

Government Of The People's Republic Of Bangladesh Director General's Office Sheikh Hasina National Institute of Youth Development Ministry of Youth & Sports Savar, Dhaka

Final Report

SKILLS REQUIREMENT FOR YOUTH DEVELOPMENT TARGETING-2041

22 May 2023

Prepared for The Sheikh Hasina National Institute of Youth Development (SHNIYD) by

Authors

Dr. Mohammad Zia-Us-Sabur, Team Lead, and Education Expert, DM WATCH LIMITED Dr. Tariqur Rahman Bhuiyan, Deputy Team Lead, DM WATCH LIMITED Mohammad Fahim Sayeed, Research Associate, DM WATCH LIMITED Sharjin Jahan, Research Associate, DM WATCH LIMITED Dr. Md Habibur Rahman Salman, DM WATCH LIMITED Md. Bayazid Hasan, DM WATCH LIMITED

Cover Photo: DM WATCH LIMITED and SHNIYD Layout and Design Adapted by: Shadman Al Arabi, DM WATCH LIMITED

Published by

DM WATCH LIMITED Shatabdi Haque Tower (3rd Floor), 586/3, Begum Rokeya Sharoni, Dhaka 1216 Email: <u>info@dmwatch.com</u> or <u>disastermanagementwatch@gmail.com</u> Website: <u>www.dmwatch.com</u>

Suggested Citation

Zia-Us-Sabur, M., Bhuiyan, T.R., Jahan, s., Sayeed, M. F., Salman M. H. R., Hasan M. B., (2023). "Skill Requirement for Youth Development Targeting 2041". Dhaka: DM WATCH LIMITED.

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Executive summary

Bangladesh is experiencing a demographic transition where the proportion of the population in the working age group is increasing, and the proportion in the dependent age group is decreasing. Investing in human capital, particularly in education and skill development, is essential to ensure the employability and overall development of the youth population, which constitutes a significant portion of the total population. The government of Bangladesh has elaborated national skills development policy 2011 and instituted NSDA (National Skills Development Authority). Bangladesh is also a signatory country for SDG4. Recently Bangladesh has approved its National SDG4 Strategic Framework which assigns high priority on vocational education for the youth and all adults. The government has implemented several initiatives to support youth skill development, such as the Technical and Vocational Education and Training (TVET) program, the Digital Bangladesh campaign, Youth Entrepreneurship Development Program, and the Skills for Employment Investment Program (SEIP). However, recent research highlights the need for a more comprehensive approach to youth development that equips young people with diverse skills that will allow them to adapt and thrive in the rapidly changing economic and technological landscape. The Sheikh Hasina National Institute of Youth Development (SHNIYD) conducted a study on Skills Requirement for Youth Development Targeting-2041, which aimed to identify skills required for youth to meet the employment challenges of 2041 and determine ways to improve those skills. The findings of the study will help SHNIYD develop and deliver tailored programs for young people and inform policymakers, educators, and other stakeholders on supporting the development and success of young people in Bangladesh.

The research aims to identify the major skills needed by the youth to meet employment requirements targeting 2041 and determine ways to improve the identified skills. The study targeted youths from all over Bangladesh. In order to ensure that the study findings are based on representative sampling one district from each division was selected based on the size of the youth population of the districts, further downscaled to Upazila level. The study team adopted a comprehensive methodology involving document review, tools preparation, training, strong team mobilization, data collection, and analysis. The study involved a cross-sectional design with mixed methods, where the Stratified Random Sampling (SRS) technique for the quantitative sample and the purposive sampling technique for the qualitative sample was used. The study had seven steps, which included reviewing the existing body of evidence, submitting the inception report, finalizing the data collection tools, conducting data collection, validating the data, analyzing the results, and preparing the draft report. The stakeholders who provided input to the study included the Ministry of Education, Ministry of Youth and Sports, Ministry of Labour and Employment, Ministry of Economic Affairs, non-governmental organizations (NGOs) working on youth development, business associations, Massive Open Online Course (MOOC), educational institutions, and vocational training centers, and youth associations working on the national level. The quality of the data collected was validated in a seminar organized in SHNIYD, and the final draft of the report incorporated feedback from SHNIYD.

The literature review discusses the challenges of youth development and employment in Bangladesh in light of the changing skill requirements in the job market. Youth unemployment is a significant issue in the country, with the unemployment rate among youth almost double the national unemployment rate. The highest share of unemployed youth is in the age group of 18-35 years, regardless of gender and location. The education system is not empowering youth with income and decent living, and the unemployment rates are higher among youth with higher education. The causes of youth unemployment in Bangladesh include insufficient job opportunities, a gap between education and employment skills, poor quality education, corruption, limited access to credit and technical training, mental health issues, and poor transportation and communication facilities. The lack of soft skills among graduates has been identified as a gap in the workforce, particularly among young people. The study suggests a need for policy interventions that address the education and employment challenges faced by the youth in Bangladesh, especially females, to unlock the potential of this large workforce. The labor market in Bangladesh has a significant skill gap, but only a few studies have attempted to analyze it. It is essential to note that surveying existing industries alone cannot provide skill demand projections for future years since much of the demand is likely to come from new enterprises. The skills gap remains a challenge for education providers as well, with recent studies reporting that many graduates feel ill-prepared for work, lacking the necessary soft skills.

Unemployment can have a significant impact on the youth, both economically and socially as well as psychologically. Economically, youth unemployment can lead to a loss of income and financial instability, which can cause long-term consequences such as lower lifetime earnings and a higher risk of poverty. Unemployment can also lead to a skills gap, as young people miss out on valuable work experience and training opportunities that could help them build their careers. This can make it harder for them to find work in the future and can result in a cycle of poverty and unemployment.

Socially, youth unemployment can lead to a sense of isolation and disengagement from society, as young people feel excluded from the workforce and struggle to find their place in society. It can also lead to mental health issues, such as depression and anxiety, as young people struggle to cope with the stress and uncertainty of unemployment. In some cases, it can even lead to social unrest and political instability, as unemployed youth become frustrated with the lack of opportunities available to them. Therefore, it is important to address youth unemployment through various strategies, such as job creation programs, vocational training, and entrepreneurship training, to provide young people with the necessary skills and opportunities to succeed in the job market.

This study analyzed the current state of youth skills and employment in Bangladesh. The study was conducted by analyzing the employment status of respondents, their work experience according to their education level, and the self-employment rates among youth. The results showed that 27.2% of respondents were unemployed, 6.2% were employed part-time, 9.8% were employed full-time, and 17.7% were self-employed. The representation of female respondents was notably lower in terms of self-employment and higher in terms of unemployment, indicating that women are still lagging behind in income-generating activities.

Youth from the Rangpur division showed a higher tendency to engage in income-generating activities, with a higher percentage of self-employed, full-time employed, and part-time employed youth. On the other hand, Barisal, Mymensingh, Sylhet, and Rajshahi have relatively higher rates of unemployment. Lack of sufficient opportunities to acquire technical knowledge and lack of local-level facilities may play a causal role behind the higher rate of unemployment in Sylhet. Youth from Mymensingh face financial implications when moving from place to place during job search, making it challenging to secure jobs. However, farming, pisciculture, and entrepreneurship can provide sustainable livelihoods and create job opportunities for others in the community.

In terms of sectors employing higher percentages of youth, the Retail, Manufacturing, and Education sectors were found to be the highest employers. Tourism and hospitality showed the lowest recruitment rate, possibly due to the underdeveloped nature of this sector to attract international tourists. The opinion of 81.6% of respondents was that there were not enough job opportunities for youth in Bangladesh. However, the respondents were divided into two groups with similar representation in assessing whether the currently available job opportunities were relevant to their skills and qualifications.

The study found that the majority of the respondents were male (61.7%) and aged between 18-25 years (71.2%). The level of education among respondents was relatively high, with 71.3% having a bachelor's degree or higher. The study found that the IT sector, followed by the Agrofood sector, was the most sought-after sector for employment. Respondents believed that higher work experience was required in the IT, Agro-food, and Education sectors. The study also revealed that 46.7% of the respondents considered starting their own business, with the majority of respondents from Chattogram, Barisal, Khulna, and Rangpur considering entrepreneurship. Respondents identified soft skills as the skill they lacked the most, while technical skills were identified as the most valued skill required to get employed in their preferred sector. The study suggests that there are gaps available in terms of technical skills, and there is a lack of information regarding available training programs and the scarcity of training centers at the Upazila level.

Industry experts believed that there would be significant growth in the IT, Agro-food, and Manufacturing sectors in the future. However, there were concerns about the lack of technical skills, soft skills, and digital literacy among young people. Industry experts also suggested that the government should take practical initiatives to equip youth with technical knowledge and integrate technical knowledge with academics from an early stage. They also suggested that collaboration between industry and educational institutions is crucial to reduce the gap between the skills that young people possess and the skills that industries require.

Employers emphasized that young people lacked experience and practical knowledge of the job market, particularly in the IT and Manufacturing sectors. They also suggested that the curriculum should be updated to align with industry demands and emphasized the importance of soft skills. Educators emphasized the need for practical training, internship opportunities, and exposure to the job market to equip young people with the necessary skills. They also suggested that the curriculum should be updated regularly to reflect changes in industry demands.

According to the survey, accessibility and affordability of the available training and education programs were not very satisfactory. Only a small percentage of the respondents found the accessibility of the training and education programs very easy. The percentage of male respondents who found the accessibility very easy was slightly higher than female respondents. The district level analysis showed that Chattogram district had a better response compared to other districts in terms of accessing the training programs. On the other hand, the respondents of Khulna found it the most difficult to access such programs compared to others.

In terms of affordability, the cost of training and education programs was a major concern for many respondents. Nearly 26% of the respondents from Chattogram marked the high cost of training and educational programs as one of the reasons for their dissatisfaction. The respondents who were not satisfied with the availability of training and education programs reported the high cost of the programs as one of the reasons for their dissatisfaction. Moreover, a significant percentage of respondents from Khulna, Rangpur, and Barisal districts reported the excessive expense of the programs as one of the reasons for not attending any training or education programs.

The government and private organizations should take appropriate measures to make training and education programs more accessible and affordable to all segments of society. This can be achieved through various measures such as providing scholarships, reducing the cost of training and education programs, providing loans, and increasing the availability of training and education programs in different parts of the country.

The accessibility and affordability of training and education programs in different fields for young entrepreneurs was also covered in this study. The study team analyzed the responses of youths through quantitative and qualitative surveys. The affordability of training and education programs was rated on a scale of 1 to 5, with the majority of respondents rating it as moderate. The cost of tuition and materials, limited availability of programs, distant location, and lack of information about available programs were identified as barriers to accessing the programs. The representative from BAPA mentioned that organizations post their training and education programs online, and it is the youths' responsibility to look for them. The KII with youth entrepreneurs in different regions showed that some young people perceive the programs as cost-effective and effective in increasing productivity and generating income, while others indicate that there are no training programs available for young people. This suggests the need to disseminate relevant information properly among the youths.

The perceptions of youth, employers, and educators on the appropriateness and potential of different fields for training and education. According to the survey findings, the majority of respondents believe that information technology (IT) and agro-food programs have the potential to provide different job opportunities. The importance of job potential was seen equally important among males and females. The relevance of existing programs with the current market trends was found to be somewhat well, according to the majority of respondents. District-wise analysis showed that respondents rated the alignment of training and education programs with the changing market trend differently in different districts, with Mymensingh district having the highest percentage of respondents rating the alignment as "very well."

According to the report, the participation rate of females in different training and education programs related to their field was higher than that of males. The participation rate was the highest in Rajshahi (76.9%), while the lowest participation rate was in Dhaka district (30.6%). The completion rates for males (73.1%) and females (74.7%) were almost similar. The highest completion rate was observed in Rajshahi (91.4%), followed by Rangpur (98.8%), while the lowest completion rate was in Chattogram (26.2%).

The most common reason for not completing the training or skill development program among both male and female respondents was that the program was too difficult to understand, followed by personal or family circumstances. Female respondents were more likely to report that the program was not what they expected or wanted compared to male respondents.

The majority of respondents (35.9%) had training or skill development programs related to IT, followed by Manufacturing (17.7%) and Agro-food (18.3%). The male and female ratio in this regard were almost similar, except in manufacturing-related programs, where 27% of the female respondents took training on manufacturing, while the rate was 8.5% in case of male respondents.

The majority of short-term programs (1 to 3 months) were offered in Rajshahi, Rangpur, and Dhaka, while Chattogram had the highest percentage (63.1%) of participants in short-term programs among all districts. Medium-term programs (4 to 6 months) were more popular in Barisal, Mymensingh, and Khulna districts. Long-term programs (7 to 12 months) were very rare, with only Rajshahi and Rangpur districts having participants in such programs. Extended-term programs (more than 12 months) were only offered in Dhaka and Sylhet districts.

A higher percentage of females (79.6%) received information or guidance on taking any training or skill development programs from stakeholders. Among those who received information or guidance, the majority received it from NGOs, followed by government institutions and private companies. The respondents reported that there is a lack of coordination among different stakeholders in providing training and education opportunities for youth.

The survey data shows that technology and IT jobs are the most in demand in the current job market in Bangladesh, with 32.9% of the respondents indicating this sector as the most indemand. Business and finance (22.4%), education and teaching (18.4%), and agriculture and farming (15.7%) were also mentioned as demandable jobs. Healthcare and medicine (9.5%) were also mentioned as demandable jobs, while marketing, garments and textile, administration, and driving were mentioned by a very small percentage of respondents.

The appropriate and potential markets for job opportunities in Bangladesh and the training and skill-development components were also studied to investigate how they align with these markets. According to the survey, technology and IT jobs are currently the most in-demand followed by business and finance, education and teaching, and agriculture and farming. In the future, technology and IT jobs are predicted to remain the most in-demand, followed by business and finance, agriculture and farming, education and teaching, and healthcare and medicine. The survey respondents identified creativity and innovation as the most sought-after skills in the future job market, followed by communication and collaboration skills, industry-specific skills, emotional intelligence, and critical thinking and problem-solving.

A significant number of respondents perceive a skills gap between the skills they have and the skills required by potential employers. The report suggests that the youth should develop more skills on newly developed technologies, and they need to understand what kind of skills are required by employers.

To align with the changing market trends, training and skill development programs need to be adaptable and innovative. The survey revealed that the youth in Bangladesh advocate for increased funding in training and skill development programs, subsidies or scholarships to make these programs accessible to a broader range of youth, greater collaboration between the government, employers, and educational institutions in the form of apprenticeships and internships, and partnerships with educators and industry experts. These interventions can create a more inclusive and dynamic environment for skill acquisition and empower youth to successfully navigate the ever-changing job market and secure meaningful employment opportunities in the future.

According to this survey, traditional classroom-based training is the most preferred mode of training among Bangladeshi youth, with 67.9% of respondents choosing it. However, there is a growing interest in online self-paced courses and other modes of training in some regions. Male respondents had a slightly higher preference for online self-paced courses, while female respondents preferred instructor-led virtual classes more. Regional differences were also observed, with Barisal having the highest preference for classroom-based training and Dhaka having the highest preference for online self-paced courses. Rangpur had the highest percentage of respondents preferring on-the-job training.

The primary factors influencing the preferred training mode were convenience, networking opportunities, and training effectiveness. These factors differed slightly based on gender and region. For example, networking opportunities were more important for female respondents, while effectiveness of training was more important for male respondents. In terms of region, respondents in Dhaka, Khulna, and Sylhet valued convenience more, while those in Barisal and Mymensingh prioritized training effectiveness. When it comes to preferred institution types for training and skill development, government institutions were the most popular choice among Bangladeshi youth, with 94.4% of respondents selecting them. Private training institutes were the second most preferred choice, while NGOs were the least popular. Lower cost of training, better quality of training, and better job placement opportunities were the top three reasons for selecting a training source. Regional differences were observed, with respondents in Khulna and Rangpur prioritizing lower cost of training more, while those in Dhaka and Chattogram emphasized better quality of training.

This study highlights the urgent need to address skills deficits and prepare young individuals for employment demands in Bangladesh by 2041. Collaboration and coordination among diverse stakeholders are crucial for delivering youth training and educational opportunities. The study indicates a gap between current education and training initiatives and future skill requirements, emphasizing the importance of accessible and affordable training programs for young individuals from diverse socio-economic backgrounds. The research provides valuable insights to gain a deeper understanding of the skills landscape and the future workforce.

Effective responses to the findings could transform the youth employment landscape, leading to increased productivity, economic progress, and social equilibrium, and foster a culture of continuous learning, adaptability, and innovation.

Overall map of the study				
Objective	Scope	Findings	Methods and Data Source	Deliverables
1. Assess the present condition of youth in terms of skill related to employment	• Present condition of youth in terms of skill related to employment.	 Around 79% youth said there is underemployment among the youth in Bangladesh. Almost 31% of the youths think there is underemployment in the IT sector of the country. Only 18.3% of the total respondents had soft skills, and 31.3% had technical skills. Around 33.8% of the respondents claimed that technical skills are required to get a job, where 23.7% and 21.3% of them said digital literacy and management skills respectively are required. Regarding future job requirement, youths believe digital literacy and English language skill will be required. Almost 33% of the respondents had 2 to 5 years of experience, and around 31% of the respondents had more than 5 years of experience. Around 35.4% of the respondents have received vocational training and 23.6% have self-learned different skills to acquire necessary skills for getting jobs. Around 39.3% of the respondents received family support while taking part in the training. 	 Secondary documents review: Review of scholarly articles, government policies, plans, and strategies and reports of government organization Quantitative survey: Youths (aged between 18 and 35) Key Informant Interview (KII) with youth entrepreneurs, Academicians, representatives from government and non- government agencies In-Depth Interview (IDI): Youths in particularly vulnerable contexts considering disability, ethnicity, and geographical diversity. Focus Group Discussion (FGD): Youth organizations working at local level 	• Draft report-based recommendation

Overall map of the study				
Objective	Scope	Findings	Methods and Data Source	Deliverables
2. Identify necessary skills for youth employment within 2041	• Identification of necessary skills for youth employment within 2041	 About 44.8% of the youths were 'somewhat satisfied' with the skills development programs Among the respondents who were dissatisfied with the available training programs, 23.5% indicated limited availability of relevant courses and training programs, and 28.7% indicated lack of access to training programs in their area as reasons of dissatisfaction. Almost 23.4% of the respondents indicated limited availability as a barrier to accessing training programs. Almost 82.8% of the youths indicated IT related skills, 50% indicated agro-food, 33.3% indicated manufacturing skills trainings potential to avail job opportunities. Around 68% of the respondents said that incorporation of more technology-based training methods is effective, where 39.5% of them identified partnering with industry experts and employers are effective for skill development programs. Almost 60.05% of the youths said it is 'very important' to have collaboration among the stakeholders 	 Secondary documents review: Review of scholarly articles, government policies, plans, and strategies and reports of government and non- government organization Quantitative survey: Youths (aged between 18 and 35) Key Informant Interview (KII) with youth entrepreneurs, Academicians, representatives from government and non- government agencies In-Depth Interview (IDI): Youths in particularly vulnerable contexts considering disability, ethnicity, and geographical diversity. Focus Group Discussion (FGD): Youth organizations working at local level 	Draft report-based recommendation
3. Map appropriate and potential fields of training and education	• Skill development through training and education	 Almost 32.9% of the respondents said IT sector was the most demanded, 22.4% indicated business and finance sector, 18.4% and 15.7% indicated education and teaching, and agriculture and farming sectors respectively. Where 34% of the respondents claimed that technology and IT jobs will be the most demanded, 21% of the respondence was for business and finance sector, 18% of the respondence was for agriculture and farming sector. 	 Secondary documents review: Review of scholarly articles, government policies, plans, and strategies and reports of government and non- government organization Quantitative survey: Youths (aged between 18 and 35) Key Informant Interview (KII) with youth entrepreneurs, Academicians, 	Draft report-based recommendation

	Overall map of the study			
Objective	Scope	Findings	Methods and Data Source	Deliverables
		 Around 32.1% of the respondents think skills related to creativity and innovation will be mostly needed skills for future job, where 22.8% of them indicated about communication and collaboration skills. To improve the training opportunities, 33% of the respondents suggested increasing funding for skill development training, where 32.4% talked about providing subsidies or scholarship. 	representatives from government and non- government agencies • In-Depth Interview (IDI): Youths in particularly vulnerable contexts considering disability, ethnicity, and geographical diversity. • Focus Group Discussion (FGD): Youth organizations working at local level	
4. Examine the appropriate and potential markets, as well as the related training and skill-development components.	• Field of Training and Education	 Almost 67.9% of the respondents wanted classroombased training facilities, where 13.7% and 10.6% of them talked about online self-paced courses and on-the-job training respectively. Around 94.4% of the respondents preferred government institutions to receive training from. Almost 40% of the respondents wanted training sessions of 1-3 months, 36.8% wanted training sessions of 3-6 months long. Around 52.1% of the respondents wanted no fee for the training session, 5.7% to 20.5% wanted a fee of around 500 to 5000 BDT. 	 Secondary documents review: Review of scholarly articles, government policies, plans, and strategies and reports of government and non- government organization Quantitative survey: Youths (aged between 18 and 35) Key Informant Interview (KII) with youth entrepreneurs, Academicians, representatives from government and non- government agencies In-Depth Interview (IDI): Youths in particularly vulnerable contexts considering disability, ethnicity, and geographical diversity. Focus Group Discussion (FGD): Youth organizations working at local level 	Draft report-based recommendation

Overall map of the study				
Objective Scope Findings Methods and Data Source Deliverables				
5. Target youth	• Target population:		• Quantitative survey: Youths	
population	Youth all over		(aged between 18 and 35)	
all over	Bangladesh.			
Bangladesh				

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List of Abbreviation

Artificial Intelligence	AI
Asian Development Bank	ADB
Bangladesh Agro-Processors Association	BAPA
Bangladesh Bureau of Statistics	BBS
Bangladesh Employers' Federation	BEF
Bangladesh Technical Education Board	BTEB
Focus Group Discussion	FGD
Fourth Industrial Revolution	4IR
Gross Domestic Production	DGP
In-Depth Interview	IDI
Information and communication technology	ICT
Information Technology	IT
International Trade Centre	ITC
Key Informant Interview	KII
Massive Open Online Course	MOOC
Ministry of Education	MoE
Ministry of Labour and Employment	MoLE
National Skills Development Authority	NSDA
National Skills Development Policy	NSDP
Non-governmental organizations	NGOs
Not in Education, Employment, or Training	NEET
On-the-job Training	OJT
Secondary Documents Review	SDR
Sheikh Hasina National Institute of Youth Development	SHNIYD
Skills for Employment Investment Program	SEIP
Small and medium enterprises	SMEs
Stratified Random Sampling	SRS
Sustainable Development Goals	SDGs
Technical and Vocational Education and Training	TVET
United Nations Development Programme	UNDP
World Economic Forum	WE

Glossary of Terms

Skills Development: The full range of formal and non-formal vocational, technical, and skills-based education and training for wage employment and/or self-employment.

Industry: Employers and workers in all industrial/commercial sectors, including agriculture, and associated industry and professional bodies and worker organizations.

Youths: According to the Drafted Bangladesh National Youth Policy 2017, youth is defined as individuals between the ages of 18 and 35. It also correspondents to the National Youth Policy 2003.

Skills: The NSDA Act 2018 defines skill as follows: Skill includes the knowledge and technique acquired for doing any specific work, or the capability and ability to produce goods and services as per required standard of industrial and professional demand of national and international markets.

Information Technology (IT): In the context of this research, IT refers to computer-based information systems' design, development, implementation, and management, including software applications, hardware, IT services, and e-commerce. Job examples are Rural IT Support Technicians, E-commerce Operators, Digital Literacy Trainers, and Telecommunication Technicians.

Construction: This sector involves the designing, planning, construction, and management of infrastructures, including residential and commercial construction. Jobs in this sector may include Local Masons, Rural Infrastructure Workers, Traditional Craftsmen, Construction Site Helpers, and local Construction Materials Suppliers.

Tourism and Hospitality: Encompasses services connected to recreational activities, holidays, travel, and accommodation. It includes eco-tourism, cultural tourism, and adventure tourism in Bangladesh. Jobs in this sector include Community Tour Guides, Local Homestay Operators, Craft Souvenir Makers, Cultural Performance Artists, and Local Food Vendors.

Transport: Pertains to the conveyance of people, livestock, and commodities from one place to another, including road, rail, water, and air transport in Bangladesh. Job examples are Rickshaw Pullers, Van Drivers, Boatmen, Animal Cart Drivers, Local Bus Conductors, and Local Transport Maintenance Workers.

Manufacturing: Refers to the process of converting raw materials into finished goods for sale, including garments, textiles, pharmaceuticals, cottage industry, and steel in Bangladesh. Jobs in this sector include Textile Artisans, Cottage Industry Workers, local Pharmaceutical Compounders, and local Factory Workers

Agro-food: Involves the cultivation, processing, and distribution of food products, including agriculture, aquaculture, and food processing industries in Bangladesh. Jobs in this sector include Rice Farmers, Fishermen, Small-scale Food Processors, Local Market Vendors, and Poultry Farmers.

Retail: Concerns the direct sale of products or services to end consumers, spanning from traditional local markets to contemporary supermarkets and digital commerce platforms in Bangladesh. Job examples are Local Shop Owners, Street Vendors, Local Artisanal Craftsmen, Mobile Sellers, and Local Market Stall Holders.

Healthcare: Dedicated to offering medical services to people aiming to preserve or recuperate health, including hospitals, clinics, and pharmaceutical corporations in Bangladesh. Jobs in this sector include Community Health Workers, Traditional Birth Attendants, Rural Pharmacists, Rural Medical Practitioners, and Health Educators.

Education: Involves the provision of knowledge and instruction, typically within a school or university framework, including public and private schools, universities, and vocational training institutes in Bangladesh. Jobs in this sector include Rural School Teachers, Vocational Trainers, Adult Literacy Facilitators, Community Education Workers, and Home Tutors.

Financial Services: Comprises businesses that handle money, including credit unions, banks, credit-card companies, insurance firms, accountancy firms, finance companies, microfinance, and mobile banking services in Bangladesh. Job examples are Microfinance Loan Officers, Mobile Banking Agents, Village Savings and Loan Association Facilitators, Insurance Agents, and Local Money Changers.

1 Background and Introduction

Bangladesh is currently in a phase of demographic transition, where the proportion of the population in the working age group is increasing while the proportion in the dependent age group is decreasing. According to the World Bank (2021), around 64% of the population in Bangladesh is currently in the working age group, and this is projected to increase to around 70% by 2050. In Bangladesh, the youth population constitutes a significant portion of the total population, with around 64% of the population being under the age of 30 (Population Census, 2011). Ensuring their employability and overall development is crucial for the country's economic growth and social development. However, the rapidly changing technological and economic landscape has made it challenging for young people to acquire the necessary skills to meet the demands of the future workforce (World Bank, 2019).

Besides, it is important to note that reaping the benefits of a demographic dividend is not automatic and requires a combination of factors such as investments in education, healthcare, and infrastructure, as well as economic policies that promote job creation and entrepreneurship. The government of Bangladesh has recognized the importance of investing in human capital, specifically in education and skill development. The government has implemented a number of initiatives to support youth skill development in recent years. One of the key initiatives is the Technical and Vocational Education and Training (TVET) program, which aims to provide young people with the skills and knowledge they need to succeed in the 21st-century economy (Ministry of Education, 2016). Another initiative is the "Digital Bangladesh" campaign, launched by the government in 2013, which aims to promote the use of information and communication technology (ICT) in all sectors of the economy, including education and skill development (Ministry of Posts, Telecommunications and Information Technology, 2013). The government also has launched the "Youth Entrepreneurship Development Program" which focuses on promoting entrepreneurship and innovation among young people, to support the creation of new businesses and jobs (Ministry of Youth and Sports, 2022). A more recent initiative is the "Skills for Employment Investment Program (SEIP)" which focuses on enhancing the employability of young people by providing them with the necessary skills, knowledge, and experience to succeed in the job market (Ministry of Finance, 2017).

In this aspect, Bangladesh Perspective Plan (2022-2041) also recognizes the importance of investing in human capital, specifically in education and skill development, as a key driver of economic growth and sustainable development. In particular, it emphasizes the need to focus on youth skill development, to ensure that the country's youth are equipped with the skills needed to succeed in the future workforce. It is worth noting that the implementation of this plan will require collaboration between the government, private sectors, and other stakeholders to ensure the effective implementation of the plan to achieve the targeted outcome.

Recent research has highlighted the need for a more comprehensive approach to youth development in Bangladesh, one that focuses on equipping young people with a diverse set of skills that will allow them to adapt and thrive in the face of these changes (Khan, 2019). In particular, there is a need to understand the specific skills requirements for youth in Bangladesh in the context of the projected changes in the economy and workforce by 2041. The recent COVID-19 pandemic developments had a tremendous effect on the world economy and labor

force, with many industries encountering unheard-of difficulties and interruptions. In Bangladesh, the pandemic has led to widespread job losses and economic insecurity, particularly among young people (Ahmed & Islam, 2020). Furthermore, the post-pandemic economic recovery is likely to be shaped by the rapid acceleration of digitalization and automation, leading to significant changes in the skills required for the workforce (ILO, 2020).

Sheikh Hasina National Institute of Youth Development (SHNIYD) creates a unique opportunity to adopt modern approaches in its training and research activities suited to the development of youth in a third-world setting. This center acts as the 'Light house' for young people to pave the way for their total empowerment. Based on this context, the SHNIYD under the Ministry of Youth & Sports took a timely initiative to conduct research on *Skills Requirement for Youth Development Targeting-2041*. The research aimed to identify major skills for youth necessary to meet the challenge of employment requirements targeting 2041 and determine ways how to improve the identified skills. The research was carried out targeting youths all over Bangladesh. The research will help SHNIYD to develop and deliver programs that are tailored to the specific needs of young people in the country and make informed decisions about the programs and services they offer targeting the skills required for youth development in the country, which will help policymakers, educators, and other stakeholders to support the development and success of young people.

DM WATCH LIMITED was awarded by SHNIYD to conduct the study. A proven track record in providing research and consulting services, the firm's expertise in education and skills development, along with their knowledge of the economic and social context of Bangladesh, made them well-suited to conduct research on Skills Requirement for Youth Development Targeting-2041.

1.1.1 Scope of the Study

The primary aim of the research is to identify the major skills for youth necessary to meet the challenge of employment requirements targeting 2041 and determine the ways how to improve the identified skills.

The scope of this research is stated below-

- Present condition of youth in terms of skill related to employment.
- Identification of necessary skills for youth employment within 2041
- Skill development through training and education
- Field of Training and Education
- Target population: Youth all over Bangladesh.

1.1.2 Objective of the Study

The main objective of the study is to identify the major skills for youth necessary to meet the challenge of employment requirements targeting 2041 and determine the ways how to improve the identified skills. The specific objectives are stated below-

> Assess the Current State of Youth Skills and Employment in Bangladesh

- > Conduct a Mapping and Analysis of Existing Education and Training Fields
- Identify Appropriate and Potential Markets and Related Training and Skill-Development Components
- Understand Youth Preference on Training and Skill Development Programs
- Provide recommendations based on the findings to assist SHNIYD in enhancing and customizing their programs to address the future employment needs of Bangladeshi youth, thereby improving their employment prospects by 2041.

1.2 Literature Review of current job market situation

As information technology and other technological advancements are rapidly developing, innovative business ideas are also emerging with a notable impact on the job market. The World Economic Forum notes that disruptive changes to business models are profoundly affecting the employment landscape. In-demand occupations were non-existent 5 to 10 years ago, and the pace of change is accelerating. Therefore, we need to better anticipate and prepare ourselves and our youth "for future skills requirements, job content, and the aggregate effect on employment." The remaining part of this chapter will highlight the youth-related issues discussed in the secondary documents in light of changing skill requirements in the job market and employment situation in Bangladesh.

1.2.1 Youth Development and Employment in Bangladesh

Youths represent more than half of the entire population in Bangladesh (UNDP, 2021). Although the country has shown notable progress in terms of poverty reduction and access to education, youth development remains a challenging issue. One of the biggest issues for the youth community in the country is the unemployment rate among youth, which has almost doubled over the past seven years. The national unemployment rate is 4.2%, but the youth unemployment rate is 10.6%, with 79.6% of unemployed youth making up total unemployment (ILO 2020). As the representative of more than half of the population, youths need to be provided with sufficient employment in order to continue the progress in poverty reduction that Bangladesh has done very well in the recent past.

The unemployment pattern in Bangladesh indicates that the highest share of unemployed youth is in the age group of 18-35 years, regardless of gender and location (rural or urban). However, the unemployment rates were found even higher among youth with higher education, which suggests that the education system is not empowering youth with income and decent living (ADB 2016). IJM Van der Heijden et al 2019 discusses the results of a study on the relationship between the high frequency of university students' jobs while completing their degrees and the quality of the jobs they obtain approximately six months after graduation. The study found that the relationship was partially mediated by self-perceived employability, and not dependent on the time devoted to a student job. The article explores the theoretical implications of the study, including how self-perceived employability helps graduates be more motivated and selective in their search for a job. Additionally, youth NEET (Not in Education, Employment, or Training) is as high as 29.8%. However, recognition of youth unemployment as an emerging problem is absent in policies, such as the national youth policy 2017, which lacks a concrete

plan of action for employment creation. These findings suggest that there is a need for policy interventions that address the education and employment challenges faced by the youth in Bangladesh, especially females, to unlock the potential of this large workforce (Khatun et al 2020).

Khatun et al 2020 highlighted the causes of youth unemployment in Bangladesh which include insufficient job opportunities, a gap between education and employment skills, poor quality education, corruption, limited access to credit and technical training, mental health issues, and poor transportation and communication facilities. They also identified poor communication skills, limited education, lack of experience, and discrimination in job recruitment as reasons for unemployment. Social factors such as early marriage, family restrictions, and cultural prejudice also contribute to the issue. There has been much less reliance on public sector employment among educated Bangladeshi youth due to private sector growth. These educated youth are hired mostly by modern private sector establishments, ranging from NGOs to banking, insurance, and leasing companies, and export firms and overseas companies (Hossain, Sen, and Sawada 2012). This indicates that the public sector is still unable to attract youth for employment. The reasons may be a lengthy process and entry barriers exist in this sector in many forms.

1.2.2 Evidence of Skill gaps

A study by BIDS highlights the presence of skill gaps in Bangladesh based on various sources of evidence. The findings indicate that a low unemployment rate among individuals with technical training compared to those with general education (SSC/HSC). Similarly, Labor Force Participation Rate (LFPR) is highest among individuals with technical skills, surpassing those with SSC/HSC levels. The study found that a significant positive impact of vocational/technical diplomas on wages/salaries. Individuals with technical training tend to earn higher wages compared to their counterparts with similar educational levels, suggesting the value and demand for their skills in the labor market. It was also reported that many sectors in Bangladesh view the shortage of skilled workers as a critical constraint to sectoral growth. This industry feedback further supports the existence of skill gaps in the respective sectors (BIDS 2017). Another study identified the skill gaps more specifically which include communication skills (especially English language skills), time management skills, and problem-solving skills. These findings highlight the areas where further attention and improvement are needed to bridge the gap between employer expectations and the skills possessed by university students and recent graduates (Khatun et al 2022). A study by World Bank identified that critical thinking, problem solving, leadership, communication, work ethics, and teamwork are essential but lacking among workers in Bangladesh. The study also indicted that the overemphasis on theoretical knowledge over practical skills during tertiary education leads to deficiencies in technical competencies. Workers need better ICT skills to fully exploit the growth potential of new technologies and meet domestic and international business requirements (World Bank 2018). Table 1 summarizes the identified skill gaps from the previous studies.

Sectors	Skill Gaps	References
IT	Call centre operator	Barakat et al (2018)
	Data entry operator	World Bank 2018,
	Web developer	Sajjad et al 2020
	Computer operator	
	Web-based product marketing	
	Digital graphic design	
	Software developer	
	Content developer	
	IT Support Technician	
	Cyber computing	
	Cyber security	
Health sector	Physicians	Ahmad et al (2011)
	Nurses	
	Dentists	
	Health technologists	
Soft skills	Communication skills	Nakata et al (2018)
	English skills	Khatun et al 2022,
	Team working skills.	World Bank 2018
	Higher cognitive skills	
	Problem solving skills.	
	Decision making	
	Leadership skill	
	Critical thinking skill	
	Collaborative teamwork skills	
	Technical skills need for work.	Nakata et al (2018)
	Theoretical knowledge relevant to the work	Khatun et al 2022,
	Reading and writing in Bangla	World Bank 2018
	Numeracy skills	
	Applied skills	
	Management skills	Nakata et al (2018)
	Steer operations in changing business environment	Khatun et al 2022
	Supervisors with sound skills in production process	
	management	
	Quality control,	
	Project management	
	Manager for human resource management	

Table 1 Identified skill gaps from previous studies.

1.2.3 Skill requirements for future employment in different sectors targeting 2041

The labor market in Bangladesh has a significant skill gap, but only a few studies have attempted to analyze it. Two studies, one by the MoE and MoLE in 2012 and the other by ADB in 2015, provided an economy-wide analysis of skill needs. However, the MoE and MoLE study's skill supply data could not be disaggregated by suitability for sectors and skill levels, making it unsuitable for estimating or projecting skill gaps. The ADB study estimated skill demand and training needs but did not explicitly address skill gaps or shortages. However, given the small existing supply of skills compared to total demand, the entire "training need" may be accepted as the skill gap/shortage. The projections in the ADB study are based on labor force growth and sectoral composition data from LFS 2010 and GDP growth projections from the Sixth Five-Year Plan. However, these projections require revision in light of new data from the BBS 2013 and the 8th Five-Year Plan 2020. It is essential to note that surveying existing

industries alone cannot provide skill demand projections for future years since much of the demand is likely to come from new enterprises. The skills gap remains a challenge for education providers as well, with recent studies reporting that many graduates feel ill-prepared for work, lacking the necessary soft skills (Di Gregorio et al. 2019).

The lack of soft skills among graduates has been identified as a gap in the workforce, particularly among young people. This issue is global, with similar findings in Asia including Bangladesh, China, and other countries around the region. Governments and employers are



Figure 1 21st-century skills, Image source: World Economic Forum, New Vision for Education (2015)

encouraging universities to introduce soft skills to the undergraduate curriculum to address this issue (Di Gregorio et al. 2019). Rios et al 2020 provided an empirical examination of employers' direct communication to potential employees through job advertisements to rank-order skill demand for workplace success. They found that oral and written communication, collaboration, and problem-solving skills are highly demanded by employers, with a particular emphasis on the pairing of oral and written communication (Figure 1). With the rise of automation, there is a shift towards the need for soft skills, such as communication, teamwork, problem-solving, and leadership, in addition to technical expertise. With automation and the rise of new technologies, it is difficult to predict the net effect on job creation and displacement. Many students may be preparing for jobs that will soon be automated or replaced by technology. Additionally, there is a growing trend of professional obsolescence, which refers to the depreciation of human capital in terms of knowledge, skills, and abilities necessary to maintain effective performance in work roles (Kirschner & Stoyanov 2020). Some 21st-century

skills that are suggested to be critical for workplace success, such as social responsibility, were found to be in low demand or not mentioned at all. The study also showed differential demand for some skills by education level and degree field requirements, indicating that the homogenous development of 21st-century skills may not be effective in preparing students for workforce entry. The study's implication is that the skills highlighted as critical to 21st-century workers have been important to higher education institutions and employers for decades (Figure 1).

Besides soft skills, technical skills such as digital marketing communication, data mining, analytics, and online channels are also found important in previous literature. For example, the impact of the digital revolution on marketing has been very significant which requires marketing graduates to develop extensive knowledge of specific digital tools to support marketing strategy and operations (Teng et al. 2019).

Artificial Intelligence (AI) is a rapidly growing field that is going to make significant alterations to the job market in the future. It has the potential to revolutionize many industries, from healthcare to finance. AI is going to create 2.3 million jobs by 2025 (WEF, 2018) which are going to be new in terms of job specification, and relevant skill development programs will most likely be different than regular IT training programs usually offered today. For example, LinkedIn's 2021 Emerging Jobs Report lists AI specialists and machine learning engineers as two of the top 10 emerging jobs (LinkedIn. 2021)[.]

In the advancement of information technology and the level of dependency of work on it will make cyber security an essential part of almost all sectors in the future world. According to a report by Cybersecurity Ventures, the cybersecurity industry is expected to grow from \$173 billion in 2020 to \$270 billion by 2026 (Cybersecurity Ventures, 2021). This growth is expected to lead to an increased demand for cybersecurity professionals, such as cybersecurity analysts and engineers.

As societies are quickly moving towards data-driven culture, entities have to deal with large amounts of data in the volume of data is expected to increase exponentially as time passes. This has already necessitated data scientists for analyzing and interpreting complex data to derive insights and informed decision-making. According to LinkedIn's 2021 Emerging Jobs Report, the data scientist is the top emerging job. The report states that the demand for data scientists has grown by 46% annually over the past five years.

Computing services is going to be another emerging sector for promising employment in the future. The relevant service is going to be executed by cloud computing over the internet which includes providing data storage, processing, and applications. The public cloud services market is expected to grow by 18.4% in 2021 (Gartner, 2021) which is expected to create a demand for professionals with expertise in cloud computing, such as cloud architects and engineers.

Managerial skills and relevant education are also important issues in Bangladesh. The Schoolto-Work Transition Survey conducted by Toufique 2014 shows that many young professionals, managers, and technicians lack the necessary education for their jobs. A study found that 62% of young workers may be undereducated (Toufique 2014). The lack of basic education and skills also impedes the expansion of the informal sector and movement up the value-added ladder. Specific industries have specific skills needs, such as finding experienced welders in bicycle production or managerial skills in the pharmaceutical sector. The IT sector is expanding rapidly, but workers need adequate fundamental education to quickly acquire the needed skills.

1.2.4 Existing Strategies for developing necessary skills among Youth

There are various strategies implemented around the globe in order to cope with the changing job market. Countries are putting their efforts into developing necessary skills among youth for making them compatible and sustainable in the future job market. This section presents some existing strategies for developing necessary skills among youth:

While formal education is being implemented as a traditional way of developing necessary skills among youth, vocational training is also getting attention increasingly to meet the emerging demand for the newer skills desired by employers in the job market. Research has already shown that focusing only on formal education will not be sufficient to address the existing skill gaps and the future skill demand in the labor market (Jenkins et al., 2015). Therefore, vocational training programs are being considered feasible alternatives around the globe. Because, through vocational education, young people can get the opportunity of gaining hands-on training with a practical demonstration of various skill sets and get relevant knowledge with specific relations to trades or industries. These programs allow us to avoid the lengthy process of the formal education system and produce skilled youths within the shorter time period. These types of programs can be provided by government agencies, non-profit organizations, or private companies without maintaining too much formality. As a result, vocational training and apprenticeships are gaining popularity as effective means of developing the necessary skills for employment, especially in industries where technical skills are in high demand (Cedefop, 2020). Figure 2 shows the mind map of the existing strategies from the body of literature reviewed by this study.



Figure 2 Mind map of existing strategies for skill development

On-the-job (OJT) training

On-the-job (OJT) training involves providing training to employees while they are working. It can help develop necessary skills among youth. OJT allows youths to acquire skills in a realworld setting. Research has shown that OJT training can lead to increased job satisfaction, productivity, and skills development (Luhmann & Eid, 2014). OJT is a popular training strategy in Bangladesh, particularly in the garment and textile sector of the country. Several factors were identified which make an OJT program effective including the quality of the training program, the competency of the trainers, and the willingness of employees to learn. Researchers also emphasized that establishing a culture of providing feedback and support to trainees makes OJT more effective (Rahman et al. 2019). OJT programs in Bangladesh typically involve a combination of classroom instruction and hands-on training. Trainees are often paired with experienced employees who serve as mentors and coaches. The training program may be customized to meet the specific needs of individual employees or job roles. One example of OJT in Bangladesh is the "Skill for Employment Investment Program" (SEIP), which is funded by the government of Bangladesh and aims to provide skills training to unemployed and underemployed individuals. The SEIP program includes OJT as a key component of the training, with trainees receiving on-the-job experience in various industries such as manufacturing, IT, and hospitality.

Entrepreneurship training

The strategy of providing entrepreneurship training promotes the economic development of the country and it helps reduce the unemployment rate as well (Alam et al. 2020). This type of program helps young people acquire the skills and knowledge for starting and running their

own businesses. This can include courses on business planning, financial management, marketing, and sales. In Bangladesh, entrepreneurship training programs are offered by a range of organizations, including the government, NGOs, and private sector employers. The "SheTrades Commonwealth" program is one of the examples of entrepreneurship training programs in Bangladesh. This program is implemented by the International Trade Centre (ITC) in collaboration with the government of Bangladesh. This program provides women entrepreneurs with training and support to start and grow their businesses, including access to mentorship and networking opportunities. Khatun and Alam (2021) found that entrepreneurship training programs as effective in Bangladesh with having a positive impact on the business performance of participants. They not only help to improve the financial management and marketing skills of participants but also their ability to access funding and markets.

Short-term training

Short-term training programs mainly help build the skills and knowledge of the workforce. They are designed to provide the basic skills and knowledge that individuals need to have in order to enter the workforce in a particular industry or trade. Short-term training programs typically have a duration of three months to one year and focus on practical skills. Rashid and Alam (2020)⁻ found that short-term training programs have the potential to address the skills gap in the workforce and improve employability in Bangladesh. These types of programs are very important for marginalized groups, who often face additional barriers to accessing formal education and training. Chowdhury and Zohir (2019), indicated that these types of training programs significantly increase the employability of participants and are able to help improve practical skills and provide them with access to job opportunities.

Computer and IT training

As the digital system is being implemented in every sector around the world, computer and IT training is going to be one of the major areas of skill development in the future. IT-related skills and knowledge have already been one of the major requirements for the workforce in Bangladesh. There are various organizations offering IT training in Bangladesh including the government, NGOs, and private sector employers. Hossain et al. (2019), showed that computer and IT training programs can improve the potential of employability and income for individuals. A range of IT-related topics can be very relevant to the context of Bangladesh such as computer programming, website development, and digital marketing. One example of a computer and IT training program in Bangladesh is the "Digital Bangladesh" program, which is implemented by the government of Bangladesh. This program provides computer and IT training to students in secondary schools and higher education institutions. The program also provides support for entrepreneurship development and job placement. Hasan and Azam (2021), found that computer and IT training programs have a positive impact on the employability and income of participants. The study notes that computer and IT training programs can help to improve the technical skills and knowledge of participants, as well as their ability to access job opportunities in the digital economy.

Soft skills training:

Soft skills are also an effective strategy that covers skills such as communication, teamwork, and problem-solving-related skills. These skills are essential for success in any job. Soft skills training programs can help young people become compatible in the job market. These types of training can include role-playing exercises, team-building activities, and communication workshops.

Career counselling

Career counselling services are very helpful for making youths of the society in searching and finding appropriate jobs. They can help young people learn how to identify their strengths, interests, and goals. These kinds of services are helpful to make informed decisions in terms of identifying suitable jobs in accordance with their educational background, skill, and relevant career paths. In Bangladesh, career counseling services are provided in universities as well as in schools or through government agencies.

In general, Government policies and initiatives can also play a crucial role in preparing the youth for the ever-changing job market. The policy plays a vital role in ensuring that necessary skill development among youths is in line with the future demand for skills in the market. For example, the European Union has established the European Skills Agenda, which aims to support upskilling and reskilling of workers, especially in response to the changing nature of work (European Commission, 2020). In Bangladesh, the government has launched various initiatives to develop necessary skills among youth, such as the Skills for Employment Investment Program (SEIP) and the National Skills Development Policy (NSDP) (Government of Bangladesh, 2011; Rahman et al., 2020). These initiatives focus on providing vocational training and apprenticeships to youth, as well as supporting entrepreneurship and small and medium enterprises (SMEs) to create job opportunities. However, the National Skill Development Policy (NSDP) of 2011 has identified youth, women, and low-skilled people as a key target group for promoting access to education, training, and lifelong learning. The policy aimed to incorporate apprenticeships for youth among state-owned enterprises and provide accessible and flexible quality skills training to better equip working adolescents. On the other hand, the NSDP, 2020 is based on shared responsibilities among various actors and stakeholders in skills training design and delivery. The policy emphasizes matching skills demand and supply and equal opportunities for all segments of society, including women, people living in remote rural communities, disadvantaged youths, and persons with disabilities. The policy is intended to be results-focused, inclusive, performance-based, and forwardlooking aligned with the country's long-term development goals envisaged in SDGs, Second Perspective Plan (2021-41), Vision 2041, and Delta Plan 2100. The policy recognizes the importance of efficient coordination between demands for and supply of skills in making the skills development system responsive to labor market requirements. The policy covers training opportunities for youth and other segments of society to ensure equal access to skill development. Overall, the NSDP, 2020 aims to provide an enabling environment for skill development, re-skilling, up-skilling training, and apprenticeships through a collaborative effort of various stakeholders to create a skilled national workforce that can meet the demands of the changing labor market.

1.2.5 Institutional capacity of Government and non-government in providing skill development

The capacity of government and non-government institutions in Bangladesh to provide skill development programs for youth can be summarized as follows:

Fragmented Delivery: Skill development programs are delivered by various ministries, resulting in a fragmented system with a lack of coordination.

Public Providers: The main public providers of technical vocational education and training (TVET) include the Department of Technical Education (DTE), the Bureau of Manpower, Employment, and Training (BMET), the Ministry of Industries, the Ministry of Youth and Sports, and the Ministry of Women and Children Affairs.

The government was acknowledged for its initiatives to understand the skill demand and supply. However, it was noted that there is a challenge in bridging the gap between the demand and supply sides. The government's role was discussed in terms of being a regulator and ensuring accountability in the skill development sector.

Private Providers: About 95% of TVET institutions in Bangladesh are private providers, and they account for approximately 75% of total enrolment. The private sector was identified as the main provider of training in Bangladesh. It plays a significant role in offering skill development programs. However, it was mentioned that there is a lack of technical and soft skills, creativity, and interest in some industries. Collaboration between the private sector, TVET institutes, and educational institutions was emphasized as crucial for bridging the skills gap.

NGOs: Non-governmental organizations (NGOs) were mentioned as additional contributors to skill development in Bangladesh. Their involvement in providing training was acknowledged, although their specific role and capacity were not extensively discussed.

TVET institutes: TVET institutes were recognized as important players in addressing the skills gap and providing training to the workforce. However, it was found that only a small percentage of the population in Bangladesh is currently receiving training, and there is a need to modernize and upgrade the TVET curriculum and training.

Enrolment: Around 500,000 students enroll in formal TVET programs annually, indicating a considerable demand for skill development opportunities.

Funding Constraints: TVET institutions receive limited funding, with only about 3% of the education budget allocated to TVET. This poses a challenge in expanding and enhancing the quality of skill development programs.

Gender and Access Disparities: TVET institutions mainly target male students, and there are geographical inequalities that hinder equitable access to skill development opportunities. Women and disadvantaged groups are underrepresented.

Quality and Market Responsiveness: The quality of current training programs is hampered by various factors such as the lack of trained teachers, insufficient practical instruction, inadequate financing, and a need for better market responsiveness. The absence of skills-gap analysis and limited public-private partnerships also contribute to the gap between training and job market requirements.

Policy Framework: The National Skill Development Council (NSDC) and the National Skill Development Policy (NSDP) provide a framework for skills development initiatives and coordination. However, there is a recognized need for a more effective institutional arrangement to enhance overall coordination, establish a national human resource development fund, and engage the private sector.

2 Methodology of the Study

2.1.1 Study Area

The focus population of this investigation comprised youth from across Bangladesh. Given the comprehensive scope of the study, it was necessary to implement a selective approach. Thus, the study randomly chose one district from each division in the country. Similarly, the study areas were further refined to the Upazila level. Two Upazilas were selected randomly from each district. The list of selected study areas is provided below Table 2.

Division	Upazila/City corporation
Barisal	Barisal Sadar Upazila
	Banaripara Upazila
Chattogram	Chattogram city corporation
	Ranggamati Sadar
Dhaka	Dhaka North city corporation
	Dhamrai Upazila
Khulna	Jashore Sadar Upazila
	Manirampur Upazila
Rajshahi	Rajshahi city corporation
	Bagha Upazila
Rangpur	Rangpur Sadar Upazila
	Pirgachha Upazila
Mymensingh	Mymensingh Sadar Upazila
	Durgapur Upazila
Sylhet	Sylhet Sadar Upazila
	Gowainghat Upazila

Table 2 Table of the study area

2.1.2 Research Approach

To achieve the objectives of the study, the study team adopted a comprehensive methodology in each of the activities, e.g., document review, tools preparation, training, strong team mobilization, data collection, and analysis according to the ToR. This study involved a crosssectional design with mixed methods, where Multi-stage Cluster Sampling technique (see
details in section 2.1.3.2.1) for the quantitative sample and the purposive sampling technique for the qualitative sample was used. The following steps were undertaken to conduct the study. The methodological workflow of the study is illustrated in Figure 3.



Figure 3 Steps followed throughout the Study.

2.1.3 Data Collection

2.1.3.1 Secondary Documents Review

Following the SDR guideline (see Annex 7.2), the study team conducted a systematic review of the secondary documents for collecting most relevant data for analysis.

2.1.3.2 Primary Data Collection

2.1.3.2.1 Quantitative data collection

Using a structured questionnaire, quantitative data was collected from youths aged between 18 and 35. The data was collected from youths from 16 Upazilas (2 Upazilas of a District from Each Division).

2.1.3.2.2 Sampling technique

This study incorporated a cross-sectional design with mixed methods, employing Multi-stage Cluster Sampling for the quantitative sample. In Multi-stage Cluster Sampling, the process starts by dividing the population into groups or clusters. In this case, the primary clusters were the divisions of Bangladesh. From these primary clusters, one district from each division was selected based on the size of its youth population, thereby creating secondary clusters. The study areas were then further refined to the Upazila level, which served as the Primary Sampling Units (PSUs). PSUs are the smallest geographical units from which a sample can be drawn. In this context, Upazilas represent the PSUs, as they were the smallest administrative units selected for data collection in the sampling process. From each PSU, the respondents were selected randomly.

2.1.3.3 Quantitative sample size

According to data from Bangladesh Bureau of Statistics (BBS), the current population of youth in Bangladesh is around 70 million as of 2021, which represents around 35% of the total population of Bangladesh. Equation presented below was used for sample size determination.

$$n(Y) = \frac{P(1-P)(Z95\%)^2}{(P-p)^2}$$
 (Equation 1)

Where

P = Proportion to be estimated = 50%, which gives statistically significant sample size

P - p = Margin of error (value 0.031)

Z95% = Z-value at the 95% confidence level = 1.65

n(Y) = Size of sample for Youths

The sample was considered at a **95% confidence level**, with an accuracy rate or amount of admissible **error margin, of 3%** for both rural and urban areas. In addition, as SHNIYD also provide training and skill development programs to the youths, this study also surveyed additional 60 (40 male and 20 female) respondents which ultimately lead to the total sample size of 1020 in 16 study areas (in Table 3 the additional 60 sample was added in the Dhamrai Upazila) The sample has been distributed equally between male and female participants for each study areas. The respondents was selected using a stratified random sampling technique with proper justification; and they were selected with consideration for the sample's gender balance. As appropriate, all assessment data was disaggregated by age, gender, and geographic region.

Division	Upazila/City corporation	Male	Female	Total
Barisal	Barisal Sadar Upazila	32	34	66
	Banaripara Upazila	29	26	55
Chattogram	Chattogram city corporation	30	30	60
	Ranggamati Sadar	30	30	60
Dhaka	Dhaka North city corporation	32	29	61
	Dhamrai Upazila*	67	45	112
Khulna	Jashore Sadar Upazila	30	30	60
	Manirampur Upazila	30	31	61
Rajshahi	Rajshahi city corporation	30	31	61
	Bagha Upazila	30	30	60
Rangpur	Rangpur Sadar Upazila	32	30	62
	Pirgachha Upazila	28	30	58
Mymensingh	Mymensingh Sadar Upazila	30	31	61
	Durgapur Upazila	29	32	61
Sylhet	Sylhet Sadar Upazila	32	29	61

Table 3 Sampling distribution of the respondents by division and Upazilla

Division	Upazila/City corporation	Male	Female	Total
	Gowainghat Upazila	28	33	61
	Total	519	501	1020

*With the addition of 60 (40 male and 20 female youth training participants from SHNIYD)

2.1.3.4 Qualitative data collection

Qualitative data played a significant role in this research. Along with the quantitative data, qualitative data was collected too from different stakeholders. **Key informant interviews** (**KII**) were conducted with Representative from relevant ministries and government bodies, non-governmental organizations (NGOs) working on youth development, business associations from key sectors (such as IT, construction tourism, hospitality, transport, manufacturing, agro-food, etc), Educational institutions, and vocational training centres, youth associations working at national level. **Focus group discussions (FGDs)** were arranged with youth organizations working at local level and **In-depth interviews (IDI)** with youths in particularly vulnerable contexts considering disability, ethnicity, and geographical diversity.

3 Findings

3.1 Demographic Information

3.1.1 Division-wise Distribution of Respondents

This section provides demographic information of the respondents. A total number of 1020 respondents were surveyed in 8 divisions of the country. The table below (Table 4) shows the sample size distribution across 8 divisions of Bangladesh. The division with the highest frequency is Dhaka, with 173 respondents or 17% of the total. The reason behind the highest frequency in Dhaka division was the incorporation of a number of youths from the SHNIYD who had received training from the Institute. The percentage of respondents from Dhaka was followed closely by Mymensingh and Sylhet, both with 122 respondents and 11.9% of the total each.

Division	Frequency	Percentage (%)
Dhaka	173	17
Mymensingh	122	11.9
Sylhet	122	11.9
Barisal	121	11.8

 Table 4
 Division-wise distribution of respondence (N=1020)

Rangpur	120	11.8
Khulna	121	11.8
Rajshahi	121	11.8
Chattogram	120	11.7
Total	1020	100

3.1.2 Gender-wise Distribution

Among the whole sample size, 50.9% (n=519) were male and the rest of the respondents were female. (Table 5). This indicates almost same number of females attending the survey. Therefore, a gender inclusive survey was ensured in this study.

Table 5Distribution of the respondents according to sex (N=1020)

Sex	Frequency	Percentage
Male	519	50.9
Female	501	49.1
Total	1020	100

3.1.3 Gender and Age-range Distribution

Among 49.1% (n=501) of the female respondents, 19% were aged between 18-22, another 18% were aged between 23-27 years, and only 4% were aged between 33-35 years. Almost similarly, around 21.6% of the male respondent (50.9%) were aged between 18-22 years, 17.5% were aged between 23-27 years, and another 7.5% were aged between 28-32 years (Figure 4). The age representation of this study endured that the sample size appropriately included youths in the study according to the objective.



Figure 4 Age-range distribution of the respondent according to sex (N=1020)

3.1.4 Education Status of the Respondents

In this study, the majority of the respondents (43.2) completed their HSC/Diploma/equivalent. Of the rest of the respondents, 17.5% passed SSC/equivalent, 13% obtained their Bachelor/equivalent, and 7.5% pursued Masters/equivalent degree. Only 0.5% of them did not pursue any formal education (Annex Table 1).

From a gender-wise distribution of education level of the respondents, it was found that only 5.2% of male and 2.3% of female respondents pursued their Masters/equivalent degree. Majority of the respondents from both male (21.5%) and female (21.8%) respondents completed HSC/Diploma/equivalent level of education. Where 0.1% of the male respondents obtained no formal education, the percentage is 0.4 in case of female respondents (Figure 5).



Figure 5 Education status of the respondents according to sex (N=1020)

3.2 Current State of Youth Skills and Employment in Bangladesh

This section assesses the state of youth skills and employment. The current state of the youths' employment was assessed by studying the employment status of the respondents, work experience with respect to educational qualification in different sectors, and self-employment rate among youth. The status of youth skills was assessed by studying current skill gaps, perception regarding future job opportunities, and strategies of youths for acquiring the necessary skills and support they receive from various stakeholders.

3.2.1 Employment, unemployment, and underemployment rates among youth in different sectors

3.2.1.1 Employment state

Figure 6 depicts employment status of the respondents by gender which indicates that 39% (Annex Table 2) of the respondents are students with 20.1% and 19% representing female and male respectively. The results also showed that 27.2% of the respondents are unemployed, of them 17.1% and 10% were represented by female and male respectively. In comparison, employed persons (both part time 6.2% and full time 9.8%) represented notably lower percentage. However, 17.7% were found self-employed with female 6.3% and male 11% (Figure 6). The representation of self-employed youths was comparatively higher than both part-time and full-time employed youths. A notable difference was found, in terms of

percentage, that the representation of female was less by almost half when it came to selfemployment. Female were also found notably higher in terms of representing unemployed respondents. This indicates that, women are still behind in participating income generating activities.



Figure 6 Employment status of respondent according to sex

It was found from the FGDs sessions that lack of sufficient opportunities to acquire technical knowledge and lack of local-level facilities may play a causal role behind higher rate of unemployment in Sylhet. They also highlighted transportation as a problem towards their employment. This indicates that, many may consider by road communication is a barrier to secure employment due to the transportation and accommodation cost as well as time spent on the road due to traffic congestion. This was also echoed in the FGD session in Mymensingh that financial implication of moving from place to place during job-search makes it challenging to secure job. However, in Mymensingh, there are prospects in farming, pisciculture, and entrepreneurship that can provide sustainable livelihoods and create job opportunities for others in the community.

Technical knowledge is essential, yet there is a lack of sufficient opportunities in this regard. - An FGD participant from Sylhet 81.6% of the respondents are of the opinion that there are not enough job opportunities for youth in Bangladesh (Annex Table 4). Except youths from Sylhet (38.5%), 82.6% to 92.6% of the youths from the rest of the divisions thought that there are not enough job opportunities for youth in Bangladesh (Annex Table 5). However, in terms of assessing whether currently available job opportunities are relevant to the skills and qualification respondents have, youths seemed to be divided into two groups with close margins of representation between the groups (52.4% said yes and 47.6% said no, see Annex Table 6). The divisional responses shows that notable majority of youth from Dhaka, Khulna and Rajshahi thought that available job opportunities match their skills and qualifications with 78.6%, 76% and 61.2% respectively (Annex Table 7). This may indicate that youths from these three divisions are more confident about their skills and qualifications, or it might also be the case that they are more updated and aware about the available job opportunities.

3.2.1.2 Unemployment state

The unemployment rate in this study were assessed considering the duration of unemployment respondents have experienced. The total employed rate among the respondent was 15.6%. Including self-employed respondents, the rate went as high as 32.9% which is higher than the unemployed respondents (27.1%). The results also showed that maximum (46.6%) of the unemployed respondents have experienced a duration of more than 2 years being jobless (Annex Table 10). 24.2% of the unemployed respondents said that they have experienced one to two years of unemployment and 15.5% experienced six months to one year of unemployment. The respondents were asked to identify the reasons for unemployment among youths and the results showed that both male and female identified lack of job opportunity as a reason of unemployment with the highest response (Male 27.4% and Female 29.3%) followed by lack of experience (Male 18% and Female 21.7%) and lack of required skills and qualifications (Male 18.8% and Female 18.8%) (Figure 7). The division-wise comparison showed that respondents from Khulna, Rajshahi and Rangpur highly identified lack of job opportunity as one of the main reasons of unemployment with 35.20%, 39.40% and 38.10% respectively. Respondents of rest of the divisions also identified this reason with higher rate (Annex Table 11). As IT, Education and Agro-Food sector were identified as demanding higher experience and educational qualification, these very sectors are similarly attributed as higher unemployment rate as well with 31.08%, 33.8% and 10.88% respectively (Annex Table 12).



Figure 7 Reasons of unemployment indicated by the respondents of both sex (N=277)

The Key Informant Interviews (KII) with youth entrepreneurs in Sylhet, Mymensingh and Barisal commonly identified lack of technical knowledge and essential education as key factors of unemployment among youths. In addition, financial constraints, lack of training and reliance on parents, and a lack of vocational skills were also identified as key factors for unemployment. These factors may play a key role in delaying employment of the youth as well. Because youths may have to spend more time securing jobs by going through a longer period of job-searching and applying. In both FGDs in Sylhet and Mymensingh, there is a lack of sufficient employment opportunities in technical and other sectors, which makes it difficult for individuals to secure jobs.



- An FGD participant from Mymensingh

3.2.2 Education level and work experience of employed youth in different sectors

The educational qualification of the respondents indicated that 43.2% of all respondents were having HSC/Diploma and equivalent education which is the majority group followed by SSC/equivalent 17.50% and dropped out before SSC/equivalent 11.50%. In terms of gender perspective, Male and Female respondents seemed to be having similar status as the percentages vary with marginally (Figure 8).



Figure 8 Distribution of education status by sex (N=1020)

Division-wise educational background related data revealed that respondents from Khulna and Rajshahi have comparatively more Masters/equivalent degree with 14% and 11% respectively. In terms of having Bachelor/equivalent degree, 20% of the respondents from Dhaka had Bachelor/equivalent degree which is the highest compared to rest of the division followed by Chattogram 14%, and both Khulna and Mymensingh 13%. Rangpur division seemed to have comparatively more respondents from Rangpur have a higher employment rate. Their less educational qualification can be related to the fact that many respondents may be unable to continue their education due to their higher rate of involvement with income generating activities (Figure 9).



Figure 9 Division-wise distribution of education status of the respondents (N=1020)

Youth believed that the Information Technology sector required higher educational qualification with more than 31.6% followed by education sector (19.5%) and Agro-food sector (11.1%) (see Figure 10). The representative from the Ministry of Youth and Sports also indicated that the young people who are seeking jobs do not have sufficient skills even though they have obtained higher degrees. This might be one of the key reasons why IT, Agro-food and education industry had lower rate of employment in these three sectors.

During the FGD session with the youths from Sylhet, difficulties related to quota system, lack of employment opportunities, and insufficient technical knowledge were identified as key challenges towards getting employed for youths. On the other hand, during the FGD session with the youths from Mymensingh, economic challenges, lack of education and unfavorable living conditions were highlighted as obstacles for getting employed. The issue of education and training was also addressed by the representative from Ministry of Youth and Sports, and it was highlighted that there is no sufficient budget for training about 1.82 Crore NEET (not in employment, education and training) people in the country. It will need an estimated amount of 3000 crore BDT to train around 9 lacs people.

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Finding a job is not an easy task for me; it requires extensive searching. Despite promises from various individuals, they often back out upon realizing my physical and cognitive challenges. They underestimate my capabilities and assume that I am incapable of performing any job.

- A Vulnerable youth with disability

However, the in-depth interview (IDI) with vulnerable youths (youths with disabilities) from Sylhet identified that physical disability and cognitive challenges prevented them from continuing education and skill development training. The IDI session in Mymensingh specified their inability to do extensive searching to get a job. Due to these vary reason, the vulnerable youths found that the employers were unwilling to keep youths in service thinking that they are incapable of performing the job. Therefore, the situation affects the vulnerable youths in a multifold way. While their vulnerability prevents them from getting appropriate education and training, their physical and cognitive limitations pose them further away in the race of securing a job. Consequently, this may bring lack of confidence in their ability.



Figure 10Perception of respondents about educational requirement by sectors (N=1020)

The respondents were found generally experienced in working in their respective field. Only 17.18% of the respondents, which is the lowest rate in the table, found having less than one year's experience. Therefore, majority of the respondents informed that they are having ranges of experiences working in their respective field such as 33.13% had 2 to 5 years of experience,

30.67% had more than 5 years of experience and 19.02% had 1 to 2 years of experience (Table 6).

Response	Frequency	Percentage (%)
2 to 5 years	54	33.13
More than 5 years	50	30.67
1 to 2 years	31	19.02
Less than 1 year	28	17.18
Total	163	100

Table 6 Work experience of the respondents in their respective fields

Similar to the educational requirement required by sectors in Figure 10, respondents believed that higher work experience is also required by IT (29.1%), Agro-food (13.8%) and Education sector (12.8%) (Figure 11). This indicates that young people are relatively less employed in these sectors due to the requirement of higher education and higher work experience. Both of the stated reasons are relevant to the youths as many of them may not pursue higher education and they are likely to have less experience of working.



Figure 11Perception of respondents on work experience requirement by sector.

3.2.3 Self-employment rate among youth

The data of this study indicates that 46.7% of the respondents considered starting their own business whereas 53.3% did not consider entrepreneurship (Annex Table 8). Division-wise comparison indicated that the majority of the respondents from Chattogram, Barisal, Khulna,

Rangpur considered entrepreneurship with 73.1%, 63.8%, 56.7% and 55% respectively (Annex Table 9). This indicates that the willingness and motivation of youth to become entrepreneurs should be given higher importance and there needs to be a more enabling environment for youth to become entrepreneurs. This is important, because entrepreneurship does not only ensure self-employment but also creates job opportunities for others. Those who considered starting their own business considered laying their business in the Agro-Food sector 22% (Male 25.4% and Female 17.3%), IT sector with 21.5% (Male 23.2% and Female 19%), Retail sector (Male 18.3% and Female 13.5%) and in Manufacturing (Male 7.6% and Female 25.7%) (Table 7). This result indicates that youths are aware of the potential of the IT sector and willing to consider this sector for their investment.

Response	Female (n=159)	Male (n=233)	Total (N=392)
Agro-food	17.3%	25.4%	22.0%
Information technology (IT)	19.0%	23.2%	21.5%
Retail	13.5%	18.3%	16.3%
Manufacturing	25.7%	7.6%	15.2%
Education	9.7%	6.4%	7.8%
Health care	5.5%	5.2%	5.3%
Financial services	2.1%	5.2%	3.9%
Tourism and hospitality	2.5%	4.0%	3.4%
Transport	1.7%	2.8%	2.3%
Construction	1.3%	1.8%	1.6%
Parlour and beauty care	1.7%	0.0%	.7%

 Table 7
 Sectors preferred by the respondents for their entrepreneurship.

In the KII session with the representative from the Ministry of Youth and Sports indicated that the ministry has launched a project aimed at generating self-employment for educated jobseeking youth through freelancing training. The government is also working to upgrade the skill development program to include training in the Fourth Industrial Revolution (4IR) module, which can be done remotely. Since Bangladesh has entered into the era of 4IR, the country is focusing on developing skills of the youths in IT sector more. However, it was also revealed in the KII session that trained entrepreneurs need monetary help and mentorship to ensure proper implementation of their training-based knowledge for increasing selfemployment. Meanwhile, the representative from Bangladesh Agro-Processors Association (BAPA) informed that the self-employment rate is increasing, especially among women who are receiving various trainings and becoming entrepreneurs in different sectors, according to BAPA.

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The government has taken the challenge to upgrade the skill development program in 4IR (Fourth Industrial Revolution) module in which the youth can get skill development training while sitting at home. However, monetary help is needed for the trained entrepreneurs to grow, and mentorship is needed to check if these trained entrepreneurs are implementing their training-based-knowledge properly.

- A representative from the Ministry of Youth and Sports

The KII sessions with youth entrepreneurs indicated that their preference of starting a business was because owning a business grant them independence and the opportunity to achieve financial stability. They also thought that they would be able to earn more than in a typical job and they preferred avoiding work for someone else. This indicates that financial stability and independence of working thrive them to self-employment. It was found from the KIIs that the key to thriving as an entrepreneur is to possess technical proficiency and efficiency, which can be gained through various training programs, both online and in-person. However, this requires a fundamental understanding of computers and increased support for technical education facilities. Therefore, the government should take practical initiatives to equip the youth with technical knowledge, monetary help, ensuring an enabling environment for youths to invest so that self-employment continues to increase. To become a successful entrepreneur, one needs mental preparedness, relevant training, perseverance, honesty, and practical knowledge, which can be acquired through various avenues, said a youth entrepreneur during. Becoming an entrepreneur requires significant support in various aspects, including strategic location selection, financial backing, and collaboration to establish market connections, seeking guidance from successful entrepreneurs, and expert advice. However, it was identified through the IDI sessions that vulnerable youths (person with disability) preferred to teach their existing skills to others for becoming self-employed person. They also prefer jobs that allow them to work that do not involve heavy physical exertion.

3.2.4 Identification of existing skill gaps

As indicated by the past research that soft skills, technical skills and digital skills will be more demanded in the future job market, respondents of this study seemed to be lacking in soft skill the most (Male 18.1% and Female 18.5%). The respondents had technical skills with the highest rate (Male 30.1% and Female 32.6%) followed by management skill (Male 26.3% and Female 26.8%) and digital literacy (Male 23.4% and Female 19.9%) (Table 8).

Response	Male (n=519)	Female (n=501)	Total (N=1020)
Technical skills	30.1%	32.6%	31.3%
Management skills	26.3%	26.8%	26.5%
Digital literacy	23.4%	19.9%	21.6%
Soft skills	18.1%	18.5%	18.3%
don't know	2.1%	2.2%	2.2%

Table 8 Skil	ls youths	currently	possess
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The respondents were asked to identify the required skills to get employed in their preferred sector and the valued technical skills with highest responses (Male 34.1% and Female 33.4%) followed by digital literacy (Male 23.7% and Female 23.8%) and management skills (Male 21.2% and Female 21.5%) (Table 9). An interesting thing was noted that, respondents did identify their lower soft skills in Table 9 and they also emphasized less on soft skill when it was asked to identify required skills to get employed in their preferred sector. This indicates that respondents are notable unaware about the importance of soft skills whereas previous research works highly emphasized it.

Table 9 Perception of respondents on skills required by the sectors for recruitment.

Response	Male (n=519)	Female (n=501)	Total (N=1020)
Technical skills	34.1%	33.4%	33.8%
Digital literacy	23.7%	23.8%	23.7%
Management skills	21.2%	21.5%	21.3%
Soft skills	19.9%	20.0%	19.9%
don't know	1.2%	1.3%	1.2%

The Sylhet FGD suggests that there are gaps available in terms of technical skills. They emphasized that acquiring skills in technological fields and having appropriate educational qualifications is important. In contrast, the Mymensingh FGD highlights that there is lack of information regarding available training programs and the scarcity of training centers at the Upazila level, with existing centers being located far away. According to them, the existing skill gaps among the youths can be a consequence of limited information and lack of reaching the information to target people as well as the distance of the training providing institutions.

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No, not everyone has the opportunity to receive training. There is a lack of information regarding available training programs. There is also a scarcity of training centers at the Upazila level, and the existing training center is located far away.

- An FGD participant from Mymensingh

3.2.5 Required skills in the future.

KIIs with youth entrepreneurs from Sylhet, Mymensingh, and Barisal believe that the job market is changing, with a focus on digitalization and technical skills. There is an increasing demand for skilled employees in industries such as weaving, agriculture, and livestock management. The job market is expected to transition towards a virtual, smart, and online-based model. Freelancing, web designing, fashion designing, computer, electronics, photography, and handicrafts are seen as promising job markets for young people. The government should offer training programs, financial assistance, and encouragement to equip the youth with skills in these areas. Self-employment opportunities are also available in sectors such as poultry farming and fish farming. In the future, there will be abundant job opportunities in various sectors, and individuals will need to possess a combination of computer proficiency, technical skills, and a solid academic foundation to excel.

The results also identified that technical skills, computer knowledge and English proficiency will be primary skills employers will look into youths in the future. For example, FGD sessions with the youth respondents identified the stated skills and knowledge as important for young people to succeed in the job market in future. There is also a growing demand for online communication skills, and outsourcing skills. The government should expand the network of training centers to provide more opportunities and financial assistance in the form of loans. Additionally, the training and educational curriculum should be aligned with employers' requirements to ensure that the training is tailored to meet those demands.

In terms of disabled and vulnerable youth, they should have the right to integrate and interact with everyone, and there should be opportunities for training in the field of data cleaning. The Mymensingh KII suggests that there is an abundance of work opportunities available in the area. Most of these jobs are offered by shops. The Barisal KII reveals that various industries such as poultry farming, graphic design, agriculture, ICT, entrepreneurship, and online business are flourishing. However, job opportunities are limited in the local area, resulting in high competition for positions, and many individuals lack the necessary skills to succeed in these fields. Therefore, future job opportunities will evolve around the stated industries. The Sylhet IDI suggests that training programs could be a good strategy to acquire organized for designing, art, technology, and musical practice for disable and vulnerable youth. The Sylhet FGD emphasizes the importance of technical knowledge in livestock control, management, and cattle fattening, as well as the need for necessary materials. Additionally, developing skills for the agricultural sector and handicrafts is crucial. The Mymensingh IDI highlights that work involving minimal physical labor and intellectual capacity is preferred by disable and vulnerable youth. The Mymensingh FGD recommends enrolling in training programs at the Youth Development Center to foster self-reliance, cultivate talent, and integrate practical education with academic education. Technical knowledge and communication skills should be enhanced to achieve success.

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The job market is expected to transition towards a virtual, smart, and onlinebased model. It will undergo significant improvements, advancing digitally while emphasizing enhanced competence. Additionally, there will be a greater emphasis on the English language.

- An FGD participant from Sylhet

The representative from the Ministry of Youth and Sports has highlighted the reasons of the existing skill gaps which includes lack of training facilities for the emotional and behavioral development of youths, and lack of direct contact with employers or industries to understand their skill requirements. The National Development Authority, the responsible agency for monitoring stakeholders, should ensure collaboration and cooperation between skill development entities and employers' skill needs across industries. The National Skills Development Authority (NSDA) recommends that youths research and understand the job market's skill requirements to develop the necessary skills to address the unemployment issue. Similarly, BAPA suggests that youths identify their skill gaps and research the market needs before receiving any training.

3.2.6 Perceptions of youth, employers, educators, and industry experts regarding future job opportunities and necessary skills in different sectors

According to the perception of the respondents of this study, the top sector will have the most job opportunities for youth in Bangladesh by 2041 was identified as IT sector with response

rate of 30% followed by Agro-Food 15.9%, Education 12.9% and manufacturing 10.8% (Table 10). They emphasized technical skills as the highest requirement in order to get employed in these sectors (36.4%) followed by management skills 24% and digital literacy 22.3% (22 Annex Table). KIIs with the sector specialists indicated that the Agro-processing field is a very demanding sector nowadays in Bangladesh. The government is also focusing on this sector. Previously the youth did not know the opportunities in this sector. The results of this study also indicate that youths' perception of this sector is getting positive as it received 15.9% response. The representative from BAPA informed us that youths are now receiving training in this sector. Although academic knowledge helps the youth to learn the basics, based on which they can receive the training, the academic curriculum needs to be developed more. Without having a basic understanding, receiving any training can be difficult, said the representative from BAPA.

Response	Percentage (%)
Information technology (IT)	30.0%
Agro-food	15.9%
Education	12.9%
Manufacturing	10.8%
Health care	9.2%
Construction	5.7%
Financial services	5.6%
Tourism and hospitality	4.6%
Transport	2.7%
Retail	2.6%

Table 10 Perception of respondents about the job opportunities by sectors (N=1020)

The current study assessed the level of confidence of the respondents in terms of their preparedness in accruing necessary skills for future employment in the sectors that they identified as most job opportunities in the previous section. Only 15.6% of the male respondents and 10.2% of the female respondents were found *very confident* about their preparedness. The majority was found *confident* (Male 39.1%, Female 39.3%) about their preparedness (Figure 12). The overall confident level, (combining the scale of *very confident* and *confident*) 54.7% Male respondents and 49.5% Female respondents were found confident enough about their preparedness for acquiring the necessary skills for future employment. This indicates the willingness of the youths in embracing the challenges of learning new skills which

is very promising towards developing marketable skills in youths in Bangladesh. This also indicates that youth understand the necessity of newer skills and the implication of not having required skills in terms of employment in the future.



Figure 12Confidence level of the respondents about acquiring the necessary skills.

3.2.7 Strategies adopted by youth to acquire necessary skills for future employment.

The respondents of this study preferred vocational training methods as a strategy of acquiring necessary skills for their current employment. This strategy got the highest response from 31.7% of the Male and 39.1% of the Female respondents. The second most chosen strategy among male respondents was self-learning by 28.2% o followed by formal education 25.3% and on the job training 14.4%. Whereas female respondents preferred formal education as second most chosen strategy (26.2%) followed by self-learning (19.0%) and on the job training (15.2%) (Table 11). These results showed that most of the youths have taken notable initiatives to learn and acquire new knowledge and skills. This indicates that the demand of new skill requirements from the employers are being reflected on the tendency of youths in general. This can be taken as a considerable indication of youths' willingness to learn and train themselves with the required skills.

Response	Male (n= 436)	Female (n= 429)	Total (N= 865)
Vocational training	31.7%	39.1%	35.4%
Formal education	25.3%	26.2%	25.8%
Self-learning	28.2%	19.0%	23.6%

Table 11 Strategy of the respondents to acquire the necessary skills for current job

On-the-job training	14.4%	15.2%	14.8%	
Did not take any initiative	.4%	.4%	.4%	

The respondents of this study preferred vocational training methods as a strategy of acquiring necessary skills for their future employment as well. This strategy got the highest response from 35.2% of the Male and 38% of the Female respondents. The second most chosen strategy among the respondents was formal education (Male 23.4% and Female 22.2%) followed by Self-learning (Male 22.2% and Female 20.6%) and on the job training Male 17.6% and Female 16.4%) (Table 12).

Response	Male (n=519)	Female (n=501)	Total (N=1020)
Vocational training	35.2%	38.0%	36.6%
Formal education	23.4%	22.2%	22.8%
Self-learning	22.2%	20.6%	21.4%
On-the-job training	17.6%	16.4%	17.0%
Did not take any initiative	1.7%	2.8%	2.2%

Table 12 Strategy of the respondents to acquire the necessary skills for future job

Current study assessed the level of confidence on their ability to learn and acquire new skills as well. Only 23.3% of the male respondents and 22.2% of female respondents were found very confident on their ability to learn and acquire new skills. The majority was found confident (Male 45.1%, Female 42.1%) on their ability to learn and acquire new skills (Figure 13). The overall confident level, (combining the scale of very confident and confident) 68.4% of the Male respondents and 64.3% of the Female respondents were found confident enough about their preparedness for acquiring the necessary skills for future employment.



Figure 13Confident level of the respondents about their ability to learn and acquire new skills

The youth entrepreneurs shared, during KII, their strategies for acquiring skills, which included attending training, working in related fields for practical experience, and adopting a strategic approach to entrepreneurship. The FGD sessions said that they adopted strategies of learning beyond academics to include practical experiences and extracurricular activities, they also highlighted attending training programs and seminars at the local level and promoting cottage industries through awareness campaigns. The IDI with disabled and vulnerable youth reflected

There should be an emphasis on providing additional training opportunities to enable individuals to acquire new skills and effectively apply them in their work.

- A young person with disability from Mymensingh.

that they preferred participating in training on various skills, including graphic design and cleaning. They emphasized the importance of language training, financial assistance, and support for their transition into the workforce through standardized certificates and follow-up activities. Their strategy was to engage them with the jobs and skills that can be performed with minimum physical effort and movement.

3.2.8 Support received by youth from family, friends, and community in acquiring necessary skills.

The majority of the respondents (Male 39% and Female 39.7%) indicated that they have received significant support from your family in acquiring the necessary skills for the current job they are in during the survey. 29.5 % of the male respondents and 36.2% of the female respondents indicated that they received some support from their family. Whereas 21.9 % of the male respondents and 20.7 % of the female respondents indicated that they received moderate support from their family (Table 13). The results clearly indicate that only 7.4% (combining Male and Female) did not receive any support from their family. This may indicate that there are many families have not ability and capacity to support their young members. This also clearly indicates that families usually support as much as they can in order to see their young members of the family employed.

Response	Male (n=105)	Female (n=58)	Total (n=163)		
Significant support	39.0%	39.7%	39.3%		
Some support	29.5%	36.2%	31.9%		
Moderate support	21.9%	20.7%	21.5%		
No support	9.5%	3.4%	7.4%		

Table 13 Family support received by respondents for acquiring necessary skills.

In order to acquire newer skills respondents indicated that they need significant support from their family. This differed between Male and Female respondent marginally (Male 51% and Female 56.9%). 33% of the male and 34.5% of the female respondents indicates that they need moderate support from the family and 14% male, and 6.9% female respondents said that they need some support from the family (Table 14). This indicates that, despite having a notable percentage of respondents employed in one way or another (part time 6.2%, full time 9.8% and self-employed 17.7%), youths still need support from their family. This indicates that the earning of the youths unable to prepare themselves for future job market by their own even though they have job.

Table 14 Family support received by respondents for acquiring necessary skills

Response	Male (n=519)	Female (n=501)	Total (N=1020)
Significant support	51.0%	56.9%	53.2%
Moderate support	33.0%	34.5%	33.5%
Some support	14.0%	6.9%	11.4%

Response	Response Male (n=519)		Total (N=1020)		
No support	2.0%	1.7%	1.9%		

3.3 Mapping and Analysis of Existing Education and Training Fields

Prior to identifying the major skills for youth which is required to meet the challenge of employment requirements targeting 2041, and determining ways for improving the identified skills, it is necessary to map and analysis the existing education and training fields. This section focuses on the analysis of availability, effectiveness and relevance of the existing training and education programs. Besides, the accessibility and affordability of the available training and education programs in different fields are also assessed. The perceptions of youth, employers and educators on the appropriateness as well as potentials of different training and education fields are also analyzed. Last but not least, the collaboration and coordination among different stakeholders are also examined.

3.3.1 Availability, effectiveness, and relevance of existing training and education programs in different fields

Quantitative survey, FGD and KII were conducted to understand how available, effective and relevant the existing training programs were for the youth. The responses of individuals of eight different divisions of the country were assessed to understand the knowledge level regarding the ongoing training or education programs that are available for youth in their desired fields. Among all, the respondents from Rajshahi had the most positive response (91.7%, N=1020), and the respondents from Khulna had the most negative response with 55.4% response (Table 15). From a gender-based analysis, 69.9% of the male, and 66.5% female had a positive response (Annex Table 15).

Response	Barisal (n=121)	Chattogram (n=120)	Dhaka (n=173)	Khulna (n=121)	Rajshahi (n=121)	Rangpur (n=120)	Mymensingh (n=122)	Sylhet (n=122)	Total (N=1020)
Yes	76.9%	79.2%	53.8%	44.6%	91.7%	85.0%	63.1%	58.2%	68.2%
No	23.1%	20.8%	46.2%	55.4%	8.3%	15.0%	36.9%	41.8%	31.8%

Table 15 Knowledge of the respondents about the available training and education programs (N=1020)

The respondents were asked about the accessibility of the existing training and education programs in their field of interest. Where only 9.1% of the male respondents found the accessibility 'very easy', the female percentage was 7.8%. About 37% of the male respondent labeled the accessibility as 'somewhat easy', where the percentage of female response was

39%. Almost 27% of the female and 24% of the male respondents identified the accessibility as somewhat difficult (





Figure 14Accessibility of training and education programs among male and female respondents (N=1020)

The district level analysis identified Chattogram district having a better response compare to other districts. Where 49.2% of the respondents from Chattogram found the access of the training programs 'somewhat easy', 16.7% of the respondents found it 'very easy'. The respondents of Khulna found it the most difficult compare to others, in accessing the training and education programs. Where 41.3% of the respondents from Khulna found it 'somewhat difficult; 19.0% of the respondents found it 'very difficult'. None of the respondents from Sylhet found it very easy to access such programs (Annex Table 16).

The respondents were further surveyed to know if they have attended any training programs related to their field of interest. Interestingly, the percentage of female participation was better than the male one. Where 52.1% of the female respondents did attend the training or education programs related to their field of interest, 54.1% of the male respondents did not attend any such programs (Annex Table 17). In district level assessment, it was observed that, the participation is the highest in Rajshahi (76.9%), compare to other districts. Surprisingly, the participation rate is the lowest (30.6%) in Dhaka district (Table 16).

Response	Barisal (n=121)	Chattogram (n=120)	Dhaka (n=173)	Khulna (n=121)	Rajshahi (n=121)	Rangpur (n=120)	Mymensingh (n=122)	Sylhet (n=122)	Total (N=1020)
No	55.4%	45.8%	69.4%	63.6%	23.1%	32.5%	58.2%	52.5%	51.1%
Yes	44.6%	54.2%	30.6%	36.4%	76.9%	67.5%	41.8%	47.5%	48.9%

Table 16 Participation of the respondents in training and education programs by districts (N=1020)

Regarding the satisfaction level about the availability of training and education programs, only a few percentages of the respondents were 'very dissatisfied', with Chattogram and Sylhet district having 0.0 percentage. Where 63.1% of the respondents from Sylhet, and 20.7% of the respondents from Khulna were 'somewhat satisfied', 30.8% of the respondents from Chattogram, and 8.3% from both Barisal and Rangpur were 'very satisfied' (Table 17). Overall, 15.4% of them were very satisfied and 44.8% were somewhat satisfied with the availability of training and educational programs of their field of interest.

 $Table \ 17 \ Satisfaction \ level \ of \ the \ respondents \ on \ the \ availability \ of \ training \ and \ education \ programs \ in \ district \ level \ (N=1020)$

Response	Barisal (n=121)	Chattogram (n=120)	Dhaka (n=173)	Khulna (n=121)	Rajshahi (n=121)	Rangpur (n=120)	Mymensingh (n=122)	Sylhet (n=122)	Total (N=1020)
Somewhat satisfied	59.5%	52.5%	33.5%	20.7%	49.6%	40.8%	43.4%	63.1%	44.8%
Neutral	18.2%	10.8%	43.9%	33.9%	18.2%	22.5%	29.5%	28.7%	26.7%
Very satisfied	8.3%	30.8%	13.9%	24.0%	18.2%	8.3%	14.8%	5.7%	15.4%
Somewhat dissatisfied	12.4%	5.8%	5.8%	14.0%	12.4%	25.8%	9.8%	2.5%	10.8%
Very dissatisfied	1.7%	0.0%	2.9%	7.4%	1.7%	2.5%	2.5%	0.0%	2.4%

Respondents who were not satisfied with the availability of the training and education programs were further surveyed to understand the reasons. Approximately, 60% of the respondents from Sylhet and 42.3% of the respondents from Barisal reported lack of access to training and education programs in their area as one of the major reasons. Among all the respondents in Rajshahi and Mymensing, 30.8% and 23.3% respectively, reported limited availability of relevant courses and training programs, almost 26% of the respondents from Chattogram marked high cost of training and educational program as one of the reasons of dissatisfaction. Around 33.3% of the respondents from Khulna district indicated lack of information about

available training and education program as one of the reasons. Besides, 11.4% from Dhaka and 19% from Rangpur district expressed their inability to balance work and training/education program's schedule (Table 18).

Response	Barisal (n=26)	Chattogram (n=15)	Dhaka (n=35)	Khulna (n=60)	Rajshahi (n=26)	Rangpur (n=58)	Mymensingh (n=43)	Sylhet (n=5)	Total (N= 268)
Lack of access to training and education programs in my area	42.3%	26.7%	25.7%	33.3%	26.9%	19.0%	27.9%	60.0%	28.7%
Limited availability of relevant courses and training programs	26.9%	20.0%	11.4%	16.7%	30.8%	34.5%	23.3%	20.0%	23.5%
Lack of information about available training and education programs	11.5%	6.7%	25.7%	33.3%	15.4%	12.1%	11.6%	20.0%	18.7%
High cost of training and education programs	0.0%	26.7%	17.1%	6.7%	0.0%	1.7%	25.6%	0.0%	9.7%
Inability to balance work and training/education program schedules	7.7%	0.0%	11.4%	5.0%	11.5%	19.0%	2.3%	0.0%	9.0%
Insufficient quality of available training and education programs	11.5%	6.7%	5.7%	1.7%	15.4%	8.6%	9.3%	0.0%	7.5%
Lack of support from family or friends to pursue training and education programs	0.0%	6.7%	2.9%	1.7%	0.0%	3.4%	0.0%	0.0%	1.9%
Language barriers	0.0%	6.7%	0.0%	1.7%	0.0%	1.7%	0.0%	0.0%	1.1%

Table 18 Reasons behind the dissatisfaction of the respondents on the available training and education program (N=268)

Respondents, who reported not to attend any training or education programs (Annex Table 17), were further asked about the reasons. Among all, 76.7% of the respondents from Rangpur, 73.2% of the respondents from Khulna district marked lack of information about available programs as one of the major reasons. From the respondents of Dhaka, 35% reported the excessive expense of the programs as one of the reasons. Around 56% of the respondents from Barisal did not attend any programs because of the long distance of the training or education venues from their respective places. About 16.7% of the respondents from Chattogram did not attend such programs since those were not available in their preferred language. Overall, 9.9% of the respondents were not interested in ay training or education programs (Table 19).

Response	Barisal (n=67)	Chattogram (n=55)	Dhaka (n=120)	Khulna (n=77)	Rajshahi (n=28)	Rangpur (n=39)	Mymensingh (n=71)	Sylhet (n=64)	Total (n=521)
Lack of information about available programs	23.3%	37.0%	50.4%	73.2%	25.0%	76.7%	34.6%	39.0%	44.0%
Programs are too far away	55.6%	21.3%	7.3%	5.2%	15.6%	9.3%	32.7%	13.4%	21.3%
Programs are too expensive	14.4%	15.7%	35.0%	8.2%	3.1%	2.3%	28.2%	18.3%	19.7%
not interested in training programs	5.6%	9.3%	6.6%	8.2%	50.0%	11.6%	0.6%	24.4%	9.9%
Programs are not available in my preferred language	1.1%	16.7%	0.7%	5.2%	6.3%	0.0%	3.8%	4.9%	5.0%

Table 19 Reasons behind respondents not attending any training or education programs (N=521)

The study team also measured the effectiveness of the training or education programs. Respondents who had attended the training or education programs were asked about their satisfaction level regarding the effectiveness of the programs. Overall, 26.9% male and 26.1% female were 'very satisfied', and 6.7% male and 3.1% female were 'somewhat dissatisfied' (Annex Table 18). In the district level assessment, almost nobody was 'very dissatisfied' with the effectiveness of the programs. In Rangpur and Rajshahi district, around 9.9% and 6.5% respectively were 'somewhat dissatisfied' with the programs. Around 79.6% of the respondents from Barisal, 77.6% from Sylhet, 47.2% from Dhaka were 'somewhat satisfied', where around 54.5% from Khulna and 47.1% from Mymensingh was noticed to be 'very satisfied'. Overall, 63.1% of the respondents were 'somewhat satisfied' with the effectiveness of the programs (Table 20).

Table 20 Satisfaction	level on the effectiveness	of the training of	r education programs in	n district level (N=499)
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Response	Barisal (n=54)	Chattogram (n=65)	Dhaka (n=53)	Khulna (n=44)	Rajshahi (n=93)	Rangpur (n=81)	Mymensingh (n=51)	Sylhet (n=58)	Total (N=499)
Somewhat satisfied	79.6%	55.4%	47.2%	38.6%	65.6%	76.5%	51.0%	77.6%	63.1%
Very satisfied	14.8%	41.5%	30.2%	54.5%	21.5%	9.9%	47.1%	8.6%	26.5%
Neutral	3.7%	1.5%	15.1%	2.3%	6.5%	3.7%	2.0%	8.6%	5.4%
Somewhat dissatisfied	1.9%	1.5%	5.7%	4.5%	6.5%	9.9%	0.0%	5.2%	4.8%
Very dissatisfied	0.0%	0.0%	1.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%

The participants of FDG session in Sylhet informed that the availability of training and education programs for youth entrepreneurs is perceived as cost-effective and helpful in enhancing productivity and generating income. While some training programs are available through the youth ministry, the effectiveness and relevance of the existing programs can be achieved by taking long-term initiatives and offering government-sponsored training programs

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It is not possible to provide training to around 1.82 crore people of the country at a time. This is because the government does not have sufficient fund, even if the government manage the fund, it is not possible to provide training facilities for all these people at a time. It will take years to train them that way.

- A representative from Ministry of Youth and Sports.

to bridge the current gap. Additionally, traditional training programs covering various skills are somewhat effective, but there is a need for more benefits to be provided to young individuals. KII with the representative from The Ministry of Youth and Sports emphasize the effectivity at a macro level and acknowledged that government fund alone would not be effective as it is not possible to provide training to all 1.82 crore people in the country at once due to limited government funding and resources. Instead, he suggested training trainers at the Upazilla level who can then train youth in their respective areas utilizing platforms available in the private sector. This will allow the entire training system (government and private initiatives) covering more young people and achieve the goals over time.

3.3.2 Accessibility and affordability of training and education programs in different fields

The study team analyzed the accessibility and affordability of the training and education programs through quantitative and qualitative survey. The youths were asked to level the affordability on a scale of 1 to 5. The highest percentage of respondents rated the affordability as a "3" were females with 28.1%, males with 31.8%. The lowest percentage of respondents rated the affordability as a "5" with 6.7% of males and 3.2% of females. Overall, the table indicates that the majority of respondents perceive the affordability of training and education programs in their field of interest to be moderate (Table 21).

Response	Male (n=519)	Female (n=501)	Total (n=1020)		
1 (Very affordable)	9.8%	15.2%	12.5%		
2	20.4%	26.1%	23.2%		
3	31.8%	28.1%	30.0%		
4	18.5%	17.6%	18.0%		
5 (Not at all affordable)	6.7%	3.2%	5.0%		
I do not know	12.7%	9.8%	11.3%		

Table 21 Affordability of the training and education programs (N=1020)

The study team further analysed the barrier to accessing the programs. About 19.8% male and 14.4% female respondents indicated the cost of tuition and materials as a barrier. Again, 23.1% male and 23.7% female mentioned about the limited availability of programs. About 22.2% female and 17.8% male found the distant location a barrier'. Overall, 20.6% of the youths indicated the lack of information about available programs as a barrier (Table 22).

 Table 22 Barriers to accessing training and education programs (N=1020)

Response	Male (n=519)	Female (n=501)	Total (N=1020)
Limited availability of programs	23.1%	23.7%	23.4%
Lack of information about available programs	19.9%	21.4%	20.6%
Distance from your location	17.8%	22.2%	20.0%
did not face any barrier	18.9%	18.0%	18.5%
Cost of tuition and materials	19.8%	14.4%	17.1%

family problem	.6%	.3%	.4%
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The representative from BAPA said that training and education programs are available nowadays. Different organizations post about their training and education programs online. In this case. It is the job of the youths to look for the training programs they want to avail. Regarding affordability, the youths need to find a way to afford the training since it will benefit them in future. The accessibility and affordability of training and education programs for youth entrepreneurs vary across different regions. The KII with youth entrepreneurs in Sylhet and Mymensingh indicated that some young people perceive the programs as cost-effective and effective in increasing productivity and generating income. However, participants of the FGD session indicated that, there are no training programs available for young people. This indicates that many youths are not informed about the available training and skill development programs. This suggests that relevant information should be disseminated properly among the youths. The KII with youth entrepreneurs in Barisal indicated that the traditional training programs are somewhat effective and convenient, but there is a need for additional benefits to be provided. It is also suggested to spread knowledge gained from youth development centers to the wider community.

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Traditional training programs and skill development initiatives have proven to be somewhat effective. They are cost-effective and convenient for young individuals. Nevertheless, there is a need for additional benefits to be provided to them.

- A Youth entrepreneur from Barisal.

3.3.3 Perceptions of youth, employers, and educators on the appropriateness and potential of different fields for training and education

Understanding the perceptions of youth, employers, and educators on the appropriateness and potential of the training and education programs is also a prerequisite to analyze the existing programs. The youths were asked which fields of programs, according to them, were the most potential in providing with different job opportunities. Majority of the response (82.8%) were in fever of information technology (IT) with 86.9% male and 78.6% female response. A significant percentage mentioned programs on agro-food as a potential one for job opportunities (male 49.2%, female 50.9%). Around 33.3% of the total respondents indicated programs on manufacturing potential in availing job opportunities (Table 23).

Table 23	Percention h	w sex on	notential	training a	and	education	nrograms t	o avail	ioh	onnortunities	(N-	-101	(\mathbf{Q})
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Response	Male (n=518)	Female (n=501)	Total (n=1019)
Information technology (IT)	86.9%	78.6%	82.8%

Response	Male (n=518)	Female (n=501)	Total (n=1019)
Agro-food	49.2%	50.9%	50.0%
Manufacturing	32.8%	33.7%	33.3%
Health care	24.3%	23.4%	23.8%
Tourism and hospitality	18.1%	14.8%	16.5%
Construction	14.3%	12.0%	13.2%
Retail	4.1%	4.8%	4.4%
Don't know	0.0%	0.2%	.1%

In a district-wise analysis, Information technology (IT) received the highest percentage of responses, ranging from 70.8% in Rangpur to 97.5% in Chattogram. Agro-food received the second-highest percentage of responses in most districts, ranging from 47.9% in Rajshahi to 68.9% in Mymensingh. Manufacturing received a relatively high percentage of responses in Barisal, Khulna, and Rangpur, ranging from 38.0% to 69.4%. Health care received a relatively high percentage of responses in Dhaka, Rajshahi, and Sylhet, ranging from 19.7% to 36.1%. Tourism and hospitality received the lowest percentage of responses in most districts, except in Barisal (43.8%) (Annex Table 19),

Next, the youths were asked how important they think it is to choose a field of training and education based on its potential for job opportunities. According to the survey findings, 72.1% of respondents believe that it is very important to choose a field of training and education based on its potential for job opportunities. In contrast, only 1.8% of the participants think that it is not very important. The importance of job potential was seen equally important among males (70.7%) and females (73.5%). Around 26.2% of the respondents believe that job potential is important but not a top priority (Table 24).

Response	Male (n=519)	Female (n=501)	Total (n=1020)	
Very important	70.7%	73.5%	72.1%	
important	27.6%	24.8%	26.2%	
Not very important	1.7%	1.8%	1.8%	

Table 24 Respondents' perception on the importance of choosing a training or education program based on the potential for job opportunities (N=1020)

3.3.4 Alignment of training and education programs with changing market trends

The alignment of training and education program with the changing market trend plays avital role. A significant number of respondents (male 64.7%, female 57.7&), found the relevance of the existing programs with the current market trends 'somewhat well' (Annex Table 20). In a district-wise analysis, it was observed that, about 22% of the total respondents rated the alignment as "very well," with the highest percentage (46.7%) coming from Mymensingh district. Around 61% of respondents rated the alignment as "somewhat well," with the highest percentage (91.8%) coming from Sylhet district. The percentage of respondents who rated the alignment as "not very well" was 13.4%, with the highest percentage (32.5%) coming from Rangpur district. The percentage of respondent as "not well at all" was 3.6%, with the highest percentage (11.6%) coming from Dhaka district (Table 25).

Response	Barisal (n=121)	Chattogram (n=120)	Dhaka (n=173)	Khulna (n=121)	Rajshahi (n=121)	Rangpur (n=120)	Mymensingh (n=122)	Sylhet (n=122)	Total (n=1020)
Somewhat well	79.3%	59.2%	54.9%	32.2%	71.9%	60.8%	42.6%	91.8%	61.3%
Very well	10.7%	32.5%	13.9%	45.5%	18.2%	3.3%	46.7%	5.7%	21.7%
Not very well	9.9%	5.8%	19.7%	15.7%	9.9%	32.5%	10.7%	0.8%	13.4%
Not well at all	0.0%	2.5%	11.6%	6.6%	0.0%	3.3%	0.0%	1.6%	3.6%

Table 25 District-wise perception on the alignment of training and education programs with the changing market trends (N=1020)

The majority of respondents, 59.4%, believed it was very important for training and education programs to keep pace with changing market trends, with slightly more males than females agreeing. About 37.8% male and 39.1% female respondents thought it was somewhat important, while only 1% male and 2.6% female considered it not very important (Annex Table 21). Again, the district-wise analysis showed, the majority of respondents from all regions in Bangladesh believed that it was important for training and education programs to keep pace with the changing market trends. The highest percentage of respondents who believed that it was somewhat important were from Khulna (81.8%) and Rajshahi (68.6%). The highest percentage of respondents who believed that it was not very important or not important at all were from Dhaka and Mymensingh. Overall, 59.4% of respondents believed that it was very important for training and education programs to keep pace with the changing market trends (Table 26).

Response	Barisal (n=121)	Chattogram (n=120)	Dhaka (n=173)	Khulna (n=121)	Rajshahi (n=121)	Rangpur (n=120)	Mymensingh (n=122)	Sylhet (n=122)	Total (n=1020)
Very important	33.9%	69.2%	56.1%	81.8%	68.6%	85.0%	53.3%	29.5%	59.4%
Somewhat important	65.3%	30.0%	37.6%	17.4%	30.6%	15.0%	42.6%	68.9%	38.4%
Not very important	.8%	.8%	4.0%	.8%	.8%	.0%	4.1%	1.6%	1.8%
Not important at all	0.0%	0.0%	2.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%

Table 26 Importance of the alignment of trading and education programs with the changing market trends (district-wise)N=1020

According to the survey results, the most effective method for training and skill development programs to keep up with the changing job market trends was "partnering with industry experts and employers" (39.5%). The second most effective method was "incorporating more technology-based training methods" (68.0%). Encouraging more research and development in training and skill development was also considered an effective method (61.1%). "Increase follow up support" had the lowest percentage (0.9%) which was only indicated by Khulna (5.8%) and Dhaka (1.2%) (Table 27).

Table 27 Most effective methods for training and skill development programs (District-wise, N=1020) \

Response	Barisal (n=121)	Chattogram (n=120)	Dhaka (n=173)	Khulna (n=121)	Rajshahi (n=121)	Rangpur (n=120)	Mymensingh (n=122)	Sylhet (n=122)	Total (n=1020)
Incorporating more technology-based training methods	68.6%	80.0%	50.3%	78.5%	88.4%	80.0%	65.6%	41.0%	68.0%
Encouraging more research and development in training and skill development	52.1%	54.2%	64.2%	67.8%	63.6%	69.2%	48.4%	68.0%	61.1%
Partnering with industry experts and employers	82.6%	62.5%	28.3%	28.9%	34.7%	10.0%	40.2%	33.6%	39.5%
Increase follow up support	0.0%	0.0%	1.2%	5.8%	0.0%	0.0%	0.0%	0.0%	.9%
don't know	0.0%	0.0%	0.6%	3.3%	0.0%	0.0%	0.0%	0.0%	.5%

The respondents were asked to rate the present training and skill development programs available in the country to preparing them for job markets. According to the responses, the majority of respondents across all regions rated the current training and skill development programs in Bangladesh for youth as average (38.6%). A significant portion of respondents rated the programs as good (36.1%), while a smaller percentage rated them as poor (17.5%). The ratings varied somewhat by region, with Dhaka having the highest proportion of respondents rating the programs as average (52.0%) and Rajshahi having the highest proportion of respondents rating the programs as good (46.7%) (Table 28).

Response	Barisal (n=121)	Chattogra m (n=120)	Dhaka (n=173)	Khulna (n=121)	Rajshahi (n=121)	Rangpur (n=120)	Mymensin gh (n=122)	Sylhet (n=122)	Total (n=1020)
3 - Average	13.2%	37.5%	52.0%	36.4%	31.4%	40.0%	36.1%	56.6%	38.6%
4 - Good	49.6%	30.8%	23.1%	38.8%	42.1%	46.7%	50.0%	13.1%	36.1%
2 - Poor	30.6%	25.0%	15.6%	6.6%	23.1%	10.8%	1.6%	27.0%	17.5%
5 - Very good	3.3%	4.2%	1.7%	13.2%	0.8%	0.8%	12.3%	0.8%	4.5%
1- Very poor	3.3%	2.5%	7.5%	5.0%	2.5%	1.7%	0.0%	2.5%	3.3%

Table 28 District-wise rating of the current training and skill development programs (N=1020)

KII sessions with sector specialists indicated that the job market in Bangladesh is increasingly demanding technical skills and the use of electronic devices. However, there is a mismatch between employer demands and the skills possessed by youth, leading to a shortage of skilled employees. To address this gap, there needs to be better alignment between training and education programs and the changing market trends. BAPA is working towards this by providing basic training in multiple skills and updating their curriculum to incorporate resource persons from both universities and factory levels. A suggestion was made to create a website where employers can post job circulars and necessary skills, and skill development organizations can post about their training programs. On the other hand, FGDs in Sylhet and Mymensingh suggested that soft skills are important for various fields, including agriculture, handicrafts, and tailoring. The in-depth-interview with youth with disability in Mymensingh indicated that access to loans is also necessary to establish oneself effectively. Additionally,

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Mostly, the trend is leading to more use of electronic devices. The job market wants people who are skilled in the use of electronic or technical stuff. The government of Bangladesh has been constantly trying to develop these kinds of skills among the youth.

- A representative from NSDA.

self-reliance, attitude, education, English language skills, and fitness are important for the development of vulnerable youth. However, the scarcity of materials and equipment, as well as the shortage of teachers, is hindering practical education.

3.3.5 Participation and retention rates of youth in training and education programs

As mentioned earlier, the percentage of female participation in different training and education programs related to their field was better than the male one (Annex Table 17); and the participation is the highest in Rajshahi (76.9%), compare to other districts, where the participation rate is the lowest (30.6%) in Dhaka district (Table 16). Those who attended different training or education programs. Were asked if they completed the programs. The male (73.1%) and female (74.7%) rates of completing the programs are almost similar (Annex Table 15). The highest completion rate was observed in Rajshahi (91.4%), followed by Rangpur (98.8%), and the lowest completion rate was in Chattogram (26.2%) (Table 29).

Response	Barisal (n=54)	Chattogra m (n=65)	Dhaka (n=53)	Khulna (n=44)	Rajshahi (n=93)	Rangpur (n=81)	Mymensin gh (n=51)	Sylhet (n=58)	Total (N=499)
Yes	50.0%	26.2%	77.4%	93.2%	91.4%	98.8%	64.7%	77.6%	73.9%
Program is still running	46.3%	67.7%	7.5%	2.3%	8.6%	0.0%	35.3%	10.3%	21.2%
No	3.7%	6.2%	15.1%	4.5%	0.0%	1.2%	0.0%	12.1%	4.8%

Table 29 District-wise completion rate of the training and skill development programs (N=1020)

Among those who did not complete the training or skill development program, the most common reason reported by both male and female respondents was that the program was too difficult to understand, with 29.2% of male and 25% of female respondents reporting this reason. Personal or family circumstances were the second most common reason, with 20.8% of male and 18.8% of female respondents citing this reason. Female respondents were more likely to report that the program was not what they expected or wanted (25%) compared to male respondents (8.3%) (Table 30). In terms of regional distribution, among respondents from Dhaka, 41.7% indicated that the program was too difficult to understand, while 16.7% cited lack of support from program staff or trainers. For respondents from Sylhet, 26.7% stated that the program was too difficult to understand, while 20.0% cited personal or family circumstances as the reason for not completing. All the respondents from Rangpur and 50% from Chattogram cited personal or family circumstances as a major reason (Annex Table 23).

Table 30 The reason for not completing the programs identified by respondents (N=24)

Response	Male (n=15)	Female (n=9)	Total (N=24)
Program was too difficult to understand	29.2%	25.0%	27.5%
Response	Male (n=15)	Female (n=9)	Total (N=24)
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Personal or family circumstances prevented completion	20.8%	18.8%	20.0%
The program was not what I expected or wanted	8.3%	25.0%	15.0%
Financial constraints prevented completion	20.8%	0.0%	12.5%
Lack of support from program staff or trainers	4.2%	12.5%	7.5%
Found a job before completing the program	4.2%	12.5%	7.5%
Not enough time to complete the program	8.3%	0.0%	5.0%
Lack of interest or motivation	4.2%	6.3%	5.0%

The study shows that in Barisal, the majority (45.5%) of respondents had training or skill development programs related to Information Technology (IT), while in Chattogram (58.1%), Dhaka (50.0%), and Mymensingh (44.1%), more than half of the respondents had training related to IT. In Rajshahi, Manufacturing was the most common sector, with 47% of respondents having training related to this sector. In Rangpur, Agro-food was the most common sector, with 43% of respondents having training related to this sector. In Khulna, Education and Manufacturing were the most common sectors, with 21.4% and 13.3% of respondents having training related to these sectors, respectively. Overall, the majority of respondents (35.9%) had training or skill development programs related to IT, followed by Manufacturing (17.7%) and Agro-food (18.3%) (Table 31). The male and female ratio in this regard were almost similar, with the only remarkable difference in manufacturing-related programs. Where 27% of the female respondents took training on manufacturing, the rate was 8.5% in case of male respondents (Annex Table 24).

Table 31	Percentages	of different	types o	f programs	obtained l	by the respo	ndents (N=49	6)

Response	Barisal (n=54)	Chattogram (n=65)	Dhaka (n=53)	Khulna (n=44)	Rajshahi (n=90)	Rangpur (n=81)	Mymensingh (n=51)	Sylhet (n=58)	Total (N=496)
Information technology (IT)	45.5%	58.1%	50.0%	35.7%	13.0%	18.6%	44.1%	31.5%	35.9%
Agro-food	6.5%	3.2%	6.1%	21.4%	31.0%	43.0%	23.5%	13.9%	18.3%
Manufacturing	29.9%	8.6%	3.7%	13.3%	47.0%	34.9%	10.3%	3.0%	17.7%
Education	1.3%	4.3%	17.1%	11.2%	1.0%	1.2%	1.5%	20.0%	8.6%
Health care	0.0%	3.2%	1.2%	8.2%	2.0%	0.0%	10.3%	8.5%	4.6%

Response	Barisal (n=54)	Chattogram (n=65)	Dhaka (n=53)	Khulna (n=44)	Rajshahi (n=90)	Rangpur (n=81)	Mymensingh (n=51)	Sylhet (n=58)	Total (N=496)
Financial services	1.3%	5.4%	6.1%	6.1%	0.0%	1.2%	1.5%	4.2%	3.4%
Retail	5.2%	2.2%	0.0%	1.0%	0.0%	1.2%	1.5%	9.7%	3.3%
Construction	3.9%	9.7%	2.4%	1.0%	1.0%	0.0%	1.5%	3.0%	2.9%
Transport	3.9%	2.2%	4.9%	1.0%	0.0%	0.0%	1.5%	3.6%	2.2%
Tourism and hospitality	1.3%	1.1%	8.5%	1.0%	1.0%	0.0%	1.5%	2.4%	2.1%
Electrical installation and maintenance	1.3%	2.2%	0.0%	0.0%	4.0%	0.0%	2.9%	0.0%	1.2%

The respondents were further asked about the duration of the training or skill development programs. The majority of short-term programs (1 to 3 months) were offered in Rajshahi (78.5%), Rangpur (72.8%), and Dhaka (73.1%), while Barisal (42.6%) and Khulna (53.5%) also had a significant number of participants in these programs. Chattogram had the highest percentage (63.1%) of participants in short-term programs among all districts. Medium-term programs (4 to 6 months) were more popular in Barisal (57.4%), Mymensingh (60.8%), and Khulna (46.5%) districts. Long-term programs (7 to 12 months) were very rare, with only Rajshahi (2.2%) and Rangpur (2.5%) districts having participants in such programs. Finally, extended-term programs (more than 12 months) were only offered in Dhaka (5.8%) and Sylhet (1.8%) districts (Annex Table 25).

Additionally, questions were asked to understand the frequency of attending different training programs. Around 28.7% of the total respondents reported attending a training program within the last month, with 31.4% being female and 25.6% being male. For those who attended a program within the last three months, 17.4% of the total respondents reported doing so, with 15.7% being female and 19.3% being male. Looking at attendance within the last six months, 11.4% of the total respondents reported attending a program, with 10.7% being female and 12.2% being male. When asked about attendance within the last year, 14.2% of the total respondents reported doing so, with 19.2% being female and 8.8% being male. Finally, more than a year ago, 28.3% of the total respondents reported attending a training program, with 23.0% being female and 34.0% being male (Table 32).

Table 32 Frequency of attending training or their skill development programs (N=499)

Response	Male (n=238)	Female (n=261)	Total (N=499)
Within the last month	25.6%	31.4%	28.7%

Response	Male (n=238)	Female (n=261)	Total (N=499)
More than a year ago	34.0%	23.0%	28.3%
Within the last 3 months	19.3%	15.7%	17.4%
Within the last year	8.8%	19.2%	14.2%
Within the last 6 months	12.2%	10.7%	11.4%

3.3.6 Collaboration and coordination among different stakeholders in providing training and education opportunities for youth.

The respondents were asked if they had received any information or guidance on taking any training or skill development programs from the stakeholders. In terms of gender, a higher percentage of females (79.6%) received information or guidance on training and skill development opportunities from government agencies compared to males (69.4%). Similarly, a higher percentage of females (14.2%) received information or guidance from educational institutions compared to males (17.9%). A higher percentage of males (16.2%) received information or guidance from private sector companies compared to females (14.0%). A higher percentage of males (11.0%) received information or guidance from non-governmental organizations (NGOs) compared to females (8.8%). Finally, a slightly higher percentage of females (9.7%) and males (11.4%) did not receive any information or guidance on training and skill development opportunities (Annex Table 26). In Barisal, 90.9% of respondents reported receiving information about training opportunities from government agencies, while 59.5% reported receiving information from private sector companies. In Chattogram, 87.5% received information from government agencies, while only 3.3% received information from private sector companies. In Dhaka, the highest percentage (41.0%) received information from educational institutions, while only 35.3% received information from government agencies. In Khulna, the highest percentage (24.8%) received information from non-governmental organizations, while 13.2% received information from private sector companies. In Rajshahi, 78.5% received information from government agencies and only 3.3% received information from educational institutions (Table 33).

Response	Barisal (n=121)	Chattogram (n=120)	Dhaka (n=173)	Khulna (n=121)	Rajshahi (n=121)	Rangpur (n=120)	Mymensingh (n=122)	Sylhet (n=122)	Total (n=1020)
Government agencies	90.9%	87.5%	35.3%	77.7%	78.5%	66.7%	90.2%	85.2%	74.4%
Educational institutions	15.7%	4.2%	41.0%	25.6%	3.3%	5.8%	6.6%	15.6%	16.1%
Private sector companies	59.5%	3.3%	6.4%	13.2%	9.9%	15.0%	9.8%	7.4%	15.1%

Response	Barisal (n=121)	Chattogram (n=120)	Dhaka (n=173)	Khulna (n=121)	Rajshahi (n=121)	Rangpur (n=120)	Mymensingh (n=122)	Sylhet (n=122)	Total (n=1020)
Non-governmental organizations (NGOs)	6.6%	9.2%	9.2%	24.8%	3.3%	9.2%	13.9%	3.3%	9.9%
Did not receive any information	1.7%	10.8%	19.7%	14.0%	9.1%	10.8%	3.3%	4.1%	9.7%

Regarding the satisfaction level on receiving prior guidance from different stakeholders, 52.9% of the overall respondents were somewhat satisfied, with Barisal having 73.6% and Sylhet having 67.2% response. Around 22.6% of respondents were very satisfied, with 40.8% response from Chattogram and 38% responses from Dhaka (Table 34). In terms of gender-based satisfaction level, 54.1% male and 51.7% of the female respondents were somewhat satisfied, where 19.3% male and 26.1% female respondents were very satisfied (Annex Table 27).

Table 34 District-wise satisfaction level on receiving guidance from the stakeholders (N=1020)

Response	Barisal (n=121)	Chattogram (n=120)	Dhaka (n=173)	Khulna (n=121)	Rajshahi (n=121)	Rangpur (n=120)	Mymensingh (n=122)	Sylhet (n=122)	Total (n=1020)
Somewhat satisfied	73.6%	41.7%	51.4%	27.3%	62.0%	50.0%	50.8%	67.2%	52.9%
Very satisfied	15.7%	40.8%	12.7%	38.0%	19.0%	13.3%	29.5%	16.4%	22.6%
Neutral	10.7%	16.7%	35.3%	25.6%	15.7%	25.8%	18.0%	15.6%	21.2%
Somewhat dissatisfied	0.0%	0.8%	0.6%	8.3%	2.5%	10.0%	1.6%	0.8%	2.9%
Very dissatisfied	0.0%	0.0%	0.0%	0.8%	0.8%	0.8%	0.0%	0.0%	0.3%

Additionally, the youths were asked about their perception regarding the collaboration among different stakeholders to provide training and education opportunities for them. In Barisal, 47.9% of respondents believe that different stakeholders are working very well to provide training and education opportunities for youth, while in Chattogram, the percentage is 41.7%. In contrast, in Dhaka, only 8.7% of respondents think that stakeholders are working very well. Overall, 26.0% of all respondents believe that stakeholders are working very well. On the other hand, 53.3% of respondents think that stakeholders are working somewhat well, while 17.3% of respondents think that they are not working very well or not well at all (Table 35).

Response	Barisal (n=121)	Chattogram (n=120)	Dhaka (n=173)	Khulna (n=121)	Rajshahi (n=121)	Rangpur (n=120)	Mymensingh (n=122)	Sylhet (n=122)	Total (n=1020)
Somewhat well	45.5%	51.7%	60.7%	21.5%	60.3%	37.5%	57.4%	88.5%	53.3%
Very well	47.9%	41.7%	8.7%	30.6%	34.7%	0.8%	41.8%	9.0%	26.0%
Not very well	6.6%	6.7%	26.6%	34.7%	4.1%	52.5%	0.8%	2.5%	17.3%
Not well at all	0.0%	0.0%	4.0%	13.2%	0.8%	9.2%	0.0%	0.0%	3.4%

 Table 35 Perception of the respondents on the collaboration between stakeholders in providing training or education

 opportunities (N=1020)

According to the survey, the majority of respondents believe that collaboration and coordination among stakeholders are very important in providing training and education opportunities for youth, with 60.5% of the total respondents selecting this option. Chattogram has the highest percentage of respondents who believe that collaboration and coordination among stakeholders are very important, with 71.7%, while Rangpur has the lowest with only 43.4%. On the other hand, 37.5% of respondents believe that collaboration and coordination among stakeholders are somewhat important. The percentage of respondents who consider collaboration and coordination among stakeholders not very important or not important at all is relatively low, with only 1.9% and 0.2%, respectively (Table 36).

Response	Barisal (n=121)	Chattogram (n=120)	Dhaka (n=173)	Khulna (n=121)	Rajshahi (n=121)	Rangpur (n=120)	Mymensingh (n=122)	Sylhet (n=122)	Total (n=1020)
Very important	33.9%	71.7%	71.7%	70.2%	53.7%	92.5%	42.6%	43.4%	60.5%
Somewhat important	64.5%	26.7%	26.0%	27.3%	45.5%	7.5%	51.6%	54.9%	37.5%
Not very important	1.7%	1.7%	1.7%	1.7%	0.8%	0.0%	5.7%	1.6%	1.9%
Not important at all	0.0%	0.0%	0.6%	0.8%	0.0%	0.0%	0.0%	0.0%	0.2%

Table 36 Importance of collaboration among all the stakeholders (N=1020)

The KII with NSDA and BAPA revealed that the National Skill Development Authority (NSDA) is developing a common curriculum for all skill development organizations in compliance with national policies and guidelines. They are registering all skill development organizations under the NSDA so that they can follow the same curriculum according to the government's goal of 2041. The NSDA is working on developing coordination among all stakeholders and communicating with different industries to understand the kind of skills they want to see among the youth. On the other hand, BAPA emphasizes the importance of collaboration between youths and training institutes. They believe that youths can also learn about different training programs offered by different organizations through social media. BAPA encourages youths to start their own small businesses after receiving different training as most business entities around us are Small and Medium Enterprises.

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The NSDA is developing a common curriculum for the skill development organizations like the Sheikh Hasina National Institute of Youth Development. This curriculum is being developed in compliance with the national policies and guidelines. The NSDA, under the government's permission, is now registering all the skill development organizations under the NSDA, so that all the organizations follow the same curriculum that will be provided in accordance with the government's goal of 2041. The NSDA is working on developing coordination among all the stakeholders. They are also communicating with different industries to understand what kind of skills they would like to see among the youth.

- A representative from NSDA.

3.4 Appropriate and Potential Markets and Related Training and Skill-Development Components

The section focuses on the current and future job market demand and the necessary skills for success in the job market. The findings reveal the current job market's demand for skills in technology and IT, business and finance, education and teaching, and agriculture and farming, which are also expected to be in high demand in the future, with a particular emphasis on technology and IT. Additionally, the findings highlight the skills deemed valuable for future job success, such as creativity and innovation, communication and collaboration skills, industry-specific skills, and emotional intelligence. The research also sheds light on the perception of a skills gap among the respondents, with over half of the respondents perceiving a gap between their current skills and the skills demanded by employers. To address these challenges, the respondents suggest increased funding, subsidies or scholarships, more apprenticeships and internships, and increased collaboration with educators and industry experts. The need for innovative and adaptable training programs that align with changing market trends is also emphasized, including access to necessary materials and equipment, practical knowledge, expanded training centers, and fostering self-reliance among the youth.

3.4.1 Market demand for different types of jobs and skills in the current and future job market

3.4.1.1 Current market demand

Most of the respondents (32.9%) indicated that technology and IT jobs are the most in demand followed by business and finance (22.4%), education and teaching (18.4%), and agriculture and farming (15.7%). This may be due to the growing importance of technology in various industries and the need for individuals with technical expertise to manage, develop and maintain the digital infrastructure of organizations as well as to ensure the smooth operation and success of the business and financial institutes. Healthcare and medicine (9.5%) were also mentioned as demandable jobs, while marketing, garments and textile, administration, and driving were mentioned by a very small percentage of respondents. A few respondents (0.7%) stated that they did not have any idea about the most in-demand job sectors (Table 37).

Response	Percentage (%)
Technology and IT	32.9%
Business and finance	22.4%
Education and teaching	18.4%
Agriculture and farming	15.7%

Table 37 Most demanded jobs in the current market according to the respondents

Response	Percentage (%)
Healthcare and medicine	9.5%
Do not have any idea	0.7%
Administration	0.3%
garments and textile	0.2%
Driving	0.1%
Marketing	0.0%

3.4.1.2 Future market demand

The majority of respondents, comprising 34%, indicated that technology and IT jobs will be the most in-demand in the future, followed by business and finance (21%), agriculture and farming (18%), education and teaching (16%), and healthcare and medicine (11%) (Figure 15).



Figure 15 Most demanded jobs for the future according to the respondents (N=1020)

The survey data indicated that a diverse range of cognitive, emotional, and technical competencies will be valued in the future job market of Bangladesh, emphasizing the need for holistic skill development among the youth. The majority of participants (32.1%) believe that creativity and innovation will be the most sought-after skills in the future. Communication and collaboration skills follow closely, with 22.8% of respondents identifying them as crucial for the job market. Industry-specific skills and emotional intelligence were also considered

important by 17.7% and 14.6% of participants, respectively. Meanwhile, 12.6% of respondents highlighted critical thinking and problem-solving as key skills for the future. Only a negligible fraction (0.1%) were unsure about the most in-demand skills (Figure 16).



Figure16 Perception of respondents about most demanded skills in future

A young entrepreneur from Sylhet suggests that technical knowledge and skills will be in high demand in the future job market. The weaving industry is expected to witness significant development, and the agricultural sector should undergo digitalization to enhance its efficiency. In the FGD sessions in Sylhet and Mymensingh revealed that the existing and future job markets encompass agriculture, livestock management, fish farming, pisciculture, computer-related occupations, and mobile servicing. The demand for computer education, English

I believe that in the future, there will be an increased demand for technical knowledge and skills. The weaving industry is expected to witness significant development. The agricultural sector should undergo digitalization to enhance its efficiency. Additionally, improvements should be made in livestock management.

- A Youth entrepreneur from Sylhet

language proficiency, outsourcing skills, and online communication skills is expected to increase in the future. However, there is a scarcity of job opportunities in certain regions compared to the number of educated youths seeking employment.

3.4.2 Gap between the skills youth have and the skills required by potential markets.

Out of the total respondents, 536 (52.5%) answered "Yes", indicating that they perceive skills gap. On the other hand, 484 (47.5%) respondents answered "No", indicating that they do not perceive a skills gap (Table 38).

Response	Frequency	Percentage (%)
Yes	536	52.54902
No	484	47.45098
Total	1020	100

Table 38 Gap between the skills youth have and required by employers

Majority of respondents in Barisal, Chattogram, Rangpur, Mymensingh, and Sylhet believe that there is a gap between the skills they have and the skills required by employers, with percentages ranging from 52.5% to 70.8%, where highest responses were in Rangpur division. In contrast, a higher percentage of respondents in Dhaka, Rajshahi and Khulna do not perceive a gap in their skills, with 74%, 56.2% and 53.7% respectively. Overall, 52.5% of the total sample size believe that there is a gap between their skills and the skills required by employers, while 47.5% do not perceive such a gap. (Annex Table 28). The representative from NSDA indicated that the youth should develop more skills on the newly developed technologies. Besides, they need to understand at first, what kind of skills they should develop. They should not take such skill development training which is no longer wanted by the employers.

3.4.3 Innovation and adaptability in training and skill development programs to align with changing market trends.

In a rapidly evolving global economy, it is crucial to ensure that training and skill development programs for youth are adaptable and innovative, allowing them to align with changing market trends. This section of the report investigates the various strategies and interventions that can be implemented to enhance the efficacy and relevance of these programs, based on the perspectives of the youth in Bangladesh.

Out of 1020 respondents, a significant proportion (33.0%) advocated for increased funding in training and skill development programs, while 32.4% emphasized the need for subsidies or scholarships to make these programs accessible to a broader range of youth. Furthermore, 22.1% of participants called for greater collaboration between the government, employers, and educational institutions in the form of apprenticeships and internships, providing hands-on experiences that are aligned with current market needs. A smaller percentage (12.3%) underscored the importance of fostering partnerships with educators and industry experts to ensure that the content and delivery of these programs remain up-to-date and relevant (Table 39).

Response	Male (n=519)	Female (n=501)	Total (N=1020)
Increase funding for training and skill development programs	33.6%	32.4%	33.0%
Provide subsidies or scholarships for youth to attend programs	30.8%	34.0%	32.4%
Work with employers to create more apprenticeships and internships	21.8%	22.4%	22.1%
Increase collaboration with educators and industry experts	13.7%	10.8%	12.3%
don't know	0.0%	0.4%	.2%

Table 39 Suggestion of respondents for improving training opportunities

From a social science perspective, these findings highlight the necessity for a multi-pronged approach to improve the effectiveness and adaptability of training and skill development programs. By addressing financial barriers, promoting experiential learning, and fostering collaboration between various stakeholders, these interventions can create a more inclusive and dynamic environment for skill acquisition. This, in turn, can empower youth to successfully navigate the ever-changing job market and secure meaningful employment opportunities in the future.

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It is also necessary to arrange study trips to neighbouring countries to understand the technological upgrades and international job markets' environment. BAPA gets invitations sometimes on such trips to India and other neighbouring countries. This kind of program also includes a business fair, attending which is important to understand the current trend.

- A representative from BAPA

The representative from NSDA told that it is instructing skill development organizations to develop their curriculum in compliance with the National Qualification Framework. This framework has levels ranging from Lifelong Learning Level 1 to Level 6. On the other hand, a representative from BAPA suggested arranging study trips to neighboring countries to understand technological upgrades and the international job market environment. Business

fairs are also important to understand the current trend. Additionally, BAPA recommends inviting consultancy firms like the Netherlands-based organization that bear their own travelling cost and share their skills with other countries. Such organizations can help the youths of Bangladesh to learn and develop new skills. The in-depth-interview with yout suggests that in order to align with changing market trends, innovation and adaptability in training and skill development programs are necessary. Providing access to necessary materials and equipment, education on Android phones, computer literacy, and internet usage with a focus on practical knowledge and hands-on experience, establishing more training centres, prioritizing the establishment of institutions for English and practical education, introducing computer and language studies in educational institutions after the HSC exam, and expanding the network of training centres to provide more opportunities are some of the suggestions provided. Additionally, there should be greater efforts from the government to foster selfreliance among the youth.

3.5 Youth Preference on Training and Skill Development Programs

This section presents the findings of a study on the training modalities, institutions, and duration preferences of youths in Bangladesh. The findings suggest that the conventional method of classroom-based instruction is the most preferred modality, trailed by self-paced online courses and on-the-job training. The results indicate a notable inclination towards government institutions as a preferred choice for training, and further reveal a discernible disparity in training preferences across different regions. Furthermore, the findings indicate that a majority of participants exhibit a preference for complimentary training. Moreover, the duration of the training is influenced by the necessity for rapid upskilling, reduced time commitments, and the conviction that shorter durations are sufficient. The objective of this section is to offer perspectives on the inclinations of the youth in Bangladesh towards skill

enhancement and training initiatives. This information can be utilised to shape policies and programme frameworks that cater to the demands of the youth in the upcoming job market.



Figure 17 Engaging with youths in a Focus Group Discussion for this study (location: Rajshahi)

3.5.1.1 Preferred mode of training

The survey data suggested that Bangladeshi youth predominantly prefer traditional classroombased training for skills development. However, there is a growing interest in online self-paced courses and other modes of training in certain regions. Gender and regional differences also play a role in shaping training preferences. Policymakers and training providers can consider these preferences and differences when designing and implementing skill development programs to maximize their impact and accessibility.

Response	Male (n=519)	(Female (n=501)	Total (N=1020)
Classroom-based training	65.5%	70.5%	67.9%
Online self-paced courses	16.0%	11.4%	13.7%
On-the-job training	11.2%	10.0%	10.6%
Instructor-led virtual classes	4.4%	7.8%	6.1%
Not interested in training	2.7%	0.4%	1.6%
No preference	.2%	.0%	.1%

Table 40 Preferred mode of training that best suits the respondents.

From the survey, 67.9% of respondents preferred classroom-based training, making it the most popular choice among the participants. A notable preference difference was observed between males (65.5%) and females (70.5%). Online self-paced courses were the second most preferred option, with 13.7% of the respondents choosing it; however, a higher percentage of males (16.0%) preferred this mode compared to females (11.4%). On-the-job training was preferred by 10.6% of the respondents, with similar proportions among males (11.2%) and females (10.0%). Instructor-led virtual classes were the least popular among the main training modes, with 6.1% of respondents selecting it, and a higher preference among females (7.8%) than males (4.4%). A negligible number of respondents (0.1%) reported having no preference, and 1.6% of respondents were not interested in training, with a higher percentage among males (2.7%) than females (0.4%) (Table 40).

Breaking down the preferences by division provides a similar picture. While classroom-based training was the most popular option in almost all divisions, its preference was remarkably high in Barisal (92.6%). Dhaka, on the other hand, had the highest preference for online self-paced courses (25.4%) and instructor-led virtual classes (17.9%). Rangpur had the highest percentage of respondents (30.0%) preferring on-the-job training. Interestingly, in Khulna, a relatively higher proportion of respondents (5.0%) reported not being interested in training (Annex Table 29).

The survey data also suggested that convenience, networking opportunities, and training effectiveness are significant factors influencing the preferred training modes among Bangladeshi youth. However, the reasons behind these preferences vary based on gender and region.

Response	Male (n=505)	Female (n=499)	Total (N=1004)
Convenience	20.9%	20.5%	20.7%
Interaction with trainers	3.3%	1.8%	20.0%
Effectiveness of the training	15.6%	14.8%	15.2%
Personalized learning experience	15.6%	14.8%	14.1%
Cost-effectiveness	12.0%	12.6%	12.3%
Practical application of knowledge	3.5%	2.9%	9.2%
Networking opportunities	18.1%	22.0%	3.2%
Flexibility	2.9%	2.9%	2.9%
Availability of resources	14.3%	13.8%	2.6%

Table 41	Reason	behind	training	mode	preference	e
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Convenience emerged as the primary reason behind the preferred training mode for both males (20.9%) and females (20.5%), with an overall percentage of 20.7%. Networking opportunities were also a significant factor, particularly for females (22.0%) compared to males (18.1%). Other important factors included the effectiveness of the training (15.2%), personalized learning experience (14.1%), and cost-effectiveness (12.3%). Flexibility and practical application of knowledge were less influential reasons, both with less than 10% of respondents selecting them. Interaction with trainers was selected by 20% of the respondents, with a higher percentage among males (3.3%) than females (1.8%) (Table 41).

There were few regional differences observed in the reasons behind preferred training modes. Convenience was the most selected reason in Dhaka (30.7%), Khulna (32.9%), and Sylhet (23.4%), while effectiveness of the training was the top choice in Barisal (21.9%) and Mymensingh (16.7%). In Rajshahi, the personalized learning experience was the primary reason (27.8%), and in Rangpur, interaction with trainers (32.4%) was the most popular reason. Chattogram had cost-effectiveness as the top reason (17.6%). (Annex Table 30)

Additionally, the disabled youths find it very difficult to reach the programs. One of them expressed his frustration for not being able to attend the training programs because of his physical condition. In his opinion, there is a very limited scope for the disabled or ethnic youths to attend the programs (IDI, Sylhet). Another disable youth from Mymensingh suggested that the distant training venues are one of the obstacles for the physically challenged youths. Hence, the government should establish area-based training organizations.

3.5.1.2 Preferred institution type for training programs

Survey data revealed that government institutions were the most preferred choice for providing training and skill development among Bangladeshi youth, both in terms of gender and regional preferences.

Response	Barisal (n=121)	Chattogram (n=120)	Dhaka (n=173)	Khulna (n=115)	Rajshahi (n=120)	Rangpur (n=111)	Mymensingh (n=122)	Sylhet (n=122)	Total (N=1004)
Government institutions	89.3%	99.2%	93.6%	94.8%	89.2%	97.3%	98.4%	94.3%	94.4%
Private training institutes	9.9%	0.0%	5.2%	0.9%	8.3%	0.9%	0.8%	5.7%	4.1%
NGOs	.8%	.0%	1.2%	4.3%	2.5%	.9%	.8%	.0%	1.3%

Table 42 Preferred institution for training and skill development program

Response	Barisal	Chattogram	Dhaka	Khulna	Rajshahi	Rangpur	Mymensingh	Sylhet	Total
	(n=121)	(n=120)	(n=173)	(n=115)	(n=120)	(n=111)	(n=122)	(n=122)	(N=1004)
None	0.0%	0.8%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.2%

The vast majority of both male (93.3%) and female (95.6%) respondents prefer government institutions for training and skill development, with an overall percentage of 94.4%. Private training institutes were the second most preferred choice, with 5.0% of males and 3.2% of females opting for them. NGOs were the least popular choice, with only 1.4% of males and 1.2% of females selecting this option. A very small percentage (0.2%) indicated no preference for any institution (Table 42).

Additionally, examining the data by division indicates that government institutions were consistently the top choice in all divisions, with the greatest preference in Chattogram (99.2%) and the least in Barisal (89.3%). Private training institutes were more popular in Barisal (9.9%), Dhaka (5.2%), and Sylhet (5.7%), but had very low preferences in other divisions. NGOs had the highest preference in Khulna (4.3%) but were not a popular choice in other divisions (Annex Table 31).

Response	Male (n=505)	Female (n=499)	Total (N=1004)
Lower cost of training	29.1%	28.8%	29.0%
Better quality of training	25.4%	28.5%	26.9%
Better job placement opportunities	26.1%	25.3%	25.7%
Availability of training in preferred field	7.6%	7.1%	7.4%
Reputation of training provider	6.0%	5.3%	5.6%
Flexibility of training schedule	3.5%	3.2%	3.3%
Recommendations from others	2.4%	1.5%	2.0%
they provide stipend after completion	0.0%	0.2%	.1%

Table 43 Reason behind preferring certain institutions for training and skill development program

Overall, the top three reasons for selecting a training source were better quality of training (26.9%), lower cost of training (29.0%), and better job placement opportunities (25.7%). These preferences were relatively consistent across both genders, with females showing slightly more emphasis on quality and males on cost and job placement (Table 43).

When analysing the data by division, a few notable differences emerge. In Khulna, the lower cost of training was the most important factor (36.6%), while in Rangpur, it was even more significant (62.8%). Dhaka and Chattogram participants prioritized better quality of training (29.7% and 29.3%, respectively) and better job placement opportunities (27.0% and 29.0%, respectively). Availability of training in the preferred field was most important in Sylhet (14.0%), while reputation of training provider was most relevant in Barisal (14.5%). (Annex Table 32)

3.5.1.3 Preferred duration of training and skills development program

The survey data suggested that youth in Bangladesh generally prefer training programs with durations of 1-3 months and 3-6 months, but preferences can vary significantly across different divisions.

Response	Male (n=505)	Female (n=499)	Total (N=1004)
1-3 months	35.6%	44.5%	40.0%
3-6 months	42.4%	31.1%	36.8%
6-12 months	17.2%	13.0%	15.1%
Less than a month	3.4%	9.2%	6.3%
More than 12 months	1.4%	2.2%	1.8%

Table 44 Preferred duration of training and skills development program

Overall, the most popular training durations were 1-3 months (40.0%) and 3-6 months (36.8%). Female respondents tended to prefer shorter training durations, with 44.5% opting for 1-3 months compared to 35.6% of males. Males showed a higher preference for the 3-6 month duration, with 42.4% compared to 31.1% of females (Table 44).

When analyzing the data by division, significant variations can be observed. In Rajshahi and Rangpur, a majority of respondents preferred 1-3 month training programs (55.0% in both divisions), while in Mymensingh, the majority (63.1%) preferred 3-6 month programs. Dhaka and Chattogram also showed a preference for 1-3 month (49.7%) and 3-6 month (51.7%) training programs, respectively. In Khulna, shorter training durations were more popular, with 60.9% preferring 1-3 months and 13.9% opting for less than a month (Annex Table 33).

Overall, the main reasons for their preferences were the need to upskill quickly for immediate job prospects (29.9%), a preference for shorter time commitments due to personal or financial reasons (30.7%), and the belief that a shorter duration is sufficient for their learning needs (15.1%). A considerable percentage (24.3%) also preferred longer durations to gain more indepth knowledge and skills.

Response	Male (n=505)	Female (n=499)	Total (N=1004)
Prefer a shorter time commitment due to personal or financial reasons	29.1%	32.3%	30.7%
Need to upskill quickly for immediate job prospects	30.9%	28.9%	29.9%
Prefer a longer duration to gain more in-depth knowledge and skills	25.9%	22.6%	24.3%
Believe a shorter duration is sufficient for their learning needs	14.0%	16.2%	15.1%

Table 45 Reasons behind preferred duration of the training program

When examining the data by gender, there are slight differences in preferences. Males showed a higher inclination towards longer durations for more in-depth knowledge (25.9%), while females preferred shorter time commitments due to personal or financial reasons (32.3%) (Table 45).

The analysis of preferences by division reveals some regional variations. For instance, the need to upskill quickly for immediate job prospects was highest in Dhaka (45.8%) and Chattogram (40.8%). In contrast, Rangpur showed the highest preference for shorter time commitments due to personal or financial reasons (58.5%). Believing that a shorter duration is sufficient for learning needs was most prominent in Khulna (28.9%). Rajshahi and Mymensingh showed a higher preference for longer durations to gain more in-depth knowledge and skills, with 45.7% and 42.2% respectively. (Annex Table 34). The findings from the FGD in Barisal indicated that the youths prefered long term training programs that could be availed after obtaining the Higher Secondary Certificate (HSC).

In summary, the data indicates that various factors influence the preference of training duration among Bangladeshi youth, with some differences across gender and divisions.

3.5.1.4 Preferred costing of training programs

The analysis of the survey data showed that most respondents (52.1%) prefer no-cost training. However, there is a range of willingness to pay among the remaining participants: 20.5% would pay up to BDT 500, 9.5% up to BDT 1000, 9.7% up to BDT 2000, 5.7% up to BDT 5000, and 2.6% over BDT 5000.

Response	Male (n=505)	Female (n=499)	Total (N=1004)
No cost	46.7%	57.5%	52.1%
up to BDT 500	20.0%	21.0%	20.5%
up to BDT 2000	11.9%	7.4%	9.7%
up to BDT 1000	8.3%	10.6%	9.5%
up to BDT 5000	8.5%	2.8%	5.7%
More than BDT 5000	4.6%	0.6%	2.6%

Table 46 Preference of respondents on costing of training programs

When comparing the preferences by gender, females demonstrated a higher inclination towards no-cost training (57.5%) than males (46.7%). Males were more willing to pay higher amounts for training, with 8.5% willing to pay up to BDT 5000 and 4.6% more than BDT 5000, compared to 2.8% and 0.6% of females, respectively (Table 46).

The data segregated by division reveals some notable regional differences. The preference for no-cost training was highest in Sylhet (88.5%) and Chattogram (83.3%), while it was lowest in Rajshahi (15.0%) and Mymensingh (18.9%). In contrast, willingness to pay up to BDT 500 was most common in Mymensingh (54.1%) and Khulna (45.2%). The preference for paying up to BDT 1000, BDT 2000, and BDT 5000 was more evenly distributed across divisions, with some variations. A willingness to pay more than BDT 5000 was relatively low in all divisions, with the highest percentage found in Rajshahi (9.2%) (Annex Table 35). Besides, the respondents from the FGD in Barisal emphasized on providing scholarship opportunities for attending the training programs. Additionally, the findings from the FGD conducted in Jessore suggested that the local government could provide loans without interest for obtaining the vocational trainings.

In summary, the data indicates that a significant proportion of Bangladeshi youth prefer nocost training, with variations in willingness to pay for training across gender and divisions.

4 Discussion on the findings of the study

This chapter aims at providing a critical analysis of the quantitative and qualitative findings of the study. Where the youths have their understanding, there are other issues to consider which are required to keep in mind in order to fulfil the objectives of the study.

With the growing rate of IT farms and freelancers in Bangladesh, it is evident that the youths require adequate skills to secure jobs. Table 47 depicts the targeted training programs based on the qualitative findings which indicates that IT related programs are to be targeted in large numbers for equipping the youth for technology dependent job market in the future. The table also indicate what

types of training mode to be preferred and types of soft skills to be focused. However, it is also necessary to keep in mind that where IT sector has a growth of around 40%; agriculture has always been an essential sector for Bangladesh's economy, with around 45% of the population employed in agriculture. Besides, the government does not have sufficient fund to provide the equipment for facilitating trainings on IT-based skill development for all. Therefore, a strong emphasis should be placed on providing proper skill development trainings on agro-business.

The study team found a trend in the youths to go for the training or skill development programs which are popular at the time, without realizing if those programs or opportunities are aligned with their filed of interest or are valuable to pursue in line with the current competitive job market. For instance, if everyone receive training on web development and graphics designing, not everyone can secure a job since not all the private job sectors need plenty of web developers or graphics designers. Hence, the youths should keep them up to date and should focus on their field of interest before pursuing a skill development training.

Again, the educational qualifications of most of the respondents are HSC/Diploma/equivalent. According to BMET, the country sent around 5-6 lakh workers a year for the last one decade. As of March 2021, the Bangladesh Bureau of Statistics (BBS) reported that the country's total remittance inflow was \$18.21 billion, which is a 36.17% increase compared to the same period in the previous year. However, the percentage of less skilled workers who migrated abroad increased to 78.64 percent last year from 75.24 percent the year before, according to the RMMRU's 2022 Migration Trends Report. This indicates the unavoidable need of facilitating vocational training. There are various types of vocational training programs that can be offered in Bangladesh to equip individuals with the necessary skills and knowledge for employment. Not only the youths who are planning to go abroad as a skilled worker, but also the youths who wants to secure a job in the country can take vocation training for its crying need in the job market. Most of the time, the industries look for eligible employees with technical skills. As the educational institutions cannot make the youths technically sound, the industries often cannot offer jobs to the youths even if they are University graduate. Some examples of vocational training programs include: technical and vocational education and training (TVET) programs that focus on training for specific occupations, such as mechanics, electricians, plumbers, carpenters, etc., Healthcare training, Hospitality and tourism training and so forth.

Again, for a country like Bangladesh, skill development on manufacturing is another priority as Bangladesh is growing its economy in this field. There are various job opportunities available for Bangladeshi youth in the manufacturing sector such as garment manufacturing, textile manufacturing, leather, food processing, electronics manufacturing, construction materials manufacturing, Handicrafts and cottage industries and so forth.

To mitigate the burden of unemployment, focus need to put on self-employment. According to the Entrepreneurship Index 2021, which was published by the New York-based CEOworld magazine, Bangladesh was placed 84th out of 100 economies. It is evident to the current growing rate of entrepreneurship in Bangladesh. Although the youths are nowadays choosing self-employment, the professional training facilities for them are less available. Often, they cannot survive in the market because of the strategies applied by the large industries. Hence,

the youths who are interested in self-employment, need necessary trainings to keep pace with the current competitive market.

With most of the focus of the youths on IT-based skill development training, they were seeming less knowledgeable regarding the job market in the NGO sector. Currently, the NGO Affairs Bureau of the Government regulates around 26,000 registered NGOs in Bangladesh. Although this sector offers numerous job opportunities, there is a huge competetion among the candidates. Often these NGOs claimed not to get enough skilled candidates.

Our study also uncovers a knowledge gap among youths regarding job opportunities in the NGO sector, despite the significant number of registered NGOs in Bangladesh. This underscores the need for career guidance and awareness programs that provide insights into diverse job opportunities.

Tai Pro	rgeted Training ograms	Pro Tir	eferred ne Period	Pro of	eferred Mode Training	Pre Tra	eferred Soft Skills aining	Ot	hers
1.	Graphics Design	1.	Short	1.	Classroom-	1.	Communication	1.	Easy learning
2.	3D Animation		term: 1-6		based		and interpersonal		method
3.	Web		months		training		skills	2.	Partnering
	Development	2.	Long	2.	Online-based	2.	Time		with industry
4.	Machine Learning		term: 6-12		training		management		experts and
5.	Adobe photoshop		months	3.	On-the-job	3.	Adaptability and		employees
	and Illustrator				training		flexibility	3.	Increase
6.	Entrepreneurship					4.	Emotional		follow-up
	Development on						intelligence		support.
	manufacturing,						networking skills	4.	Skill
	and agro-based					5.	Team working		development
	small business.						skills.		of the trainers
7.	Tourism and					6.	Decision making		from time to
	hospitality					7.	Presentation skill		time
	management					8.	Digital literacy	5.	Keeping
8.	Digital marketing					9.	Problem solving		industry level
9.	English language						skill.		experts as
	course					10.	Critical thinking		trainers
							skill	6.	Organizing
						11.	Collaborative		business fair,
							teamwork skills		study trips to
						12.	Leadership skill		neighborhood
									countries

Table 47 Targeting training programs

Provided the context of the job market above, IT related skills seem to be widely relevant to the diverse job market across the sector. As per previous studies, it is similarly reflected that Graphics Design, 3D Animation, Web Development, Machine Learning, Adobe photoshop and Illustrator and Digital marketing related training programs should be focused for adapting to the future job market. Besides, skills and training related to entrepreneurship development, manufacturing business, agro-based small business, tourism and hospitality management, and English language course will be high in demand in the future (Table 47).

This research suggests a need for a nuanced, sector-specific approach to skills development in Bangladesh, taking into account market demands, the country's economic context, and individual interests. It also points to the importance of career guidance and entrepreneurship

support, as well as the need for continued research and monitoring to ensure that skills development strategies align with evolving trends. This comprehensive approach will be critical in achieving the youth development targets for 2041. In order to achieve the target of 2041 this study also suggest to this parodic plan considering short-term, medium-term and long-term plan as depicted in Table 48.

Time Horizon	Skill Development Plans				
	- Strengthen public-private partnerships in primary and secondary education				
	- Enhance education quality through improved learning facilities, curriculum, and teacher quality				
	- Eliminate dropout rates in primary and secondary education				
Short-term	- Improve quality and accreditation of madrassa education				
	- Expand secondary school intake and provide training to the workforce				
	- Promote decentralization of school service delivery				
	- Strengthen non-formal education delivery to eliminate adult illiteracy				
	- Fully implement the National Skills Development Policy (NSDP) 2011				
	- Diversify technical and vocational education programs to meet emerging skills gaps, particularly in the ICT sector				
Medium-term	- Facilitate women's participation in technical education and skills training				
	- Focus on training and skill formation in rural areas				
	- Strengthen public-private partnerships in the delivery of training				
	- Increase public spending on education and training to 4% of GDP by FY2031 and 6% by FY2041				
	- Mobilize local government finances to support education services				
Long-term	- Improve the quality of public spending by setting priorities and completing ongoing projects in a timely manner				
	- Boost private financing of education and training through incentives and supportive policies				
	- Narrow and eliminate the gender gap in vocational education and skill-based training				

Table 48 Skill development plan

5 Conclusion and Recommendations

5.1 Implications of the study

The study's implications are profound, underscoring the pressing need for addressing the identified skills deficits to prepare young individuals for the employment demands of 2041.



Figure 18 Implications of the study

The significance of collaboration and coordination among diverse stakeholders in delivering youth training and educational opportunities is highlighted (Figure 18).

There are substantial implications for education and training providers, with the study illustrating a gap between current education and training initiatives and forthcoming skill requirements. The research also underscores the significance of accessibility and affordability in training and education programs, emphasizing inclusivity for young individuals from diverse socio-economic backgrounds.

For employers, the study provides valuable insights, assisting them to gain a deeper understanding of the skills landscape and the future workforce. The research brings to light the importance of youth proactively pursuing skill enhancement opportunities and understanding future employment patterns and market fluctuations.

In the long-term societal context, the research carries significant implications. Effective responses to these findings could potentially transform the youth employment landscape in Bangladesh by 2041, leading to increased productivity, economic progress, and social

equilibrium. It also indicates the necessity of fostering a culture of continuous learning, adaptability, and innovation to better equip the next generation for future challenges.

5.2 Recommendations for improving youth skills development Targeting 2041

This research sheds light on significant obstacles encountered in the realm of youth employment and skill enhancement and proposes a set of measures to be implemented by

diverse actors involved in this domain. The research highlights the necessity to tackle various challenges, including insufficient technical expertise, suboptimal employment opportunities, gender-based imbalances in representation, deficiencies in non-technical competencies, restricted availability of training initiatives, and the requirement for readiness for the forthcoming labor market. The research emphasizes the importance of allocating resources towards initiatives that aim to improve technical expertise and vocational competencies, facilitate the integration of disadvantaged and disabled young individuals into the labor force, advocate for gender-sensitive programs, augment training in non-technical skills, enhance accessibility to training programs, and equip young individuals with the necessary skills to succeed in the future job market. The research further suggests that it is imperative to tackle the incongruity between the requisites of employers and the competencies of young individuals. Additionally, it is advisable to accord precedence to conventional classroom-oriented instruction and to devise training regimens that are both economical and of high quality, with the aid of governmental organizations. The entities that are involved in collaborative efforts encompass government agencies, training institutions, private sector companies, and nongovernmental organizations. The proper execution of these recommendations holds significant importance for the adequate growth and utilization of the youth population in Bangladesh, thereby exerting a notable influence on the nation's socio-economic progress. Major recommendations against the key findings are illustrated in the Table 49.

SL.	Key Findings	Major Recommendations	Stakeholders for Collaboration	Priority level
1.	Lack of technical knowledge, financial constraints, lack of training, reliance on parents, and lack of vocational skills were identified as key factors for unemployment.	Invest in programs aimed at enhancing technical knowledge, vocational skills, and experience, particularly for the unemployed.	Government, training institutions, and private sector companies.	High
2.	Unemployment and Underemployment was driven by factors such as physical disability, cognitive challenges, economic difficulties, lack of education, unfavorable living conditions, and issues with the quota system and technical knowledge.	Develop strategies for integrating disabled and vulnerable youth into the workforce, including specific training programs.	Government, NGOs, and private sector companies.	High
3.	Youth in Rangpur division had higher rates of employment while divisions like Barisal, Mymensingh, Sylhet, and Rajshahi had higher rates of unemployment.	Implement regional development strategies focusing on employment generation in divisions with higher rates of unemployment.	Government, regional development agencies, and private sector organizations.	High
4.	Retail, manufacturing, and education sectors employed the most youths, while the tourism and hospitality sector had the lowest rate of youth employment.	Enhance training programs focusing on sectors with low youth employment and increase awareness about the potential of these sectors.	Private sector companies, training institutions, and government agencies.	Medium
5.	Females were less represented in self-employment and had a higher rate of unemployment.	Promote gender-responsive programs to encourage female participation in income-generating activities.	Government, NGOs, and private sector organizations working on gender equality.	Medium
6.	Lack of soft skills was identified as a gap among respondents, despite the increasing demand for these skills in the job market.	Enhance soft skills training programs and increase awareness about the importance of these skills.	Training institutions, government agencies, and private sector companies.	Medium
7.	Access to training programs and information about them is limited, especially in certain locations, contributing to skill gaps.	Improve access to training programs, especially in areas where access is limited.	Government, training institutions, and private sector companies.	Medium

Table 49 Key findings and general recommendations of the study

SL.	Key Findings	Major Recommendations	Stakeholders for Collaboration	Priority level
8.	The future job market in Bangladesh is shifting towards digitalization and technical skills.	Prepare the youth for future employment by focusing on skills required in the future job market such as digital and technical skills.	Government, training institutions, and private sector companies.	High
9.	There was a recognized mismatch in employer demand and youth skills, with a need for soft skills identified.	Address the mismatch between employer demands and skills possessed by the youth and incorporate soft skills training.	Government, training institutions, and private sector companies.	High
10.	Traditional classroom-based training was found to be the most favored mode of training among Bangladeshi youth, especially among females.	Prioritize traditional classroom-based training while developing youth skill development programs and consider online self-paced courses and on-the-job training.	Government, training institutions, and private sector companies.	Medium
11.	Government institutions were found to be highly preferred for training by respondents.	Develop quality, cost-effective training programs that align with job market requirements through government institutions.	Government, training institutions, and private sector companies.	High

Besides the general recommendations above, this study also highlights the sector-specific recommendation (see Table 50) which can be addressed in order to overcome the challenges of forthcoming job market.

Sector	Recommendations				
Information and Communication	• Enhance the capacity of ICT training institutes to offer specialized courses in emerging technologies such as artificial intelligence, data science, and cybersecurity.				
(ICT)	• Establish partnerships between ICT companies and educational institutions to develop industry-relevant curriculum and provide internships or apprenticeships to students.				
	• Promote entrepreneurship and innovation in the ICT sector by providing incubation centers, funding opportunities, and mentorship programs for aspiring tech entrepreneurs.				
	• Enhance the evidence base for ICT skills demand and supply to design effective skills strategies.				
	• Develop skills intelligence to identify sector-specific strengths, weaknesses, and options for skills development.				
	• Prioritize the training needs of disadvantaged women in the ICT sector.				
	• Leverage technology to enhance skills development opportunities for young people.				
Manufacturing and Textile	• Collaborate with industry stakeholders to identify the specific skills required in the manufacturing and textile sectors, such as garment production, textile engineering, and quality control.				
	• Develop training programs that focus on improving technical skills, productivity, and compliance with international standards in the manufacturing and textile industries.				
	• Encourage the establishment of industry-led vocational training centers that provide hands-on training and apprenticeships to bridge the skills gap in the sector.				
	• Conduct skills gap analysis to inform skills strategies in the manufacturing and textile sector.				
	• Establish skills intelligence systems to identify sector-specific needs.				
	• Prioritize training programs for disadvantaged women in the sector.				
	• Implement active labor market programs to address underinvestment in training.				
Tourism and Hospitality	• Invest in the development of hospitality and tourism management programs in universities and vocational training institutes to produce skilled professionals for the sector.				
	• Foster partnerships between hotels, restaurants, and educational institutions to offer internship programs and on-the-job training opportunities for students.				
	• Promote cultural awareness and language skills training to enhance the customer service capabilities of individuals working in the tourism and hospitality industry.				

Table 50	Sector	specific	recommend	lations	of the	studv
		~ ~ ~ ~			.,	~~~~

	• Build an evidence base on skills requirements and trends in the tourism and hospitality sector.
	• Develop skills intelligence to identify opportunities for skills development.
	• Prioritize training programs for disadvantaged women in the sector.
	• Explore the use of technology for enhancing job opportunities in the sector.
Renewable Energy	 Develop specialized training programs in renewable energy technologies, such as solar power installation and maintenance, wind energy, and energy management. Collaborate with international organizations and experts to provide technical training and knowledge transfer in the field of renewable energy. Encourage research and development in renewable energy technologies to create a skilled workforce capable of driving the growth of the sector. Conduct research to understand the skills damand and supply dynamics in the
	renewable energy sector.
	• Develop skills intelligence to inform strategies for skills development.
	• Prioritize training programs for disadvantaged women in the sector.
	• Leverage technology for enhancing skills training in renewable energy technologies.
Healthcare	• Expand medical education infrastructure to increase the number of doctors, nurses, and healthcare professionals available to meet the growing demand.
	• Strengthen training programs for healthcare support staff, such as medical technicians and paramedics, to enhance their skills and capabilities.
	• Foster public-private partnerships to improve the quality of healthcare services and create opportunities for continuous professional development in the sector.
	• Enhance the evidence base on healthcare skills requirements and trends.
	• Establish skills intelligence systems to inform skills development strategies.
	• Prioritize training programs for disadvantaged women in the healthcare sector.
	• Implement active labor market programs to address underinvestment in healthcare training.
Education	• The TVET curriculum should be updated and aligned with industry demands to bridge the skills gap.
	• To achieve effective skill development, improvements in the general education system are necessary.
	• A standardized national curriculum and certification system should be implemented while allowing flexibility to adapt to local needs.
	• Providing industrial exposure to students during their university education can enhance their skills and employability.
Training and skill development	• Collaboration between TVET, private sector, and educational institutes: Cooperation and collaboration among these stakeholders are crucial to address skill development challenges effectively.
	• Increased investment in skill development, including TVETs, is necessary to expand training opportunities and improve the quality of education.

• Soft skills should be given equal importance as technical skills, and training programs should incorporate soft skills development.
• Measures should be taken to address the reluctance of employers to provide training and the financial burden on trainees. Accreditation can also ensure the quality of training.
• The private sector should be more actively involved in skill development initiatives, with the government playing a regulatory role.
• Increased investment in skill development, including TVETs, is necessary to expand training opportunities and improve the quality of education.

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7 Annex

7.1 Methodological Framework

The methodological framework is developed by assigning relevant methods and stakeholders against each of the mandated activities mentioned in the ToR. The below table depicts the methodological framework of the study and contains objectives, indicators, methods, and stakeholders /data sources (Table 51).

Mandated activities	Objective	Indicator	Methods	Data source/stakeholder
Present condition of youth in terms of skill related to employment	'resent condition of outh in terms of mploymentAssess the present of terms of skill related to employment• Employment rate among youth • Unemployment rate among youth • Underemployment rate among 	 Secondary documents review 	• Review of scholarly articles, government policies, plans, and strategies and reports of government and non- government organization	
		• Education level of unemployed youth	• Quantitative survey	• Youths (aged between 18 and 35)
		 Work experience of employed youth Perceptions of youth regarding the availability of job opportunities and their relevance to their skills and qualifications. The gap between the skills youth have and the skills employers look for. The strategies adopted by youth to improve their employability. 	• Key Informant Interview (KII)	 Representative from Ministry of Education Representative from Ministry of Youth and Sports Representative from Ministry of Labor and Employment Representative from National Skill Development Authority Representative from Ministry of Economic Affairs Representative from Ministry of Women and Children Affairs

Table 51 Research design matrix

Mandated activities	Objective	Indicator	Methods	Data source/stakeholder
		• The support youth receive from family, friends, and community in their job search		 Representative from Bangladesh Employers' Federation (BEF) Representative from Industry Skills Councils Representative from Bangladesh Technical Education Board (BTEB) Representative from Non- governmental organizations (NGOs) working on youth development Representatives of business associations from key sectors such as IT, construction tourism, hospitality, transport, manufacturing, agro-food, etc. Representative from Educational institutions, and vocational training centers Representative from Youth associations working at national level
			• In-Depth Interview (IDI)	• Youths in particularly vulnerable contexts considering disability, ethnicity, and geographical diversity

Mandated activities	Objective	Indicator	Methods	Data source/stakeholder
			• Focus Group Discussion (FGD)	• Youth organizations working at local level
Identification of necessary skills for youth employment within 2041	Identify necessary skills for youth employment within 2041	 Employment rate among youth in different sectors Unemployment rate among youth in different sectors Underemployment rate among youth in different sectors Education level of employed youth in different sectors Work experience of employed youth in different sectors Self-employment rate among youth Perceptions of youth, employers, educators, and industry experts regarding the future job opportunities and necessary skills in different sectors. The gap between the current skills youth have and the future necessary skills youth will need in different sectors 	 Secondary documents review Quantitative survey Key Informant Interview (KII) 	 Review of scholarly articles, government policies, plans, and strategies and reports of government and non-government organization Youths (aged between 18 and 35) Representative from Ministry of Education Representative from Ministry of Youth and Sports Representative from Ministry of Labour and Employment Representative from National Skill Development Authority Representative from Ministry of Economic Affairs Representative from Ministry of Women and Children Affairs Representative from Bangladesh Employers' Federation (BEF) Representative from Industry Glive G and State of State
		in different sectors		Employers' Federation (BEI • Representative from Indus Skills Councils

Mandated activities	Objective	Indicator	Methods	Data source/stakeholder
		 Strategies adopted by youth to acquire necessary skills for future employment in different sectors. The support youth receive from family, friends, and community in acquiring necessary skills for future employment in different sectors. 		 Representative from Bangladesh Technical Education Board (BTEB) Representative from Non- governmental organizations (NGOs) working on youth development Representatives of business associations from key sectors such as IT, construction tourism, hospitality, transport, manufacturing, agro-food, etc. Representative from Educational institutions, and vocational training centers Representative from Youth associations working at national level
			• In-Depth Interview (IDI)	• Youths in particularly vulnerable contexts considering disability, ethnicity, and geographical diversity
			• Focus Group Discussion (FGD)	• Youth organizations working at local level
Mandated activities	Objective	Indicator	Methods	Data source/stakeholder
------------------------------------	--	--	------------------------------------	---
Field of Training and Education	Map appropriate and potential fields of training and education	 Market demand for different types of skills and jobs in the current and future job market The availability of training and education programs in different fields The effectiveness and relevance of existing training and education programs in different fields The accessibility and affordability of training and education programs in different fields The perception of youth, employers, and educators on the appropriateness and potential of different fields for training and education The alignment of training and education programs with the changing market trends The participation rate of youth in training and education programs and its impact on their employability The level of collaboration and coordination among different stakeholders in providing training 	• Secondary documents review	• Review of scholarly articles, government policies, plans, and strategies and reports of government and non- government organization

Mandated activities	Objective	Indicator	Methods	Data source/stakeholder
		and education opportunities for youth		
Skill development through training and education	Examine the appropriate and potential markets, as well as the related training and skill-development components.	 Mark et demand for different types of jobs and skills in the current and future job market The availability of training and skill development programs for youth in different sectors The effectiveness and relevance of existing training and skill development programs for youth in different sectors The accessibility and affordability of training and skill development programs for youth in different sectors The participation rate of youth in training and skill development programs and its impact on their employability The perception of youth, employers, and educators on the appropriateness and potential of different markets for youth employment 	• Quantitative survey • Key Informant Interview (KII)	 Youths (aged between 18 and 35) Representative from Ministry of Education Representative from Ministry of Youth and Sports Representative from Ministry of Labour and Employment Representative from National Skill Development Authority Representative from Ministry of Economic Affairs Representative from Ministry of Women and Children Affairs Representative from Bangladesh Employers' Federation (BEF) Representative from Bangladesh Technical Education Board (BTEB) Representative from Nongovernmental organizations (NGOs) working on youth development

Mandated activities	Objective	Indicator	Methods	Data source/stakeholder
		 The gap between the skills youth have and the skills required by the potential markets. The level of innovation and adaptability in training and skill development programs to align with the changing market trends The level of collaboration and coordination among different stakeholders in providing training and skill development opportunities for youth The retention rate of youth who have completed training and skill development programs and their employment outcomes. 		 Representatives of business associations from key sectors such as IT, construction tourism, hospitality, transport, manufacturing, agro-food, etc. Representative from Educational institutions, and vocational training centers Representative from Massive Open Online Course (MOOC) (e.g. Coursera, Udemy, 10- minute school, Shikho, BYLCx, Bohubrihi, etc.) Representative from Youth associations working at national level
			In-Depth Interview (IDI) Focus Group Discussion	 Youths in particularly vulnerable contexts considering disability, ethnicity, and geographical diversity Youth organizations working at local level
			(FGD) • Quantitative survey	• Youths (aged between 18 and 35)

Mandated activities	Objective	Indicator	Methods	Data source/stakeholder
			• Key Informant Interview (KII)	 Representative from Ministry of Education Representative from Ministry of Youth and Sports Representative from Ministry of Labour and Employment Representative from National Skill Development Authority Representative from Ministry of Economic Affairs Representative from Ministry of Women and Children Affairs Representative from Bangladesh Employers' Federation (BEF) Representative from Industry Skills Councils Representative from Bangladesh
				 Technical Education Board (BTEB) Representative from Non- governmental organizations (NGOs) working on youth development Representatives of business associations from key sectors such as IT, construction tourism, hospitality, transport, manufacturing, agro-food, etc.

Mandated activities	Objective	Indicator	Methods	Data source/stakeholder
				 Representative from Educational institutions, and vocational training centers Representative from Massive Open Online Course (MOOC) (e.g. Coursera, Udemy, 10- minute school, Shikho, BYLCx, Bohubrihi, etc.) Representative from Youth associations working at national level
			• In-Depth Interview (IDI)	• Youths in particularly vulnerable contexts considering disability, ethnicity, and geographical diversity
			• Focus Group Discussion (FGD)	• Youth organizations working at local level
Target population: Youth all over Bangladesh	Target youth population all over Bangladesh	• Conduct survey with representative sample of youth population from all the divisions of Bangladesh	• Quantitative survey	• Youths (aged between 18 and 35)

7.2 Secondary Literature Review Process



Figure 19 Secondary resource review mechanism (adapted from SDR guidance, 2018).

7.3 Data Collection Process (Digital Data Collection Method)





7.4 Qualitative Data Collection Method

In the case of qualitative survey, pen and paper interview (PAPI) was preferred by the study team. The interviewer was equipped with fresh papers to take notes. If the respondent permitted, field team recorded the responses for future clarification. The audio file was destroyed after transcription and translation as ethical consideration.

7.5 Work Plan

The deliverables of the study were set by the Term of Reference (ToR) which requires to be generated from the study. The activities of this study can be divided into four groups, i.e. Activity Group-1, Activity Group-2, Activity Group-3 and Activity Group-4. These activities were relevant with form 5A5. The following table exhibits the group wise activities with remark point for the critical activity (Table 52).

Activity Groups	No.*	Work Description	Responsible Party	Date of completion
	1	Initial orientation meeting with the concerned SHNIYD officials	DM WATCH LIMITED (Participation and presentation) SHNIYD (Arrangement and Organization)	02 Mar 2023
	2	Desk review of secondary documents	DM WATCH LIMITED	
Activit	3	Development of inception report including study design, sample design and data collection tools	DM WATCH LIMITED	02 Mar 2023
y Group-1	4	Submission of the draft inception report along with data collection tools	DM WATCH LIMITED	
	5	Feedback on draft inception report from SHNIYD and relevant key members	SHNIYD	
	6	Incorporation of feedback on the draft inception report and finalization	DM WATCH LIMITED	8 Mar 2023
	7	Approval of study design and data collection tools	SHNIYD	
	8	Selection and training of enumerators	DM WATCH LIMITED	
Ac	9	Pilot testing of the data collection tools	DM WATCH LIMITED	23 Mar 2023
vctivity Grou	10	Adjustments made to the data collection tools incorporating feedback from the pilot testing	DM WATCH LIMITED	2.5 IVIAI 2025
p-2	11	Field movement and data collection from the agreed sources using agreed tools and methods	DM WATCH LIMITED	06 Apr 2023

Table 52	Work Plan	of the	Study
l ubie 52	WOIK I IUN	i oj ine	Sinay

	12	Data cleaning, coding; transcript preparation; back-check	DM WATCH LIMITED	11 Apr 2023
A	13	Data analysis and triangulation	DM WATCH LIMITED	17 Apr 2023
ctivity Group-3	14	Data Validation workshop with SHNIYD and relevant key members	DM WATCH LIMITED (Participation and presentation) SHNIYD (Arrangement and Organization)	18 Apr 2023
	15	Report writing	DM WATCH LIMITED	20 Apr 2023
	16	Submission of Draft report	DM WATCH LIMITED	22 Apr 2023
	17	Presentation of Draft Report in a Seminar with SHNIYD and relevant key members	DM WATCH LIMITED (Participation and presentation) SHNIYD (Arrangement and Organization)	27 Apr 2023
Activit	18	Revision of Draft Report based on comments given by SHNIYD and relevant key members	DM WATCH LIMITED	04 May 2023
y Group-	19	Finalization of Draft Final Report with approval from SHNIYD	DM WATCH LIMITED	11 May 2023
4	20	Submission of Final Report	DM WATCH LIMITED	18 May 2023
	21	National seminar with key stakeholders and professionals	DM WATCH LIMITED (Participation and presentation) SHNIYD (Arrangement and Organization)	22 May 2023

*Activity Serial No. in form 5A5

7.6 Annex Tables and Figures

Education status	Frequency	Percentage (%)
No formal education	5	0.5
Can only sign	7	0.7
Did not complete primary education	17	1.7
Completed primary education	46	4.5
Dropped out before SSC/equivalent	117	11.5
SSC/equivalent	178	17.5
HSC/Diploma/ equivalent	441	43.2
Bachelor/equivalent	133	13.0
Masters/equivalent	76	7.5
Total	1020	100

Annex Table 1 Education status of respondents (N=1020)

Annex Table 2 Employment status of the respondent

Employment status	Frequency	Percentage (%)
Employed full-time	100	9.8
Employed part-time	63	6.2
Self-employed	181	17.7
Unemployed	277	27.2
Student	399	39
Total	1020	100

Sectors	Barisal	Chattogram	Dhaka	Khulna	Rajshahi	Rangpur	Mymensingh	Sylhet	Total
Information technology (IT)	0.0%	0.0%	8.3%	0.0%	15.4%	0.0%	0.0%	21.7%	4.9%
Construction	0.0%	18.2%	8.3%	0.0%	7.7%	0.0%	4.0%	0.0%	3.1%
Tourism and hospitality	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.3%	0.6%
Transport	0.0%	27.3%	8.3%	27.3%	0.0%	0.0%	4.0%	0.0%	4.9%
Manufacturing	10.5%	0.0%	8.3%	0.0%	15.4%	57.1%	8.0%	0.0%	21.5%
Agro-food	0.0%	9.1%	8.3%	0.0%	0.0%	2.0%	4.0%	4.3%	3.1%
Retail	68.4%	27.3%	16.7%	27.3%	15.4%	26.5%	36.0%	39.1%	33.1%
Health care	5.3%	0.0%	25.0%	0.0%	0.0%	2.0%	16.0%	4.3%	6.1%
Education	15.8%	9.1%	8.3%	18.2%	46.2%	8.2%	8.0%	13.0%	13.5%
Financial services	0.0%	0.0%	0.0%	18.2%	0.0%	4.1%	4.0%	8.7%	4.3%
Miscellaneous*	0.0%	9.1%	8.3%	9.1%	0.0%	0.0%	16.0%	4.3%	4.9%

Annex Table 3 Division wise sectoral employment in Bangladesh

*Imam, Volunteer, Dancer, Painter

Annex Table 4 Division wise sectoral employment in Bangladesh

Do you think there are enough job opportunities available for youth in Bangladesh?				
Response	Frequency	Percentage (%)		
Yes	188	18.4		
No	832	81.6		
Total	1020	100		

Do you think there are enough job opportunities available for youth in Bangladesh? (N=1020)									
Response	Barisal	Chattogram	Dhaka	Khulna	Rajshahi	Rangpur	Mymensingh	Sylhet	Total
Yes	7.4%	10.0%	17.9%	9.1%	14.0%	13.3%	13.9%	61.5%	18.4%
No	92.6%	90.0%	82.1%	90.9%	86.0%	86.7%	86.1%	38.5%	81.6%

Annex Table 5 Division wise sectoral employment in Bangladesh

Annex Table 6 Division wise sectoral employment in Bangladesh

Do you think the job opportunities available are relevant to your skills and qualifications?						
Response	Frequency	Percentage (%)				
Yes	534	52.4				
No	486	47.6				
Total	1020	100				

Annex Table 7 Division wise sectoral employment in Bangladesh

Do you think the job opportunities available are relevant to your skills and qualifications? (N=1020)									
Response	Barisal	Chattogram	Dhaka	Khulna	Rajshahi	Rangpur	Mymensingh	Sylhet	Total
Yes	41.3%	41.7%	78.6%	76.0%	61.2%	33.3%	22.1%	53.3%	52.4%
No	58.7%	58.3%	21.4%	24.0%	38.8%	66.7%	77.9%	46.7%	47.6%

Annex Table 8 Youth's preference of becoming an entrepreneur.

Response	Female (n= 438)	Male (n= 403)	Total (N=841)
Yes	36.3%	58.1%	46.7%
No	63.7%	41.9%	53.3%

Annex Table 9

Division wise preference of youth of becoming entrepreneur.

Have you ever considered starting your own business? (N=841)									
Response	Barisal (n= 105)	Chattogram (n=108)	Dhaka (n=164)	Khulna (n=97)	Rajshahi (n=80)	Rangpur (n=80)	Mymensing h (n=111)	Sylhet (n=101)	Total (N=841)
Yes	36.2%	26.9%	48.2%	43.3%	74.7%	45.0%	48.6%	58.4%	46.7%
No	63.8%	73.1%	51.8%	56.7%	25.3%	55.0%	51.4%	41.6%	53.3%

Annex Table 10 Duration of unemployment among youths

Response	Frequency	Percentage (%)
Less than 3 months	19	6.9
3 to 6 months	19	6.9
6 months to 1 year	43	15.5
1 to 2 years	67	24.2
More than 2 years	129	46.6
Total	277	100

Annex Table 11 Reasons of unemployment, division wise comparison

In your opinion, what do you think may be the reason for your unemployment? (Select all that apply) (N= 277)

Response	Baris al	Chattogr am	Dha ka	Khul na	Rajsh ahi	Rangp ur	Mymensi ngh	Sylh et	Tot al
Lack of job opportunities	31.3 %	24.3%	21.8 %	35.2 %	39.4%	38.1%	22.2%	26.0 %	28.5 %
Lack of required skills or qualification	25.4 %	24.3%	9.2%	27.8 %	9.1%	9.5%	22.2%	15.4 %	18.8 %
Lack of experience	22.4 %	20.0%	16.1 %	20.4 %	24.2%	19.0%	14.8%	22.1 %	20.1 %
Personal reasons (health, family, etc.)	0.0%	1.4%	1.1%	1.9%	16.7%	9.5%	14.8%	12.5 %	6.6 %
Lack of job search assistance	5.2%	10.0%	12.6 %	5.6%	4.5%	14.3%	8.6%	8.7%	8.1 %
Lack of job training opportunities	3.0%	7.1%	14.9 %	5.6%	3.0%	0.0%	8.6%	15.4 %	8.1 %
Discrimination in the job market	12.7 %	12.9%	24.1 %	3.7%	3.0%	9.5%	8.6%	0.0%	9.7 %

Annex Table 12 Unemployment rate by sectors in Bangladesh

In your opinion, which of the following sectors do you think have the highest underemployment rate among youth in Bangladesh? (N=1020)						
Response	Frequency	Percentage (%)				
Information technology (IT)	317	31.08				
Construction	25	2.45				
Tourism and hospitality	24	2.35				
Transport	13	1.27				
Manufacturing	82	8.04				

In your opinion, which of the following sectors do you think have the highest underemployment rate among youth in Bangladesh? (N=1020)							
Response	Frequency	Percentage (%)					
Agro-food	111	10.88					
Retail	22	2.16					
Health care	26	2.55					
Education	345	33.82					
Financial services	42	4.12					
Miscalleneous (Imam, Volunteer, Dancer, Painter)	13	1.27					
Total	1020	100					

Annex Table 13 Underemployment amongst youths

Do you think there is underemployment among youth in Bangladesh?						
Response	Frequency	Percentage (%)				
Yes	805	78.92157				
No	215	21.07843				
Total	1020	100				

Annex Table 14 The necessary skills for employment in the sectors with most job opportunities

What are the necessary skills for employment in these sectors according to your opinion? (N=1020)						
Response	Percentage (%)					
Technical skills	36.4%					
Soft skills	17.3%					
Digital literacy	22.3%					
Management skills	24.0%					

Annex Table 15: Knowledge of the male and female respondents on the available training or skill development programs (N=1020)

Are you currently aware of any training or skill development programs that are available for youth in your desired field?							
Response	Male (n=519)	Female (n=501)	Total (N=1020)				
Yes	69.9%	66.5%	68.2%				
No	30.1%	33.5%	31.8%				

Annex Table 16: Accessibility of training and education programs in district level (N=1020)

How easy is it for you to access training and education programs in your field of interest?									
Respo nse	Baris al (n=12 1)	Chatto gram (n=120)	Dhak a (n=17 3)	Khul na (n=12 1)	Rajsh ahi (n=12 1)	Rangp ur (n=12 0)	Mymen singh (n=122)	Sylhe t (n=1 22)	Total (N=1 020)
Very easy	5.0%	16.7%	7.5%	9.1%	13.2%	3.3%	13.1%	0.0%	8.4%
Somew hat easy	47.1%	49.2%	34.1 %	9.1%	45.5%	37.5%	39.3%	43.4 %	37.9 %
Neutral	10.7%	10.8%	43.4 %	21.5%	11.6%	21.7%	25.4%	31.1 %	23.1 %
Somew hat difficul t	33.9%	20.8%	13.3 %	41.3%	25.6%	37.5%	12.3%	23.0 %	25.3 %
Very difficul t	3.3%	2.5%	1.7%	19.0%	4.1%	0.0%	9.8%	2.5%	5.2%

Have you attended any training or education programs related to your field of interest?							
Response	Male (n=519)	Female (n=501)	Total (N=1020)				
Yes	45.9%	52.1%	48.9%				
No	54.1%	47.9%	51.1%				

Annex Table 17: Gender-based participation rate in training or education programs (M=1020)

Annex Table 18: Gender-based satisfaction on the effectiveness of the programs (N=499)

How satisfied are you with the effectiveness of the training and education programs?								
Response	Male (n=238)	Female (n=261)	Total (N= 499)					
Very dissatisfied	.4%	.0%	.2%					
Somewhat dissatisfied	6.7%	3.1%	4.8%					
Neutral	5.5%	5.4%	5.4%					
Somewhat satisfied	60.5%	65.5%	63.1%					
Very satisfied	26.9%	26.1%	26.5%					

Annex Table 19: District-wise opinion on the potential fields of trainings for availing job opportunities (N=1019)

In your opinion, which fields of training and education have the most potential for providing job opportunities?									
Response	Baris al (n=12 1)	Chatto gram (n=119)	Dhak a (n=1 73)	Khul na (n=12 1)	Rajsh ahi (n=12 1)	Rang pur (n=12 0)	Mymen singh (n=122)	Sylh et (n=1 22)	Total (n=1 019)
Informati on technolog y (IT)	78.5 %	97.5%	78.0 %	94.2 %	78.5%	70.8%	81.1%	86.1 %	82.8 %

Tourism and hospitality	43.8 %	25.2%	23.1 %	5.8%	10.7%	0.0%	10.7%	9.8%	16.5 %
Manufact uring	69.4 %	26.9%	22.5 %	51.2 %	38.0%	45.8%	7.4%	9.8%	33.3 %
Agro-food	61.2 %	33.6%	22.0 %	60.3 %	47.9%	63.3%	68.9%	54.9 %	50.0 %
Retail	.8%	3.4%	2.9%	5.8%	4.1%	2.5%	2.5%	13.9 %	4.4%
Constructi on	8.3%	41.2%	8.7%	5.0%	8.3%	2.5%	14.8%	18.9 %	13.2 %
Health care	5.8%	27.7%	19.7 %	25.6 %	32.2%	5.8%	39.3%	36.1 %	23.8 %
Don't know	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	.1%

Annex Table 20: Gender-wise response on the relevance of the programs with the changing market demands (N=1020)

In your opinion, how well do the current training and education programs align with the changing market trends?

Response	Male (n=519)	Female (n=501)	Total (n=1020)
Very well	18.3%	25.1%	21.7%
Somewhat well	64.7%	57.7%	61.3%
Not very well	13.7%	13.2%	13.4%
Not well at all	3.3%	4.0%	3.6%

Annex Table 21: Importance of training and education programs to align with the changing market trends (gender-wise) N=1020

How important do you think it is for training and education programs to keep pace with the changing market trends?

Response	Male (n=519)	Female (n=501)	Total (n=1020)
Very important	60.7%	58.1%	59.4%
Somewhat important	37.8%	39.1%	38.4%
Not very important	1.0%	2.6%	1.8%
Not important at all	.6%	.2%	.4%

Annex Table 22: Respondents' rate of completion of the skill development programs (N=499)

Did you complete the training or skill development program?							
Response	Male (n=239)	Female (n=261)	Total (N=499)				
Yes	73.1%	74.7%	73.9%				
No	6.3%	3.4%	4.8%				
Program is still running	20.6%	21.8%	21.2%				

Annex Table 23: District-wise response on the reasons for not completing the training programs (N=24)

If you did not complete the training or skill development program what was the reason of not completing?

Response	Baris al (n=2)	Chattog ram (n=4)	Dhak a (n=8)	Khuln a (n=2)	Rangp ur (n=1)	Sylhe t (n=7)	Total (N=2 4)
Program was too difficult to understand	25.0%	16.7%	41.7 %	0.0%	0.0%	26.7 %	27.5%
Lack of support from program staff or trainers	0.0%	0.0%	16.7 %	0.0%	0.0%	6.7%	7.5%
Personal or family circumstances prevented completion	25.0%	50.0%	0.0%	0.0%	100.0 %	20.0 %	20.0%
The program was not what I expected or wanted	25.0%	0.0%	16.7 %	50.0%	0.0%	13.3 %	15.0%

Found a job before completing the program	0.0%	0.0%	0.0%	0.0%	0.0%	20.0 %	7.5%
Financial constraints prevented completion	0.0%	33.3%	16.7 %	0.0%	0.0%	6.7%	12.5%
Not enough time to complete the program	25.0%	0.0%	0.0%	0.0%	0.0%	6.7%	5.0%
Lack of interest or motivation	0.0%	0.0%	8.3%	50.0%	0.0%	0.0%	5.0%

Annex Table 24: Gender-based ratio of the respondents in obtaining the training or skill development programs (N=496)

Which of the following sectors was the training or skill development program related to?								
Response	Male (n=237)	Female (n=259)	Total (N=496)					
Information technology (IT)	40.1%	31.7%	35.9%					
Construction	3.1%	2.6%	2.9%					
Tourism and hospitality	2.6%	1.6%	2.1%					
Transport	3.1%	1.3%	2.2%					
Manufacturing	8.5%	27.0%	17.7%					
Agro-food	20.4%	16.2%	18.3%					
Retail	2.6%	3.9%	3.3%					
Health care	5.9%	3.1%	4.6%					
Education	9.3%	7.9%	8.6%					
Financial services	3.4%	3.4%	3.4%					
Electrical installation and maintenance	1.0%	1.3%	1.2%					

Annex Table 25: Duration of the training or skill development programs (N=495)

What was the duration of the training or skill development program?

Response	Bari sal (n=5 4)	Chattog ram (n=65)	Dha ka (n=5 2)	Khul na (n=4 3)	Rajsh ahi (n=93)	Rang pur (n=81)	Mymens ingh (n=51)	Sylh et (n=5 6)	Total (N=4 95)
Short-term programs (1 to 3 months)	42.6 %	63.1%	73.1 %	53.5 %	78.5%	72.8%	37.3%	51.8 %	61.6 %
Medium- term programs (4 to 6 months):	57.4 %	33.8%	21.2 %	46.5 %	18.3%	24.7%	60.8%	42.9 %	35.6 %
Long-term programs (7 to 12 months):	0.0%	0.0%	0.0 %	0.0%	2.2%	2.5%	2.0%	3.6 %	1.4%
Extended- term programs (More than 12 months):	0.0%	3.1%	5.8 %	0.0%	1.1%	0.0%	0.0%	1.8 %	1.4%

Annex Table 26: Gender-wise ratio of receiving any information or guidance from any stakeholders prior to attending any training programs (N=1020)

Have you received any information or guidance on training and skill development opportunities from any of the following stakeholders?										
Response	Male (n=519)	Female (n=501)	Total (n=1020)							
Government agencies	69.4%	79.6%	74.4%							
Private sector companies	16.2%	14.0%	15.1%							
Educational institutions	17.9%	14.2%	16.1%							
Non-governmental organizations (NGOs)	11.0%	8.8%	9.9%							

Did not receive any information	11.4%	8.0%	9.7%
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Annex Table 27: Gender-based satisfaction level on receiving guidance from stakeholders before attending the training programs (N=1020)

How satisfied are you with the information or guidance provided by the stakeholders on training and skill development opportunities?

Response	Male (n=519)	Female (n=501)	Total (n=1020)
Very satisfied	19.3%	26.1%	22.6%
Somewhat satisfied	54.1%	51.7%	52.9%
Neutral	23.3%	19.0%	21.2%
Somewhat dissatisfied	2.9%	3.0%	2.9%
Very dissatisfied	.4%	.2%	.3%

Annex Table 28 Perception regarding Skills gap by division

Quest emple	Question: Do you think there is a gap between the skills you have and the skills required by employers?											
Res pon se	Barisal (n=12 1)	Chattogr am (n=120)	Dhaka (n=17 3)	Khulna (n=12 1)	Rajsha hi (n=121)	Rangpu r (n=120)	Mymensi ngh (n=122)	Sylhet (n=12 2)	Total (N=10 20)			
Yes	62.8%	61.7%	26.0%	46.3%	43.8%	70.8%	52.5%	68.0%	52.5%			
No	37.2%	38.3%	74.0%	53.7%	56.2%	29.2%	47.5%	32.0%	47.5%			

Question: What is your preferred mode of training that best suits you?										
Response	Barisal	Chattogr	Dhaka (n-173)	Khulna (n-121)	Rajshahi (n-121)	Rangpur	Mymensi	Sylhet (n=122)	Total (N≡1020)	
Online self-paced courses	.8%	20.0 %	25.4 %	20.7 %	5.0%	1.7%	12.3 %	18.9 %	13.7 %	
Instructor-led virtual classes	2.5%	0.0%	17.9 %	0.0%	10.7 %	5.8%	1.6%	4.9%	6.1%	
Classroom-based training	92.6 %	78.3 %	39.3 %	71.9 %	77.7 %	54.2 %	73.8 %	68.0 %	67.9 %	
On-the-job training	4.1%	1.7%	17.3 %	2.5%	5.8%	30.0 %	12.3 %	8.2%	10.6 %	
No preference	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0.1%	
Not interested in training	0.0%	0.0%	0.0%	5.0%	0.8%	7.5%	0.0%	0.0%	1.6%	

Annex Table 29 Preferred mode of training by division

Annex Table 30 Reason behind Preferred mode for training by division

What is the reason behi	nd your	preferer	nce trair	ning mo	de?				
Response	Barisal (n=121)	Chattogram (n=120)	Dhaka (n=173)	Khulna (n=115)	Rajshahi (n=120)	Rangpur (n=111)	Mymensingh (n=122)	Sylhet (n=122)	Total (N=1004)
Convenience	18.2%	12.8%	30.7%	32.9%	7.2%	22.7%	18.2%	23.4%	20.7%
Flexibility	2.0%	4.0%	3.0%	1.6%	0.0%	5.7%	2.4%	5.3%	2.9%
Cost-effectiveness	17.0%	17.6%	8.1%	11.8%	6.9%	4.0%	17.0%	10.1%	12.3%
Effectiveness of the training	21.9%	15.2%	10.7%	18.1%	12.6%	11.9%	16.7%	12.1%	15.2%
Personalized learning experience	13.1%	11.0%	15.2%	6.6%	27.8%	7.4%	15.5%	14.8%	14.1%

Availability of resources	2.3%	4.8%	4.5%	3.9%	0.7%	1.7%	1.5%	0.3%	2.6%
Interaction with trainers	12.8%	9.6%	16.1%	22.4%	31.0%	32.4%	20.9%	24.0%	20.0%
Networking opportunities	0.9%	9.4%	4.8%	0.7%	2.2%	0.6%	0.3%	4.7%	3.2%
Practical application of knowledge	11.9%	15.5%	6.9%	2.0%	11.6%	13.6%	7.5%	5.3%	9.2%

Annex Table 31 Preferred institution type for training by division

Question: Who do you prefer to provide you with training and skill development?											
Response	Barisal (n=121)	Chattogram (n=120)	Dhaka (n=173)	Khulna (n=115)	Rajshahi (n=120)	Rangpur (n=111)	Mymensingh (n=122)	Sylhet (n=122)	Total (N=1004)		
Government institutions	89.3 %	99.2 %	93.6 %	94.8 %	89.2 %	97.3 %	98.4 %	94.3 %	94.4 %		
Private training institutes	9.9%	0.0%	5.2%	0.9%	8.3%	0.9%	0.8%	5.7%	4.1%		
NGOs	.8%	.0%	1.2%	4.3%	2.5%	.9%	.8%	.0%	1.3%		
None	0.0%	0.8%	0.0%	0.0%	0.0%	0.9%	0.0%	0.0%	0.2%		

Annex Table 32 Reason behind Preferred institution type for training by division

What is the reason behind your preference of training source?										
Response	Barisal (n=121)	Chattogram (n=120)	Dhaka (n=173)	Khulna (n=115)	Rajshahi (n=120)	Rangpur (n=111)	Mymensingh (n=122)	Sylhet (n=122)	Total (N=1004)	
Better quality of training	20.7%	29.3%	29.7%	35.8%	26.9%	14.7%	27.7%	25.7%	26.9%	
Lower cost of training	24.6%	21.8%	29.0%	36.6%	31.5%	62.8%	19.4%	22.3%	29.0%	

Better job placement opportunities	30.8%	29.0%	27.0%	10.1%	26.1%	17.3%	43.4%	19.3%	25.7%
Availability of training in preferred field	6.9%	3.9%	5.8%	10.5%	9.7%	3.2%	3.3%	14.0%	7.4%
Reputation of training provider	14.5%	5.7%	4.1%	3.5%	2.5%	0.6%	3.3%	7.7%	5.6%
Flexibility of training schedule	.7%	4.8%	3.1%	1.2%	2.5%	.6%	2.1%	9.3%	3.3%
Recommendations from others	1.8%	5.4%	1.4%	1.9%	0.4%	0.6%	0.8%	1.7%	2.0%
They provide stipend after completion	0.0%	0.0%	0.0%	0.4%	0.4%	0.0%	0.0%	0.0%	.1%

Annex Table 33 Preferred duration of training and skills development program by division

Question: What is your preferred duration of training?											
Response	Barisal (n=121)	Chattogr am	Dhaka (n=173)	Khulna (n=115)	Rajshahi (n=120)	Rangpur (n=111)	Mymensi nah	Sylhet (n=122)	Total (N=1004)		
Less than a month	0.0%	2.5%	1.7%	13.9%	10.8%	19.8%	2.5%	2.5%	6.3%		
1-3 months	0.0%	45.8%	49.7%	60.9%	55.0%	55.0%	18.9%	33.6%	40.0%		
3-6 months	34.7%	51.7%	35.3%	20.9%	24.2%	20.7%	63.1%	41.8%	36.8%		
6-12 months	62.8%	0.0%	8.7%	4.3%	6.7%	4.5%	14.8%	20.5%	15.1%		
More than 12 months	2.5%	0.0%	4.6%	0.0%	3.3%	0.0%	0.8%	1.6%	1.8%		

Question: What is the reason behind your preference of training duration?											
Response	Barisal (n=121)	Chattogram (n=120)	Dhaka (n=173)	Khulna (n=115)	Rajshahi (n=120)	Rangpur (n=111)	Mymensing h (n=122)	Sylhet (n=122)	Total (N=1004)		
Need to upskill quickly for immediate job prospects	25.7%	40.8%	45.8%	32.2%	24.3%	14.6%	18.4%	24.0%	29.9%		
Prefer a shorter time commitment due to personal or financial reasons	36.4%	22.3%	33.3%	17.4%	18.6%	58.5%	23.1%	38.5%	30.7%		
Believe a shorter duration is sufficient for their learning needs	13.9%	15.5%	5.8%	28.9%	11.4%	10.6%	16.3%	19.9%	15.1%		
Prefer a longer duration to gain more in-depth knowledge and skills	24.1%	21.4%	15.1%	21.5%	45.7%	16.3%	42.2%	17.6%	24.3%		

Annex Table 34 Reason behind Preferred duration of training and skills development program by division

Annex Table 35 Preferred costing range of training and skills development program by division

Question: How much are you willing to pay for a training and skill development course?										
Response	arisal n=121)	hattogram n=120)	haka n=173)	hulna n=115)	ajshahi n=120)	angpur n=111)	122) hymensingh	ylhet n=122)	otal N=1004)	
	83	0 3		¥ C	8 3	8 3	2 3	s c		
No cost	58.7%	83.3%	46.2%	39.1%	15.0%	70.3%	18.9%	88.5%	52.1%	
up to BDT 500	1.7%	2.5%	23.7%	45.2%	24.2%	7.2%	54.1%	4.1%	20.5%	
up to BDT 1000	3.3%	10.0%	12.1%	9.6%	10.0%	8.1%	17.2%	4.1%	9.5%	

up to BDT 2000	25.6%	1.7%	8.7%	5.2%	20.0%	9.9%	4.1%	2.5%	9.7%
up to BDT 5000	6.6%	2.5%	4.6%	0.9%	21.7%	4.5%	4.1%	0.8%	5.7%
More than BDT 5000	4.1%	0.0%	4.6%	0.0%	9.2%	0.0%	1.6%	0.0%	2.6%



Shatabdi Haque Tower (3rd Floor) 586/3, Begum Rokeya Sharani West Shewrapara, Mirpur Dhaka-1216, Bangladesh Hotline: +88028090617 | +88 01328964266 Email: info@dmwatch.com Website: www.dmwatch.com