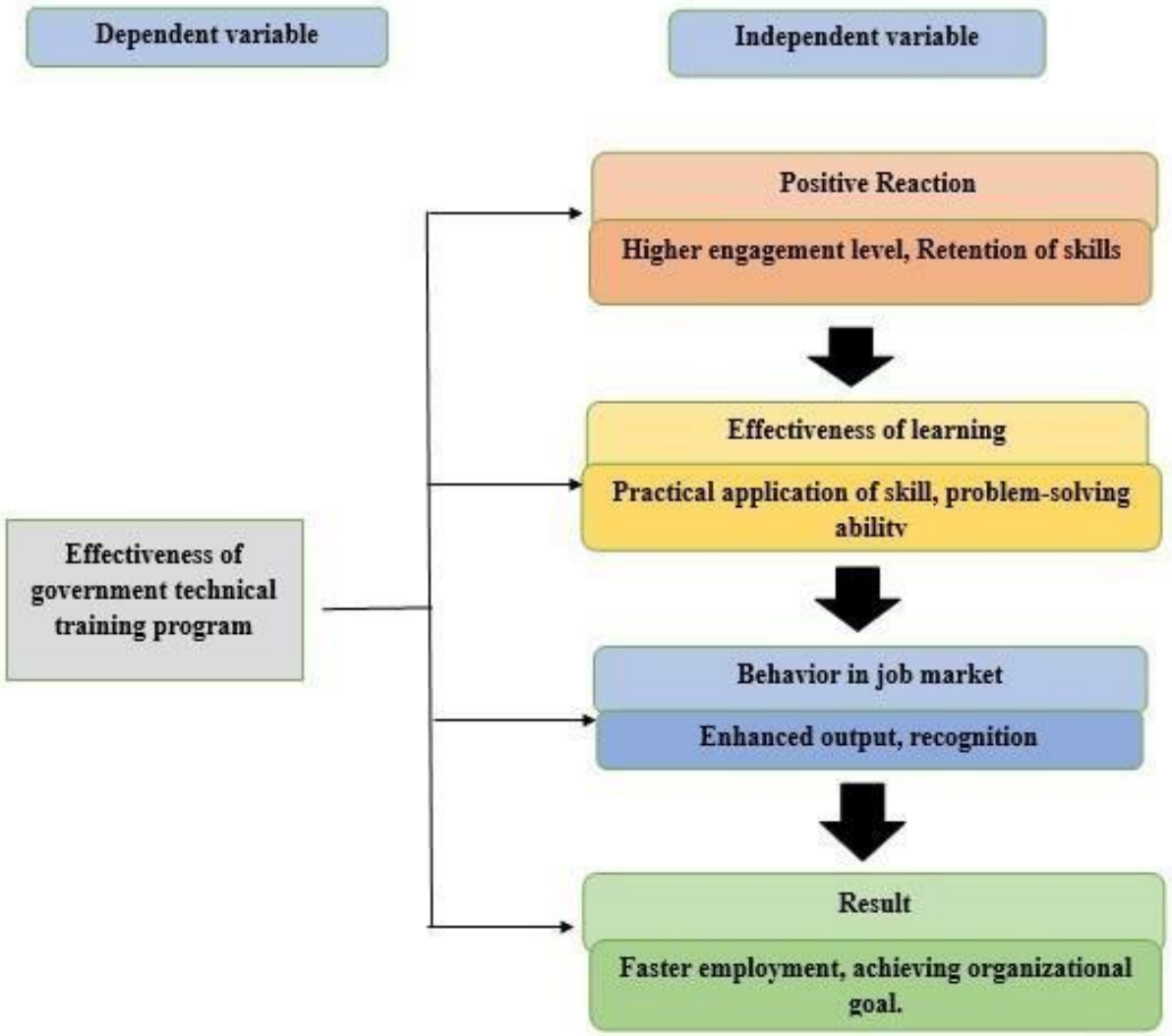

Figure 1: Conceptual framework of the study (Smidt et al., 2009)

The initial level of criterion, called reaction, measures how appreciated, relevant, and interesting the training is by learners in relation to their work. At the second stage, all participant's learning is evaluated according to whether they have acquired the desired knowledge, abilities, confidence, and professional commitment. The third phase, regarded as one of the most significant stages within the Kirkpatrick Model, assesses if participants' learning actually had an influence on them and whether they are using the concepts they have learned. It is feasible to determine whether or not the skills were grasped and whether it is practical to apply them in the job by evaluating behavioral changes. The fourth stage, the last level, is devoted to assessing immediate outcomes, and the learning is evaluated in relation to the strategic goals of the organization, which were set forth prior to the start of the learning process. Factors of these four stages are independent variable, where the effectiveness of government technical training is dependent variable (Smidt et al., 2009).

METHODOLOGY

A mixed method has been used in this research to collect both qualitative & quantitative data. Data has been collected through different tools-structured survey questionnaires, interviews, etc. Books, journals, ports, websites, newspapers videos, etc. have been used as sources of secondary data. This research covered the "Technical" and "Mirpur 12" area of Mirpur. It went through a factual and practical search to assess the

employability and effectiveness of the training program.

The study has used non-probability sampling techniques including cluster sampling and purposive sampling. After cluster sampling from Mirpur 12 and Technical Areas, the study followed purposive sampling to select the respondents who received the training. The total sample size of this study is 252. Among them 240 data have been collected through survey questionnaire, 10 participants were interviewed and 2 KII has been recorded for this study who are in-charge of this program.

Data Analysis Techniques and Validity

The data was appropriately analyzed using the Statistical Package for Social Science (SPSS) version 25, which is frequently utilized in social science research. Non-parametric statistical tests were necessary for this study since the results of the Shapiro-Wilk and Kolmogorov-Smirnov tests ($p < 0.05$) showed that the data was not normally distributed. The sample's demographic profile was explained using univariate statistics, such as frequency and percentage, which made the features of the participants quite evident. The study used non-parametric tests, specifically the Spearman correlation, Mann-Whitney U-test, Ordinal logistic regression and Chi-square test, when appropriate, to look at associations and differences in the data. These tests were carefully selected to evaluate the study objectives and are appropriate for assessing non-normally distributed data. The reactions of the subjects were measured using the Likert scale, which has five labels that represent different levels of satisfaction. Based on Cronbach's alpha for the Likert scale, an alpha value of .726 indicates that the internal consistency of the data is acceptable and good. Since the data were computed with a 95%confidence level, it may be assumed that the anticipated outcomes will lie between the computed confidence ranges. Considering the non-normal distribution of the data, the approach used in data analysis and measurement offers a strong framework for assessing the research questions overall.

FINDINGS

Socio-Demographic Profile of the Participants

The demographic and socioeconomic profile of respondents (n=240) has been described below in Table 1. Following the table; most of the respondents were male which is 60.1% and the rest of the 39.9% respondents were female. This study found that (70.4%) of respondents are unmarried, which is more than twice that of married (29.6%) individuals. Respondents aged between 21-30 age are the largest group (82.3%) of this program, followed by 31-40 (15.2%), 41-50 (1.5%) and below 20 (0.5%). Regarding the fact of religion, 85.4% of respondents belong to Islam, 14.1% are Hindu and 0.5% are Christian. A major portion of the respondents had an SSC degree (55.3%), whereas JSC (22.4%), PSC (14.5%), HSC (6.6%), and only (1.2%) had bachelor's degrees and above. The study reached out to those respondents who have different occupations and backgrounds; among them, the majority are garment workers (54.2%), followed by students (34.2%) and other workers (7.8%). In terms of monthly income, 41.6% of respondent's monthly income is below 10,000-taka, (40.3%) of their income is between 11,000-20,000-taka, (15.5%) of their income is between 21,000-30,000-taka, and only (2.6%) are earning more than 30,000 takas.

Table 1 Demographic profile of the samples (n= 240)

Socio-Economic Characteristics	**n (%)**
1. Gender	
– Male	145 (60.1)
– Female	95 (39.9)
2. Age (year)	
– Below 20	3 (0.5)

-51	195 (82.3)
-71	36 (15.2)
-91	6 (1.5)
3. Primary Occupation (Majority)	
– Student	82 (34.2)
– Garments Worker	130 (54.2)
– Worker	19 (7.8)
– Driver	5 (2.1)
– Shopkeeper	4 (1.7)
4. Monthly Income	
– Below 10,000	99 (41.6)
– 11,000-20,000	96 (40.3)
– 21,000-30,000	37 (15.5)
– More than 30,000	8 (2.6)
5. Marital Status	
– Married	71 (29.6)
– Unmarried	169 (70.4)
6. Educational Qualifications	
– Primary Level	34 (14.5)
– JSC	53 (22.4)
– SSC	134 (55.3)
– HSC	16 (6.6)
– Bachelor and Above	3 (1.2)
7. Religion	
– Islam	205 (85.4)
– Hindu	34 (14.1)
– Christian	1 (0.5)
– Buddhist	–

Recognition of Technical Training Program

Government technical training programs are hubs for creating human capital in the country. The technical training program is one of the crucial factors regarding employability in the country. It eventually helps people to be more productive and qualified enough to get a job in different sectors. This study analyzes the Skills for Employment Investment Program (SEIP) under the Ministry of Finance. This program is funded by the government of Bangladesh. To be more specific, this study discusses several courses like graphic designing, web designing, sewing machine operator, etc. About 91% of participants in the program are fully acknowledged of the technical training program. The participants of the program mostly got to know about the program through their friends (49.6%) and the rest of the participants knew it from social media (22%), community people (14.8%), and others (8.1%). Let alone these, 65% of participants are familiar with the application procedure, and 55.2% of participants applied for the technical training program all by themselves.

Behavioral Aspects of Technical Training Program

Table 2 shows that 66.7% of total participants agree that they have successfully applied the knowledge and

skills learned in the training to their job. On the other hand, 67.9% of participants agree on the fact the program is designed with practical tools to address the challenges in their work. Then again 68.8% of participants agreed that this program encourages the participants to adapt and modify their work and practices for the better. This study found that the technical training program provides guidance that the participants can apply in real-world scenarios. But it's a matter of concern that 31.1% of participants are facing obstacles in implementing what they learned though 45% of participants disagree with the statement.

Table 2 Behavioral influence of technical training program

Services	**5 (%)**	**4 (%)**	**3 (%)**	**2 (%)**	**1(%)**
Implication of knowledge and skills in training	15	66.7	13.3	2.9	1.7
Practical tools to address the challenge	13.5	67.9	10.5	6.8	1.3
Encouragement &Adoption of work	13.1	68.8	10.5	5.7	1.9
Guidance and implication in a real-world scenario	16.3	66.9	10.9	3.8	2.1
Obstacles and challenges in implementation	8.4	31.1	12.2	45	3.4
Average Value	13.2	60.2	11.4	12.8	2.08
Strongly Agree=5; Agree=4; Neutral=3; Disagree=4; Strongly Disagree=5					

Employability Rate from the Programs

This paper has also collected data from the ex-students who already have availed these programs. Based on their data, the employability rate is quite impressive. 68.4% of the ex-students got employed using the experiences gathered from these training. Male (42.3%) transferred their experience to their relevant workplace comparing to female (26.1%). It's basically not getting an exact job based on these training, but these participants have converted their learning into their relevant work field.

Table 3 Employability rate from the programs

Category	**Employability Rate**
Male	42.3%
Female	26.1%

Satisfaction Level on Technical Training Program

The level of satisfaction depends on various aspects relating to the technical training program. The satisfaction level of the beneficiaries highly relies on aspects like engagement & interaction of the program, whether the necessary contents are aligned with their needs or not, if the logistics are sufficient enough, networking opportunities provided by the authority, incentives provided by the authority, etc. Table4explains some of the necessary aspects of the program through which the study can measure the level of satisfaction of the beneficiaries. 61.1% of the respondents are satisfied and they believe that activities conducted by the authority are engaging and interactive. Only 6.7% of the respondents are dissatisfied with the engagement and interaction. The trainers try to create such an environment during their sessions where the participants can express their creativity and dedication. 66.7% of participants are satisfied with the content provided by the service providers. The contents are mostly designed in such a way that help the participants to get the job easily in their respective fields. Almost all the contents are very practical and effective for the participants. Only 2.7% of participants are strongly dissatisfied with the contents. They find the contents irrelevant regarding the program because of the lack of course materials and other facilities. Among the 240 participants, 40.2% are dissatisfied with the logistics facilities. Logistics are very important regarding the program but here this study found out that there is a lack of instructors, lab facilities, market

orientation, adequate resources, etc. The overall logistic management is affecting the performance of the participants. The learning could have been better, and the participants would have been more efficient if the resources were available as needed. 33.1% of participants are satisfied with the logistic facilities. These participants think that the service providers are trying hard and providing their best logistical support. 64.3% of total participants are pretty much satisfied with the networking opportunities provided by the service providers. These service providers help their trainees get jobs as early as possible by giving them access to their networks. The trainer also helps the trainees to develop their skills even after completing the course by assisting them in various sectors.

During an interview one of the trainers replied,

“In the SEIP IT and Sewing course they have alumni consisting of their ex-trainees who also help the freshers in getting a job that completes the technical training course.”

Table 4 Participant’s satisfaction on the technical training program

Satisfaction Level	**SS (%)**	**S (%)**	**MS (%)**	**D (%)**	**SD (%)**
Activities were engaging and interactive	21.3	61.1	9.2	6.7	1.7
Content aligned with needs	16.7	66.7	11.3	2.5	2.9
Logistics were well handed	13	33.1	9.6	40.2	4.2
Networking Opportunities were valuable	13	64.3	16.8	3.8	2.1
Incentives provided	14.2	37.1	29.2	18.3	1.2
Practical Skills Development	28.7	56.7	9.6	4.2	0.8
Employability	29.3	51	13.8	4.6	1.3
Faster Entry into the Workforce	24.3	48.1	18.4	7.1	2.1
Hands-On Experience	20.7	49.8	20.3	7.2	2.1
Contribution to Economic Growth	17.9	50.8	23.8	5.8	1.7
Career Advancement	17.9	39.6	35	5.4	2.1
Recommend this program	34.7	52.3	8.4	3.8	0.8

** SS= Strongly Satisfied, S= Satisfied, MS= Moderately Satisfied, D= Dissatisfied, SD= Strongly Dissatisfied

However, only 3.8% of participants are dissatisfied with the networking opportunities provided by the technical training program authorities.37.1% of participants are satisfied, 29.2% of participants are moderately satisfied, and 18.3% of participants are dissatisfied with the incentive program. The service providers should take this as their major concern. Providing a better incentive might encourage the participants to be more focused on their respective areas. In terms of practical skill development, 56.7% of participants are satisfied and optimistic about their skill development. The study analyzed that the practical skills of participants gradually developed within the technical training program over time. Regarding employability, 51% of participants are satisfied and the service providers also feel confident about their employability.

During an interview one of the coordinators said,

“After completing the courses most of the students are doing a great job in the freelancing sector and those who completed the sewing course are now doing jobs in suitable positions inthe textile sector.”

In terms of Hands-On Experience, 49.8% are satisfied and 7.2% are dissatisfied. Then again 50.8% of

participants are satisfied and agree that the technical training program is contributing to their personal economic growth as well as in the national economy. And in career advancement 39.6% of participants are satisfied and 35% of participants are moderately satisfied. However, the overall satisfaction level of the participants indicates a positive result. 34.7% of participants are strongly satisfied, and 52.7% of participants are satisfied with the overall service and would recommend this program to any individual who wants to enhance their skills.

Impact of Technical Training Program on Organizational Performance

Table 5 represents some facts that are closely related to overall performance and organizational goals. 65.7% of participants agree on the fact that the technical training program is designed in a such way that has positively impacted working as a team. Then again 69.7% of participants believe that the learning or outcomes of this program have contributed to achieving their organizational goals. In terms of personal work output, 68.3% of participants agree that the program has positively influenced them in generating maximum productive output. 29.2% of participants are moderately satisfied with the service provider's incentive system though 37.1% of participants are satisfied with the incentive system.

Table 5 Technical Training influence on performance

Services	**5 (%)**	**4 (%)**	**3 (%)**	**2 (%)**	**1 (%)**
Influence on team's performance	15.5	65.7	11.7	5.4	1.7
Organizational goals	12.2	69.7	11.8	4.6	1.7
Personal work output	13.8	68.3	12.5	4.6	0.8
Recognition through incentives	14.2	37.1	29.2	18.3	1.2
Average Value	13.9	60.2	16.3	8.2	1.35
Strongly Agree=5; Agree=4; Neutral=3; Disagree=4; Strongly Disagree=5					

Hypothesis Testing

Table6represents the results of the Chi-square test on the application procedure of technical training program. In terms of the application procedure of technical training program; there is no association based on gender of their knowledge about technical training program (p=.235) and self-application procedure (p=.558). Male has more (60.4%) knowledge about technical training program and self-application procedure comparing to female (39.6%). Regarding the marital status, the knowledge about government technical training program significantly varies on marital status (p=.000) and the self-application procedure also varies on marital status (p=.039). In terms of religion there is no relation of religion with knowledge about technical training programs (p=.069) and self-application procedure (p=.620). Based on the results of the chi-square test ($p < 0.05$), the study found significant association between the participants' gender and their capacity to obtain employment after completing the technical training program but no association with the marital status and religion.

Table 6 Chi-Square test of various elements with gender, marital status and religion.

Components	**Gender (%)**			**Marital Status (%)**			**Religion (%)**			
	Male	Female	p-value	Married	Unmarried	p-value	Islam	Hindu	Christian	p-value
Knowledge about government Technical Training Program	60.4	39.6	.235	39.6	58.8	.000	83.3	14.2	2.1	.069

Self- Application Procedure	60.4	39.6	.558	39.6	58.8	.039	83.3	14.2	2.1	.620
Employability of the participants	60.4	39.6	.000	39.6	58.8	.667	83.3	14.2	2.1	.586

Table 7 showed the results of the Chi-square test on the sources of information relating to the application procedure of technical training program. In terms of gender, there is a significant association between the gender and the sources of information like newspaper (p=.000), friends (p=.000), social media (p=.000), community people (p=.000) & others (p=.020). But television (p=.067) is the only source which doesn't have an association with gender regarding application procedure. Regarding marital status, there is a significant association between sources like newspaper (p=.039), social media (p=.010) and community people (p=.002) with marital status. But there is no significant difference between the sources like friends (p=.283), television (.310) and others (p=.121) with marital status. Then again, there is no association between religion and the sources of information.

Table 7 Chi-Square test of various sources of information with gender, marital status and religion.

Sources of Information	**Gender (%)**			**Marital Status (%)**			**Religion (%)**			
	Male	Female	p value	Married	Unmarried	p value	Muslim	Hindu	Chistian	p value
Newspaper	60.4	39.6	.000	39.6	58.8	.039	83.8	14.2	2.1	.538
Friends	60.4	39.6	.000	39.6	58.8	.283	83.8	14.2	2.1	.480
Social media	60.4	39.6	.000	39.6	58.8	.010	83.8	14.2	2.1	.863
TV	60.4	39.6	.067	39.6	58.8	.310	83.8	14.2	2.1	.609
Community People	60.4	39.6	.000	39.6	58.8	.002	83.8	14.2	2.1	.359
Others	60.4	39.6	.020	39.6	58.8	.121	83.8	14.2	2.1	.904

Table8shows correlation between educational qualification and level of satisfaction including engagement and interaction with the trainers, participants needs and requirements, how well the logistics are handled, networking opportunities and recognition. As the data are not normally distributed ($p < 0.05$), p value indicates that there are significant differences between educational qualification and engagement & interaction ($p < 0.05$) and Spearman's ($r = .806$) indicates that these two variables had a positive and high bivariate association. There are also association between educational qualification and needs & requirements, logistics ($p < 0.05$) and had a high positive correlation. On the other hand, there is no relation between educational qualification and networking opportunities ($p > 0.05$). Incentives and recognition have an association with educational qualification ($p < 0.05$), but the relation is weak positive. So, it is clear that most of the components of level of satisfaction have a signification relation with educational qualification. Again, age has a signification relation with engagement & interaction, needs & requirements, logistics, networking opportunities ($p < 0.05$) and also have a high positive level of correlation. On the other hand, there is no association between age and incentives and recognition ($p > .05$).

Table 8 Correlation between age, educational qualification with level of satisfaction of the participants

Component	**Level of Satisfaction**									
	Engagement & Interaction		Needs & Requirement		Logistics		Networking Opportunities		Incentives& Recognition	
	p value	r value	p value	r value	p value	r value	p value	r value	p value	r value
Educational Qualification	.000	.806	.000	.777	.000	.840	.724	.023	.023	.147

Age	.010	.768	.000	.806	.000	.806	.000	.777	.744	.122

Table9Shows the Mann Whitney test. p >0.05 indicates that there is not any significant difference between age and knowledge about technical training program. The difference of age doesn't depend on knowledge about technical training programs. Again (p= .298) also indicates that there is no difference between age and self-application. People of any age can apply here by themselves. Based on the p-value (.077) and p-value (.298), it is determined that the difference between Mean rank is not statistically significant.

In terms of access to sources of information, significant differences were found for the newspaper (p= .001), social media (p= .000), TV (p= .000). In terms of information source accessibility, there were noticeable differences between friends (p =.002), people in the community (p =.040) and other sources (p= .001). So, it can be said that age significantly influences the sources of information.

Table 9 Mann Whitney U-Test results on the relationship between age and Knowledge about technical training program and self-application.

Components	**Mean Rank**		**Age Sig. (2-tailed)**
	Yes	No	
Knowledge about technical training program	121.99	101.0	.077
Self-application	123.14	116.68	.298
Newspaper	88.09	123.94	.001
Social media	95.29	127.47	.000
Friends	98.46	141.46	.002
TV	41.60	122.18	.000
Community People	92.51	125.28	.040
Others	63.88	122.45	.001

Table 10 shows the ordinal logistic regression where age and gender were calculated with the mean level of satisfaction. The VIF is less than 1.50. So, no multicollinearity exists here. OR (age)= 1.995 indicates that if age increases by one unit, participants' level of satisfaction regarding technical training will be 99.5% higher when other variables are fixed. OR (gender)= 0.778 indicates that female participants have a 22.2% lower level of satisfaction regarding technical training compared to male participants when other variables are fixed. The odds (.004) of engagement in technical training course are 99.6% less when participants have a very low level of satisfaction.

Table 10 Parameter estimates for ordinal logistic regression test for age, gender and level of satisfaction.

Variables	**Odds Ratio**
Age	1.995
Gender	0.778
Level of satisfaction	0.004

Challenges

The effectiveness of technical training programs plays an important role in shaping economic sustainability in our country, but still facing some challenges to provide effective technical training. This study has shown that the shortage of qualified trainers is the most critical factor in technical training. Also, those who are undergoing training do not have much practical knowledge.

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Challenges faced by participants:

Category	Issue	Percentage (%)
Poor quality of technical training programs	Absence of qualified and experienced instructors	72.5
	Lack of workshop and lab facilities	84
	Absence of transparency and regularity from the instructors	13
	Inadequate market orientation	71
Inadequate number of resources	Inadequate number of classrooms	25.5
	Scarcity of computers	40
	The classroom environment is not suitable	34.5
Limitations in practical learning	Less scope to provide hands-on experience	65
	Inadequate analytical skills to compete with real-world	35
Improper monitoring and evaluation	Poor monitoring mechanism	67
	Quality assurance	–

Apart from this, the technical training program is facing difficulties due to an insufficient number of computer problems as well as the classroom environment not being suitable. The primary barrier to recruiting qualified trainers in institutions is the low wage scale.

DISCUSSION

The analysis of this paper focused on measuring the effectiveness of government technical training programs in terms of ensuring employability in the job market, and these analyses validate several earlier studies. Technical training programs run by the government serve as national concentrations for the development of the workforce. One of the most important aspects of job marketability in the nation is the technical training programs. People who are progressively more effective and equipped to work in a variety of fields benefit from it. This study examines the Ministry of Finance's Skills for Employment Investment Program (SEIP) which is funded by Bangladesh Government. According to the findings, 66.7% of all participants concur with the fact that they effectively utilized the skills and expertise they acquired during the training in their current occupations. The majority of participants concur that the training is made with useful resources to help them deal with the difficulties they face at the workplace and acknowledged that this training helped participants to improve the way they work and conduct themselves. **Ahmed (2010)** has supported the fact that, Bangladesh's national development prioritizes promoting the growth of the workforce, and as a result, the nation's current national strategy lays a high value on training in technical subjects. Because skilled labor is in high demand in international job markets, the country can increase its foreign exchange earnings by providing its talented workforce. **Iqbal (2022)** also added that, the abilities trainees received at those programs are sufficient for them to carry out their jobs satisfactorily for their employers. They could readily receive on-the-job training is another indication of the quality of the knowledge and skills they acquired.

This paper also studied to determine how satisfied the beneficiaries are, and a majority of the participants said they are content with the functions of the training institutions and think they are interesting and

participatory. The trainers attempt to foster an atmosphere where participants feel free to demonstrate their creativity and commitment. The majority of the contents are created to make it easier for participants to find employment in their industries. For the participants, almost all of the materials are highly useful and effective. **Alam & Sharmin (2023)** also evaluated that gaining practical experience in real-world business practices is crucial. By considering the prerequisites and full assessment, the person can investigate their preferred vocation. To be eligible for a certain employment, one can prepare greater expertise as soon as feasible, which calls for extensive training. Instructors must create an environment where people are comfortable showcasing their ingenuity and dedication. Most of the materials should be designed to facilitate individuals' pursuit of employment within their respective industries.

Findings show that forty-two percent of the total participants are not at ease with the logistical amenities. Program logistics are crucial, and this study revealed that there are issues with specialists, lab space, market focus, sufficient resources, etc. Each participant's competence is impacted by the overall logistical operation. If the materials had been provided when needed, the learning might have been improved and the participants might've proved better trained. **Hossain (2018)** expressed the same concern, as the quantity of technical training institutes in the nation is sufficient, but the rate at which the skilled labor supply is inadequate. A shortage of labs, equipment, and additional amenities in the institutions is a source of dissatisfaction for most trainees and trainers. **Tansen (2012)** also discussed the same fact relevant to the findings of this paper, that the majority of trainees and trainers are dissatisfied with the facilities in the government training institutions and observed that the primary barrier to recruiting qualified instructors is the lower wage scale, for which, even after having enough technical training institutions, the country's skilled labor force is not growing at an adequate rate.

CONCLUSION AND RECOMMENDATIONS

Individuals are bound to adjust to emerging and occasionally unanticipated realities as society evolves. Because of this, training will need to be a crucial component of contemporary practices, just as general education. Bangladesh currently has tremendous scope for development as an emerging economy because of its large population, which provides specialized labor resources for both the domestic and global labor markets. In Bangladesh, technical training programs can be crucial to the growth of our country's economy by producing and supplying intermediate-skilled labor in response to the current, rising demands of the domestic and international labor markets. The majority of the workforce exhibits excellent application of their acquired expertise in their profession through these technical training programs. The majority of trainees believed that there are exemplary opportunities for them to use what they have learned through these practical programs. The expertise that respondents obtained from their professional development was highly regarded. The consensus among them is that the abilities they received at the technical training institutes are sufficient for them to carry out their jobs satisfactorily for the companies they work for. The trainees expressed that they could readily receive on-the-job training is another indication of the quality of the expertise and abilities that they acquired at the training programs. The national government and various business associations are required to accomplish more to develop employment prospects in the sectors of technical training courses.

In addition, these institutions should provide consulting services to expand the opportunities available to their staff based on their technical training. The Technical training institutes in Bangladesh must recruit suitable instructors and offer them sufficient guidance necessary for technical instructional practices. The national government of Bangladesh could initiate a project towards setting up manufacturing industries in distinct regions of Bangladesh, particularly in those regions where technical training institutions are situated, to enhance practical expertise. The institution area must possess access to teaching equipment and amenities, and instructors must be proficient in utilizing them. As there seem to be fewer job possibilities in their fields of concentration, female trainees are disproportionately affected by a higher rate of

unemployment. More research is required to delve deeper into this topic, and more investigation is required to determine the way other underprivileged individuals in society, such as disabled individual's performance in the workforce.

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