▶ COVID-19 Response Plan for Bangladesh TVET Sector

Contents

1. Introduction

The [COVID-19 pandemic](#) has affected educational systems worldwide, leading to the near-total closures of schools, universities and colleges. Bangladesh is no exception to this scenario. Schools have been closed, public assessments have been kept on hold- altogether students' learning has been interrupted severely. However, alternatives have been planned and implemented as an emergency response. Teaching and assessment has moved online through internet, television or radio. However, the degree to which learning can still take place outside the classroom, is often limited by lack of access to electricity, internet connectivity, devices or media, learning platforms, or the inadequate preparation of instructors and students for remote education. Also, COVID related stress has impaired learning abilities of the students in varying degrees.

Technical and Vocation Education and Training (TVET) is facing this disruption more severely. Initial government responses appear to have been quicker in general education than TVET in many countries[1]. The hallmark of TVET – its focus on practical skills and work-readiness – makes remote learning particularly challenging. In a country like Bangladesh where the access to internet is limited and extremely inequitable in terms of gender[2] and socio-economic context, remote learning through online platforms can further enhance the existing inequity. In addition, practical skills are often acquired through learning-by-doing, which occurs in school-based workshops and laboratories or through hands-on experience at the workplace. Remote learning approaches are a weak substitute for practical exercises when they require the use of equipment or materials not usually found inside the home except for some occupations like sewing, catering, cyber security, graphic design etc. However, work-based learning can continue with precautionary safety measures in cases where businesses remain open or through virtual internships or apprenticeships or through creating short-term alternative modular approaches for occupations like care-giving that can help coping with the crisis. In the medium-term or at intermediary phase, TVET can support the training of needed professionals and provide much-needed socioemotional skills support to teachers and students to manage the mental health impacts resulting from the crisis. In the long run, at the recovery phase, TVET can cater to students who dropped out during school closures and reskilling or upskilling those who have become unemployed. TVET can also

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[1] Work based learning has been most affected by the pandemic, and its impact is severe in countries where it is compulsory part of the curricula, European Commission, *Survey on addressing COVID – 19 emergency for VET providers and policy makers, 2020*.

[2] Barriers to Digital Services Adoption in Bangladesh, Institute of Development Studies, 2019. Accessed on July 1, 2020, <https://assets.publishing.service.gov.uk/media/5d7f5d0ced915d52428dc0ce/573_Leave_No_One_Behind_in _a_Digital_World_Barriers_and_Constraints_in_Bangladesh.pdf>

facilitate the development of skills necessary for the adjustment to structural changes brought out by the COVID-19 pandemic.

COVID-19 situation has excavated the fact that the TVET education system in Bangladesh does not have the readiness yet to face such type of crisis. Still, some urgent initiatives have been taken by the government which are appreciable, but yet, a long way to go for the effective implementation and productive results. This is because its association with multi-faceted challenges of like lead time required for implementation, limited access to resources, budgetary allocation etc. COVID 19 reiterates the need for comprehensive and robust plan to ensure continuation of learning and health safety and hygiene of the pupils. Hence, a response plan for the TVET sector for Bangladesh is an urgent demand of time which provides a set of context-based options and strategies that can be operationalized and implemented by TVET authorities and departments in collaboration with other stakeholders based on different short to medium- and longer-term interventions. This response plan has been developed based on desk review of global best practices initiated in different countries, rapid consultation with key government TVET agencies in Bangladesh, development partners and civil society and survey of some TVET institutes.

2. TVET in Bangladesh

According to UNESCO, TVET comprises formal, non-formal, and informal learning for the world of work. TVET programs are generally designed to prepare learners for direct entry into a particular occupation or trade, and usually lead to a labour market vocational qualification that is recognized by relevant authorities.

TVET is not new to Bangladesh, although it is still not a very popular stream of education and it suffers from social stigma. Often it is considered as an option for someone who has no options. The situation is changing; the TVET system, particularly at the secondary level, has been expanded in recent years. The proportion of students enrolled in TVET increased from 0.4 % in 2001 to 1.8 % in 2013 (CAMPE, 2016). The average (2008-2014) Incremental Rate of enrolment according to Bangladesh Technical Education Board (BTEB) is 13.84%; whereas in General Education, the rate is 5.81 % (BTEB, 2016). In 2018, out of one million enrolled students in 6,865 public TVET institutes about 25% students were girls, and out of the total 51 thousand teachers only 20% are female.

The Government of Bangladesh aims to attain the middle-income status by 2024[3] and recognises the potential contribution of TVET to the growth of the economy by creating

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[3] The national development discourse in Bangladesh tends to consider graduating from the least developed country (LDC) category and becoming a middle-income country as interchangeable. The country continues to express its aspiration to join the middle-income country group by 2021, the 50th anniversary of its independence. However, this status has already been achieved – Bangladesh joined the lower middle-income country category (the lower tier of the two tiers of the

skilled manpower and jobs. TVET has a huge role to play in equipping the vast young labour force of 15-29 years referred as the country's "*demographic dividend*" with employable skills and to provide enhanced support services to ensure a better transition from school to work. TVET can also contribute to reduce poverty by providing employability skills, particularly to those who drop out of school early and to the large number of unemployed and underemployed adults.

Despite many reform initiatives by the government, the TVET sector needs further strengthening, promotion, adoption/adaption, and replication by stakeholders, across policies, systems, processes and impact in the labour market. No less important is government's commitment and ongoing partnership with the industry and the private sector to improve the much-needed governance and management of the TVET / Skills Development system in the country. All these challenges have now been multiplied due to the newest crisis of the COVID-19 pandemic worldwide. With the nationwide closure of all educational institute declared on 17 March 2020, TVET delivery also came to a halt. The authorities are considering expanding the closure of education institutions till September 2020. Continuation of institute closure and disruption of learning is expected to have short, medium and long-term impact on learning, human capital development and employment in the country. Hence, the Government of Bangladesh realizes the importance to plan and address alternative initiatives for TVET for Bangladesh during and after the COVID-19 pandemic.

3. Impact of COVID-19 in Bangladesh TVET system

COVID-19 has impacted the TVET system of Bangladesh in two major forms- TVET administration and TVET delivery. On one hand, the whole administrative system is facing challenges of continuing countrywide effective operations and management. On the other hand, delivery of teaching-learning is under huge disruption. Due to outbreak of COVID-19 major impacts on TVET in Bangladesh are as follows:

A. TVET Administration

▶ **Programmatic activities under halt:** Many programmatic and project activities of the Directorate of Technical Education (DTE) and Bangladesh Technical Education Board (BTEB) came to halt. Project activities are not advancing as before. Only financial activities and urgent administration related activities like retirement procedure, audit etc. are continuing. This will have an impact on the

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middle-income category) on 1 July 2015. On the other hand, graduation from the LDC group is almost certain, but not until 2024, if the country meets all the technical requirements in the coming years. (CPD Policy Brief 2018).

overall progress and yearly action plan of these organizations which will need further review and re-planning.

▶ **Standstill field-level activities:** Regular field level activities with TVET institutes has been stopped completely. Monitoring, special day celebration, district level administration, Monthly Pay Order (MPO) activities etc. are in standstill. If the COVID situation continues, alternative plans need to be produced to continue this activities in an effective manner.

▶ **Disruption in achieving targets of long-term progressive activities:** All TVET related government agencies have the mandate to work on specific global and national targets of Sustainable Development Goals (SDGs) and Five Year Plans. These activities are under halt due to COVID situation which will have impact on achieving the targets in long-term. Therefore adjustment in plans and targets need to be rethought considering the COVID situation.

▶ **Slow progress of administrative activities:** Technical and Madrasah Education Division (TMED), DTE, BTEB are continuing their regular urgent activities in an alternative modality through online. However, there are challenges in terms of capacity of the staff to convert in online mode instantly. In addition, there are also many activities of e-filing and meetings that are being planned in ad-hoc basis at the moment. With the changing situation due to COVID, there needs to be plan for the capacity development of staff and switching to online modalities for specific activities for smooth transition from offline to online.

▶ **Disruption in effective monitoring:** Government has already started online classes for few particular occupations in TVET. However, the agencies are not being able to monitor the implementation effectiveness and learning gain of students of these online courses. The already established monitoring mechanism and system is not appropriate for the newly transitioned modality. If the COVID situation continues, there must have decision and design for an effective monitoring system for the online courses.

▶ **Disruption in decision making due to lack of coordination:** Coordination among the major agencies and TVET institutes are being disrupted due to the changed situation which is impacting quick decision making. Though the agencies adopted their own mechanism for the coordination, it can be supported by proper planning and programming.

▶ **Disruption in coordinating with development partners for donor funded projects:** A number of donor-funded projects are being implement under DTE. Due to the COVID-19 lockdown, the progress of the projects are not as expected and in many cases coordination with development partners are missing.

B. TVET Delivery

- **Learning loss due to discontinuation:** TVET institutes were completely closed for about 2 months due to the outbreak of COVID-19 and lockdown in Bangladesh. Long period of disengagement from TVET institutes caused disruption in students' learning. Planned activities of the institutes halted due to the current situation and may result into complete year gap at the worst.

- **Disrupted assessment and learning outcome:** Planned assessment are in halt due to the closure of institutes and alternative assessment modalities come with lots of challenges. This makes it difficult to improve or even attain the scale of learning outcome of the students. On the other hand, the authorities and the teachers will find a difficult time to reach a way out to have national assessments considering the loss of classes and other associated factors.

- **Loss of practical learning due to halted practical demonstration:** In TVET, though the theory classes are somehow possible to plan in alternative modalities through internet and television, practical demonstration is the most pressing challenge. Even if some kind of simulation for some occupations are possible, it would be impossible for most of the occupations. Without access to equipment, practical learning for students is unthinkable. This would create a big gap in the practical learning outcome of TVET students. The option to hold face-to-face practical classes with a small group of students at a time is limited by scarcity of teachers in Bangladesh TVET.

- **Interrupted access and non-inclusive participation in alternative learning approach:** Alternative teaching-learning modalities through online classes caused non-inclusive participation of students. Not all students have the access to internet, smart phone, proper space and home-based support for distance learning. This will cause low participation in alternative learning modality and learning discrimination among students of different background.

- **Teacher's capacity and development:** Teachers' and trainers in TVET sector are also affected due to this COVID-19 lockdown. Their disengagement from educational activities is not only demotivating them but also affecting their regular practice. Alternative and innovative approach of teaching-learning is not very much popular to most of the teachers of Bangladesh. They also lack in capacity in implementing new initiatives. If timely measures cannot be taken to develop teachers' capacity, this will have longer term impact both in implementation and at teachers' motivation level.

- **Institute reopening challenges:** Reopening of TVET institutes is one of the most crucial factors to be planned now. There will be many challenges in reopening the institutes in terms of coping with the new normal situation. If the reopening plan are not developed efficiently, it will have longer term impact on students, teachers and associated all others.

- **Disrupted industry engagement:** As TVET is highly dependent on industry engagement for the practical learning of students, this has been affected due to COVID-19. And this will continue for a longer period. It will also impact the relationship between industries and institutes.
- **Increase in youth unemployment:** As TVET is directly linked with employment, there will be a huge impact on youth employment due to COVID-19. Especially among postsecondary students, economic impacts are foreseen to see drop-outs, and increase in youth unemployment in absence of education and skills training to support access to formal job market. Academic year loss will cause opportunity cost for poorer families which needs to be dealt with care to sensitivity to minimize social unrest in the society.

4. Government of Bangladesh's Response to COVID-19 for TVET

Government of Bangladesh has taken some immediate actions to run TVET classes through alternative approaches. Directorate of Technical Education along with a2i and other development partners supported designing the new interventions. Live classes for diploma-in-engineering courses for public and private polytechnic institutes and technical schools and colleges (TSCs) started from 10th May 2020. This initiative is targeted towards a total of 3.25 lakh students enrolled in 50 government and 553 private polytechnic institutes, and 64 technical school and colleges. Facebook live classes include 34 technologies for first year and six technologies- civil, mechanical, computer, electrical, electronics and ceramics for second and third year students which cover at least 80% of the total students. Fifty teachers of polytechnic in eight divisional cities are delivering lecture by rotation. They have prepared these lectures with the assistance from a2i project of Bangladesh Government. Lessons are being delivered five days a week, 10 lessons per day from 8am to 1pm with the duration of thirty minutes for each lesson. Prior to this, DTE introduced televised classroom lectures for about 3.8 lakh SSC (vocational) and Dakhil (vocational) students of 3000 institutes through Shangshad Bangladesh Television since 19 April 2020. Some of the previously created supplementary contents by TVET teachers, which are not regular lessons, are available on institute online portals for students and teachers to explore.

Assessment is a crucial part of teaching-learning. Homework has been planned after every class as part of continuous assessment which will be scored after the reopening of the institutes. However, this will not suffice to evaluate student learning through online classes. It requires a well thought planning to find out appropriate ways and means for assessments.

Ensuring inclusiveness through this alternative learning approach is quite challenging due to access to internet, smart phone etc. for students from all socio-economic backgrounds. Only 40-50% students participate in online classes and rest cannot be traced. To increase students participation, other platforms for remote learning, such as radio (national, FM and community), mobile phone (both feature and smart) and Internet are being explored.

Directorate of Technical Education (DTE) informed that the government is planning to include learning resource under World Bank project. The government is setting up mini studio one in each of the eight divisions in the selected polytechnics for shooting to produce learning materials.

A separate TV channel will be dedicated for education. SSC vocational and Business Management courses will be included there. Trainers will be consulted to select the skills and the trades that will be covered.

Bangladesh Technical Education Board (BTEB) has suggested a need assessment to identify health related occupation, provision of equipment and introducing training and certification.

5. Development Partners' and NGOs' Response to COVID-19 for TVET

Development partners (DPs) and NGOs have always been in the forefront in emergency. Crisis of COVID-19 is another such example where they have come forward with emergency responses to deal with the pandemic and post pandemic situation. Many initiatives for TVET sector have already been implemented and many are at the design phase. Some of the initiatives also have the potential to create example and solve nationwide challenges in TVET created due to COVID-19 and hence can be replicated by the Government. There is a concern expressed by a leading NGO about dwindling funding support from the development partners for NGO activities. The donors are diverting funds to health and safety. The NGOs, therefore expect funding from the government to compensate for the shrinking resources from the donors so that they can carry on their result oriented service delivery.

A. Teaching-learning

Teaching-learning delivery has been taken as a serious concern for most of the donor and implementing agencies. Quick and urgent initiatives have been taken to continue teaching-learning in TVET system. Some of the examples are as follows:

> ▶ **Online content development:** UCEP, BRAC, UNICEF and Skills 21 project of ILO are directly involved in developing online content for TVET courses and skills

training. UCEP has developed online content as per BTEB syllabus for UCEP's Polytechnic Institute (UCEP Institute of Science & Technology) and Technical Institutes. Skills 21 project of ILO developed online video materials by teachers of TVET institutes for students enrolled in Skills training for the trades- Graphic Design, Welding, and Electrical. The project is also designing full package of e-learning courses for 2 NTVQF courses- skills level 1 and pedagogy level 4 for teachers and students. UNICEF has provided technical support to DTE in designing online diploma-in-engineering courses for polytechnic institutes and SSC vocational courses for TSCs. BRAC has conducted a need analysis of online training courses to identify the willingness of learners for online/blended learning approach and will develop courses accordingly. The UCEP recommended setting up learning management system, which will also preserve the learning lessons.

- ▶ **Conduct online classes:** UCEP is conducting online classes to ensure continuation of learning & preventing dropping out of students, especially those at high risk (from poor families, girls, PWDs, minorities, urban working children, students in the 2nd Chance Education Programme etc.). They are also providing weekly distance learning and follow up for TVET student through mobile phone and other digital support. Skills 21 project has also started online training courses through Facebook and Zoom.

- ▶ **Capacity building of the instructors & teachers on digital tools, content and platform**: UCEP is supporting teachers develop new skills on digital tools, content and platform to perform efficiently. Skills 21 project of ILO is conducting online Training of Trainers (TOT) programme with BTEB to engage teachers on ongoing CBTA Level 4 training programme in pilot basis.

- ▶ **Psycho-social counselling and mental health support:** UCEP is conducting psycho-social counselling for students and parents to ensuring that students are calm enough to study during this crisis period, do not get demotivated to learn or resume schooling and also to ensure that parents don't compel student into child labour or early marriage. UNFPA is strengthening social cohesion, solidarity and healthy coping of youth through tele classes on life skills and scaling up remote support for the mental needs of youth through helpline service. The UCEP suggested considering the effect of online classes at a stretch for five hours on the health of the students.

B. Safety, Security and Hygiene

Development partners and NGOs have started working on awareness raising activities for COVID-19 from the very beginning. They are ensuring different types of safety, security and hygiene measures, such as follows:

- ▶ **Awareness building on COVID-19 risks and safety measures:** UCEP is providing orientation and disseminating information on COVID 19 risks and safety

measures among their students, parents and staff; ensuring enough water and soap in all schools and office premises; and promoting and monitoring safe & hygiene practices, including social distancing etc. KOICA is providing online-based knowledge regarding covid-19 response/infectious disease to doctors, nurses and technologists in Mugda and Savar. WIF project of ILO is providing Information educational and communication (IEC) material on Covid-19 for migrant women workers.

▶ **Social safety net programmes for extreme poor students:** To ensure that families of student do not face starvation or acute hardship, UCEP is raising fund and linking with on-going social safety net initiatives for providing cash, food and essential items to families of students (all of who are from extreme poor/ poor backgrounds or disadvantaged). DFAT's is supporting UCEP in this initiative to ensure students' safe return to schools and technical institutes after the COVID-19 crisis.

▶ **Support vulnerable students and families with food packages and personal protection materials:** UCEP is exploring and collecting fund from institutional and individual donors to support most vulnerable students and their families with package of food items and personal protection materials. KOICA is also providing emergency food and sanitary goods for vulnerable and communities in Dhaka.

C. Skills and Employment Generation

Given the economic slowdown and loss of jobs, TVET graduates are likely to face considerable challenge in getting jobs. BRAC and other Development partners are taking initiatives reduce disruptions in economic activities. Some are as follows:

▶ **Support restarting SMEs maintaining social distance:** BRAC is conceptualizing how to help small and micro entrepreneurs to restart their business maintaining social distance and precautions for COVID. This exercise is geared towards estimating MSMEs interest in involving in skills development initiatives as training facilitation.

▶ **Enhancing the capacity of RMG factories:** DFID and SDC are enhancing the capacity of RMG factories to produce Personal Protective Equipment (PPE). They are also providing training to mid-Level management and supervisors on COVID-19 Adaptation in RMG factories. Besides, they are designing training for paramedics. The main objective of the proposed support to Sudokkho project by DFID and SDC is to help the partners to sustain their businesses through building resilience to the pandemic and ability to resume operations when the restrictions are lifted and that the beneficiaries benefit from the available health products and services. Following the immediate response phase, Sudokkho will support early economic recovery, through skills acquisition and job creation. ILO has also developed Occupational Safety

and Health (OSH) guidelines for RMG's better functioning maintaining social distance, safety and hygiene.

- ▶ **Employment need assessment for returnee migrants:** ILO Migration project is mapping and assessing needs and mapping the challenges faced by returnee migrant workers and their families impacted by the COVID-19 outbreak. IOM is supporting the Government to plan for the return, reception, and reintegration of returnee migrants in 2020 from destination countries globally. Currently their needs assessment intervention is ongoing among the returnee migrants in 12 districts.

6. Challenges of Different Response Initiatives

The government, development partners and NGOs have taken quick and appropriate measures. However, there still remain some critical challenges especially in terms of coverage and access to resources. Some of the major challenges are:

Alternative learning method/ Online learning:

Online learning in TVET remains the biggest challenge with-

- ▶ limited online educational resources, no effective online learning system and policy in place;

- ▶ Lack of teachers' capacity and limited resources (internet bandwidth, relevant software and hardware) to develop professional e-learning courses

- ▶ lack of TVET-appropriate distance learning platforms that ensure quality and inclusiveness of outreach;

- ▶ Practical aspect of TVET courses could not be explored and introduced yet for providing online

Lack of equity in access:

- ▶ limited access to internet and digital tools like smart phone
- ▶ Learning environment of learners is not always suitable for online learning. Perception among students and parents is not always positive toward e-learning concept.

Challenges to reopening:

- ▶ Lack of resources for maintaining effective mechanism of social distancing for reopening institutes and delivering food supplies to the families
- ▶ The fear of COVID 19 on life and livelihood is acute and not always manageable without practical help (providing alternatives to address livelihood challenges)

- Behavioural change among people on the awareness of COVID-19 is taking time and effort
- Limited financial support to adopt new initiatives for COVID-19
- Lack of seriousness among mid-level management of industries to adopt new measures to fight against COVID-19

Lack of preparation for post-COVID era:

- Not every businesses will work/ stay relevant during post COVID-19 situation, hence it is important as well as challenging to understand the landscape focusing on emerging need
- Lack of right information and data
- Lack of vision to sustain the measures for post COVID-19 situation

7. Global Examples of Potential Response Initiatives

Updated results of a joint global survey conducted by the ILO-UNESCO and the World Bank shows that the number of countries which are developing TVET response measures seems to be steadily increasing as the crisis has developed[4]. The use of TV and distributing written resources (self-paced learning guides and learner notes) was comparatively high in low and lower-middle income countries, according to the survey.

The survey revealed that "...the most common tools or resources used are video conferencing (such as zoom), videos (including You Tube), blogs, discussion forums or platforms (like Microsoft Teams) and virtual learning environments (like Google Classroom)[5]. Video conferencing tools and virtual learning platforms appear to be more widespread among high income countries, while offline distance learning tools such as TV and written resources seem to be more frequent in lower income countries[6]. This is likely to be correlated with the general quality and access to the internet." Bangladesh is reportedly using both off-line and online distance learning tools.

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[4] *ILO-UNESCO-WBG joint survey on technical and vocational education and training (TVET) and skills development during the time of COVI – 19, May 2020*.www.ilo.org visited on 5 June 2020. The survey covered 126 countries including Bangladesh.

[5] Countries are also using simulators like STR, Opera and Amadeus, blogs, discussion forums or platforms (like Microsoft Teams), as well as social media platforms and communication tools such as Facebook, Instagram, WhatsApp and email to facilitate interaction and coordination between trainers and students. Many counties are reportedly using podcasts. Some countries are developing new or mobilising existing platforms such as skills gateways.

[6]Tools or resources for offline distance learning are also being developed or expanded and include new written resources such as self-paced learning guides and learner notes.

Many countries have used online or offline distance learning materials or technologies to address skill shortages in occupations or sectors affected by the COVID-19 pandemic. Examples of such occupational training include nursing (USA, Canada); healthcare related skills and raising awareness related to health and hygiene (India); contents on ventilator machines and face shields (Malaysia); medical equipment technicians (Indonesia); sewing of masks (Lebanon); protective facemasks, protective clothing for medical workers, medical machinery and respirators (Colombia) etc.

By and large, the online educational tools and Apps are pre-existing and not evolved for the first time in response to the current pandemic. For some countries with prior experience of distance and online learning, the transition to online has been less difficult than others. Countries, which have not gained valuable experience with online learning strategies and at an initial stage, like Bangladesh, will need careful planning, preparation, adaptation and an appropriate learning space. This will require a time bound plan of action to offer large-scale on line solutions to TVET education.

In less developed or developing countries, a serious challenge faced is due to poor connectivity, the unaffordable cost of data usage, usability of learning platforms, lack of student friendly content and the absence of regulatory acceptance of online training. Lack of (or poor) connectivity (of internet) and prolonged power-cut can affect the students and teachers living in remote areas. Lack of distance learning equipment for both students and teachers also pose a serious problem. Low network coverage itself can be a reason for lack of preparedness of teachers and students for online training (India). Students' lack of access to digital equipment has been cited as a reason for low participation rate even if some online courses are offered (Sri Lanka). Uncertainty regarding the end of school year and students' entry into the labour market has been a source of anxiety among students affecting their willingness to continue learning.

8. Potential Response Options for Bangladesh from Global Examples

The sudden onset of the pandemic left Bangladesh TVET with no contingency plan to ensure continuity of education and training. A complete lock-down brought the movement of teachers, students, and access to necessary raw materials for practical classes to a stand-still. Enterprise closure also meant discontinuity of apprenticeship and work based training.

The results of the ILO-UNESCO and World Bank survey provides certain glimpses of what different countries are doing. The examples can help Bangladesh in designing its own COVID response plan. The purpose here is not to provide country-wise narration, which is available in the cited source document. The discussion below shows how a large

number of countries is facing similar problems, not much different from what Bangladesh is facing now and will be required to address as the country intends rolling out COVID response plan. While admitting that countries which had experience with online education are in better situation to cope with these problems; the discussion will also reveal that there are no magic solutions to many of these problems. The discussion will also lead to citing a number of options for Bangladesh to choose among in planning COVID response and its execution.

As of now, the expected date of opening of educational institutions in Bangladesh is from September 2020. However, the uncertainty about contagion could lead to persistent voluntary social distancing and drop outs in the schools. It is, therefore important that the COVID response plan should also be a plan for the post-COVID -19 world, instead of just providing reactive measures for now[7]. Side by side with finding short term solutions, the plan should also aim at long term impacts and develop greater resilience in which financial and human resources have to be mobilized to "ensure universal access to digital infrastructure, tools and modern learning technologies"[8].

▶ **Revisiting the skills interventions for making them market responsive:** Many of the hard hit sectors from CVOID 19 such as RMG, Tourism and hospitality etc. will take long time to revive. Associated skills training for these sectors could be refocused to other skills associated with industries that are on high demand and are necessary to cope with the situation like agro, pharmaceuticals, caregiving. IT, healthcare among others.

▶ **National platform to deliver distance learning content:** There is a need to develop a national platform to deliver distance learning content aligned with national curricula. It is a humungous task considering the fact that the TVET institutes are conducting courses in a number of trades and students are at different grades. It will be difficult to migrate all the courses to an online platform at once. As a start, the chapters, which are relevant for teaching in the current months can be included for digitalization. The others can follow.

▶ **Capacity development of TVET teachers:** The TVET teachers in Bangladesh would need to be equipped to shift to online learning[9]. Experiences from other countries show that for the teachers to adapt to the new modes of teaching has not been easy. In Canada, teachers experienced challenges in quickly reorienting

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[7] Digitalization will empower the entire TVET education system to leverage those skills and occupations for which digital capability is a pre-requisite. TVET institutions in Latin America have reported that the new generation of e-learning programs being developed during the pandemic will most likely use more advanced technologies including gamification, augmented reality, virtual learning environments and simulators, ILO CINTERFOR, *The role of vocational training against the effects of COVID-19 in Latin America*, 2020.

[8] International Labour Organization, Distance and Online Learning during the time of COVID -19, *Policy brief*, April 2020.

[9] Republic of Korea reportedly has developed video manuals on how to use online content for instructors and users.

their training strategies and that created great deal of stress, pressure and anxiety. Students and the teachers, reportedly took time to adapt to the new online method in China. Teachers' workload increased heavily under the new teaching method as the questions and messages increased from students at all hours (Kyrgyzstan).

▶ **Develop an eco-system for students for smoother transition from offline to online mode:** The teachers would also need to communicate with the students, parents and peers to help students transiting from offline to online system and getting acclimatised to a new system of training delivery[10]. For the students, it would mean, besides acquiring digital skills, coping with an eco-system that demands learning to learn and learning individually with minimum contacts[11]. In Mexico, a call centre/hotline was set up through which teachers can support students[12]. In Uzbekistan, a call centre has been created to explain questions related to video lessons and online assessment systems for parents and students[13].

▶ **Build repository of online contents:** A whole lot of online tools and open source materials on learning management system and high quality educational materials related to skills development are available and can be leveraged to use and train the students, teachers, educators, TVET managers and administrators. A list of relevant important links in this regard, as compiled by the ILO, is in the Annex. The lack of knowledge, skills and competences to access and use these facilities and resources is a challenge for TVET community in Bangladesh. Creating awareness and capacity building among the TVET teachers and trainers in these areas, therefore, is an immediate necessity.

▶ **Build necessary ICT infrastructure and ICT skills:** To move forward to the online direction, Bangladesh TVET would require, in addition to the necessary ICT infrastructure and ICT skills, policies for institutional adaptation, organizational restructuring and capacity building at the institutional level. An important pre-requisite for creating such education and training eco-system is partnership and cooperation at the sectoral, national and international level to share information and resources.

▶ **Alternative set up for practical classes:** A common difficulty that is understandable and has been reported by some countries in the survey is one of training delivery on some subjects that needs hands-on practice under teachers'

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[10] In Sri Lanka, psychological and social support has been provided to teachers and trainers. Teachers are continuously encouraged to communicate and carry out online discussions with students through available resources (WhatsApp Groups). Working with students as a team has helped teachers in encouraging students' self-motivation; ILO-UNESCO-WBG joint survey on technical and vocational education and training (TVET) and skills development during the time of COVI – 19, May 2020, p.27.

[11] UNESCO-UNEVOC, *TVET peer support in response to COVID 19*, https://unevoc.unesco.org/home/COVID-19+disruptions visited on 18 May 2020.

[12] ILO-UNESCO-WBG joint survey on technical and vocational education and training (TVET) and skills development during the time of COVI – 19, May 2020.

[13] Ibid, p. 21.

guidance like, electricity, automotive, civil engineering. Work based learning and apprenticeship have stopped; trade and technology, which depend on work based learning have been worse affected even in developed country like Finland. In Canada, motivation of students have been adversely affected due to passive method of engaging with contents such as reading, videoconferencing, watching demonstration videos etc. in programs with an emphasis on practical activities in laboratories and workshops. In many countries distance learning is focussing on theoretical classes (India, Malaysia and others) while practical modules are being postponed. In China, practical courses could not be delivered online, which is likely to affect students' assessment and certification process. The UK has been unable to conduct assessment except where it is possible online, like in computer applications, technical drawings etc. In Egypt, for graduating students, assessment and exams will be conducted at college workshops and labs under strict precaution and social distancing. For transitioning students, the centres will open 3 weeks earlier than usual the next year.

▶ **Safety and hygiene measures for reopening TVET institutes:** The ILO-UNESCO-WB survey also indicated countries like Brazil and Lebanon are developing a series of measures for progressively moving back to face-to-face training. The measures aim at guaranteeing safe return taking into account health and distancing measures and lowering the number of students in each class. Bangladesh also needs to think in the same line for reopening the TVET institutes with proper precautionary and safety measures. COVID - 19 OSH guidelines have been issued in Bangladesh by the Directorate General of Health Services, ILO, a2i and UNDP. The Directorate of technical Education of Government of Bangladesh can use these guidelines when opening up the educational institutions.

▶ **Phase by phase reopening plan:** Selective opening of classes with limited number of students and teachers can be planned to address the students with special needs including those who have lack of access and inability to afford digital means. The selective and safe return to education can also prioritize practical classes for small group of students in phases. A number of countries already provide face to face apprenticeship and practical training with precaution (Australia, Cambodia, Finland, Kenya, Malaysia, Thailand, and some others). The UAE, reportedly conducting assessment of practical skills to small groups of students to come to workshops in strict compliance of the guidelines on protective measures against COVID-19.

▶ **Commitment of additional resources:** There is need for commitment of additional resource requirement[14], both financial and human if Bangladesh has

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[14] The ILO-UNESCO-WB survey finds that the likelihood of TVET institutions committing additional resources for the use of distance learning seems positively correlated with country's income level.

to prepare for a mix of online and offline education and training. There is a cost of technology acquisition and access, content development, and training of manpower. Teachers and students would need gadgets and access to online tools and platforms, the cost of which is to be borne by the DTE. A greater collaboration will be required between DTE and the ICT ministry to understand in greater details the existing technology provisions that the ministry can offer, also within the scope of digital Bangladesh, which can be leveraged at no cost or at minimal cost to support online education. Possible partnership for resource-sharing may be explored with the Development Partners and the Multilateral Development Banks. Collaboration with private service providers in the telecom and IT sector in Bangladesh should be explored for possible support in providing Internet and telecommunication resources for expansion of online education and training[15]. National television and radio will continue to be an important channel in the dissemination of online courses and practical knowledge.

9. Recommended Three Phase Response Plan to Recover and Transform TVET Sector to Responsive and Resilient System

Based on the impact of COVID-19 on the TVET sector of Bangladesh, the immediate responses already taken and associated challenges being faced, the potential global examples of response initiatives and most importantly the contextual realities, a firm and effective plan is required to recover and transform TVET sector responsive and resilient system. A three-phase plan: short term (immediate to 6 months), medium term (immediate to 12 months) and long term (immediate to 24 months) to address the challenges has been conceptualized for the TVET sector of Bangladesh focusing on immediate, medium term and long-term solutions. Through preparing for timely response, it is expected to limit the huge crisis the TVET sector may encounter post-pandemic. For an effective coordinated response, different levels of government need to move in a synchronized and complementary way.

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[15] In the Philippines, telecom providers are supporting the teachers in the form of reduced tariffs for bandwidth. ILO-UNESCO-WBG joint survey on technical and vocational education and training (TVET) and skills development during the time of COVI – 19, May 2020, p.26.

Step	Priority Actions/ Activities	Sub-Activities	Indicators	Time Frame	Implementer
Pillar 1: Policy and Strategy					
1.	Internet infrastructure and access to internet for agencies and TVET institutes	a. Need assessment of hardware, software and internet facilities required by existing agencies/institutes b. Liaise with ICT Division for the development of ICT infrastructure c. Allocation of budget for procurement and maintenance d. Installation of materials and access to internet	- Number of agencies and institutes got the internet infrastructure installation - Number of agencies and institutes got the access to internet - Number of institutes using the infrastructure and internet	Medium-term	TMED and DTE along with ICT Division
2.	Incentives for online resources for vulnerable groups	a. Identify vulnerable students who do not have the affordability to access to online learning (smart phone, internet) b. Plan and budget for incentives for the identified group c. Procure materials and distribute	- Number of students received incentives for online learning - Number of students utilizing online learning platforms	Short-term	DTE and TVET institutes

3.	Social safety net coverage for extreme poor students	a. Make list of extreme poor students who are affected by COVID-19 b. Provide them with safety net cards c. Transfer them cash or food according to need	- Number of students received social safety net cards - Number of students received cash or food support	Short-term	DTE and TVET institutes
4.	Governance for coordinating with DP projects	a. Develop a coordination system on how to manage all DP projects	- An agreed guideline from DTE - Coordination and monitoring mechanism	Medium-term	TMED and DTE
5.	Bring returnee migrants under the fold of RPL/e-RPL/online courses and connect them with industries	a. Develop policy for skills assessment of returnee migrants and include them within the skills development sector	- A workable policy for immediate involvement of returnee migrants in skills and industries	Medium-term	TMEB and BMET
Pillar 2: TVET Administration					

1.	Infrastructure development for transition to online administration from traditional administration	a. Need assessment and identification potential transition points b. Develop a transition plan c. Build appropriate infrastructure (web-based solution/software/applications etc.) d. Access to internet and associated resources (Phone/tab/laptop etc.)	- Offline to online transition plan developed - Online administration infrastructure developed - Number of resources provided	Long-term	DTE in collaboration with ICT division
2.	Capacity development of staff to switch to online administration	a. Identify staff who needs capacity development on online administration b. Develop online/offline training programme c. Provide training to identified staff	- Number of staff received training on online administration	Short-term to long-term	DTE

3.	New planning for programme management	a. Identify different programmatic activities kept in halt due to COVID-19 b. Develop action plan for the progress of project work, development work, long-term progressive work and administrative work c. Allocate time and resources according to plan d. Design monitoring tool for programme management in new normal situation	- Action plan developed for project work, development work, long-term progressive work and administrative work affected due to COVID-19 - Monitoring mechanism/tool developed for programme management	Short-term	TMED and DTE
Pillar 3: TVET Delivery					

1.	Rapid survey on digital access of students	a. Conduct a country-wide rapid survey of TVET students who have digital access and can attend online classes	- Number of students are at learning loss currently - Number of students have digital access - Number of students can be included in online/distance learning courses	Short-term	DTE and TVET institutes
2.	National platform to deliver distance learning	a. Identify existing platforms to be used for maximization of digital learning inclusion (local radio, TV etc.) b. Build self-learning platform for students (e-learning platform) c. Develop blended learning platform Set up hotline for student support	- Number and type of platforms used to support digital and distance learning (male/female/disability segregated) - Number of students utilizing different platform (male/female/disability segregated)	Medium-term	DTE

3.	Content development and Build repository of online contents	a. Identify occupations and lessons for converting into digital content b. Develop digital contents for theories c. Develop video content/ simulation for practical courses d. Develop self-learning contents e. Build a central repository of online contents	- Number of contents/ lessons converted into digital content - Number of students utilizing digital contents (male/female/disability segregated) - Central repository system developed	Medium-term to long-term	DTE and BTEB
4.	Strengthen systems for the recognition and validation of digital learning	a. Conduct social dialogue for developing online training content, which suits the needs of the students, workers and employers more broadly b. Conduct awareness raising session for students and parents to popularize digital learning	- Number of social dialogues conducted - Number of awareness raising session designed and conducted	Short-term to medium-term	DTE and TVET institutes

5.	Delivering short skills courses online (validation on number of batches, modality, etc.)	a.	Mapping the CBLMs for NTVQF skill courses and teacher training (CBT&A L4) to deliver online	- A guideline for delivering short courses (NTVQF 1 and NTVQF 4) online - Modality developed (number of hours , days to be taught online)	Medium-term	DTE, BTEB and TVET institutions

| 6. | Establish e-RPL system to recognise skills for skilled workers | a. Develop infrastructure to build and strengthen to provide guidance to RPL candidates
b. Build capacity of national and regional stakeholders to digitalize skills recognition procedures
c. Build capacity of trainers and assessor to implement e-RPL programme which includes training and orientation, e-assessments and issue e-certificates | - e-RPL platform developed and system operationalised

- Number of key stakeholders build their capacity to implement e-RPL programme

- Number of TVET Officials trained on e-certification system

- Number of skilled workers assessed through e-RPL system

- Number of skilled workers received e-RPL certification | Long-term | BTEB and TVET institutes |

7.	Capacity development of teachers on digital content development and online class conduction	a. Need assessment for teachers capacity development on digital content development and online class conduction b. Design capacity development programme for teachers (both online and offline) c. Conduct training for teachers	- Number of teachers trained - Number of teachers able to produce digital content - Number of teachers able to conduct effective online classes	Short-term to Long-term	DTE, BTEB, TTTC and VTTI
8.	Continuous professional development (CPD) of teachers	a. Assessment of learning loss of teachers due to discontinuation of CPD b. Explore other mediums of continuing CPD courses c. Design potential online CPD courses for teachers d. Schedule and adjust CPD courses	- Alternative platform/medium established for CPD courses - Number of teachers attaining CPD courses in alternative modality	Medium-term to long-term	TTTC, VTTI

9.	Design digital assessment and certification system	a. Conduct research on different digital assessment system around the globe b. Design digital assessment platform for TVET c. Design digital assessment tools d. Conduct digital assessment	- Digital assessment platform developed - Number of students assessed/ - Results of students through digital assessment and RPL	Short-term to long-term	DTE and BTEB
10.	Remedial support for drop-out students	a. Track and identify drop-out students b. Assess their needs for further skilling c. Design remedial support programme for drop-out students d. Include them in the remedial programme	- Number and type of remedial support programme designed - Number of students enrolled in remedial programme - Number of students completed remedial programme	Medium-term to long-term	DTE and TVET institutes
11.	Digital monitoring of digital learning and assessment	a. Design monitoring mechanism and tools for effective monitoring of digital learning and assessment b. Conduct digital monitoring	- Number and quality of monitoring report produced	Short-term to long-term	DTE and TVET institutes

Pillar 4: TVET Institute Reopening					
1.	Develop institute reopening plan	a. Develop a thorough institute reopening plan b. Reopening guideline c. Develop learning recovery plan for disadvantaged students d. Develop new schedule (if required) at the institute level for conducting classes maintaining social distance e. Allocate enough time and resources for reopening	- Institute reopening plan and guideline developed with (policy implications, finance support, schedule of reopening etc) -Reopening guideline developed with emphasis on Safe operations, wellness and protection and risk mitigation associated to school reopening. - Learning recovery plan for disadvantaged students developed	Short-term	TVET institutes
2.	Assessment of Risk-benefit of reopening	a. Develop a national guideline on decision making for school reopening	National guideline on decision making for school reopening		

3.	Implement institute reopening plan	a. Pilot reopening plan phase by phase b. Produce lessons learning document from pilot reopening and adjust the plan c. Scale-up adjusted reopening plan to all institutes	- Number of institutes following reopening plan and guideline	Short-term to medium-term	TVET institutes
Pillar 5. Safety, Health and Hygiene					
1.	Conduct awareness building campaign on health and hygiene	a. Develop and disseminate health safety and hygiene guideline for institutes and relevant stakeholders b. Develop and disseminate awareness building materials/messages	- Guideline developed - Number of institutes following the guideline - Number of institutes, students and teachers reached with awareness materials/messages	Short-term	DTE in association with DHS

2.	Regular cleansing of institutes and associated resources	a. Develop plan and schedule of cleansing at institute level b. Allocate budget and resources for cleansing and disinfectant materials/ Partnership with private sector (UNILEVER/ACI) for hygiene products c. Procure cleansing and disinfectant materials	- Number of institutes following planned cleansing of campus and associated resources	Short-term to long-term	Individual institutes
3.	Ensure health safety for students and teachers	a. Allocate budget for personal protection equipment (PPE), mask, gloves, sanitizer for students and teachers/ Partnership with private sector b. Provide personal protection equipment (PPE) and other safety item to teachers and students for face-to-face practical training	- Number of students received PPE and other safety items	Short-term to medium-term	DTE and TVET institutes

4.	Mental health support and psycho-social counselling	a. Identify students and teachers who are affected by the adverse effect of COVID-19 b. Develop mental health support contents c. Develop online/offline mechanism for mental health support or psycho-social counselling d. Train teachers/students as counsellor e. Provide counselling to the affected group f. Partnership with mental health support group to provide counselling to students and teachers	- Number of students and teachers received mental health support and counselling training - Number of students and teachers benefitted with the mental health support	Short-term	DTE and TVET institutes
Pillar 6. Industry Linkage and Employment Skills					

1.	Strengthen relationship with local industries	a. Maintain regular communication with local level industries b. Plan for industrial attachment for students online/offline c. Place students and teachers for industrial attachment maintaining social distance	- Number of local industries institutes are attached - Industrial attachment plan developed maintaining social distance - Number of institutes following Industrial attachment plan	Medium-term	TVET institutes
2.	Conduct local skills and employment need analysis post COVID situation	a. Design and conduct survey on local skills and employment demand post COVID	- Skills and employment need identified (local industry based)	Medium-term	TVET institutes

3.	Design short training courses according to local industry needs	a. Develop curriculum for short training courses for new skills required by industries b. Develop teaching-learning materials c. Develop capacity of teachers to run the courses d. Conduct short training courses on identified skills	- Curriculum developed for identified skills - Number of T-L materials developed - Number of teachers received TOT (online/offline) - Number of students trained (online/offline)	Long-term	DTE, BTEB and TVET institutes
4.	Develop self-employment courses for post COVID situation	a. Identify local demand of self-employment b. Develop self-employment courses and materials c. Develop capacity of teachers to conduct self-employment course d. Conduct self-employment training for students	- Curriculum developed for self-employment course - Number of T-L materials developed - Number of teachers received TOT (online/offline) - Number of students trained (online/offline)	Long-term	DTE, BTEB and TVET institutes

5.	Establishment of e-job portals	a. Develop a central e-job portal for skills related jobs b. Make linkage between TVET institutes and local industries for utilization c. Connect students and potential employees with e-job portal	- Number of job posts every month - Number of applicant surf through the portal - Number of applicants got job through e-porta	Long-term	DTE, Industries, TVET institutes and developer agencies
6.	Immediate initiatives for returnee migrants	a. Conduct a rapid survey of returnee migrants who will be in need of job/business b. Assess existing skills and capacity of returnee migrants and assess their future skills and job need c. Provide online training/ERPL/RPL certification to returnee migrants d. Connect the returnee migrants with their matched sectors and industries	- Number of returnee migrants are in need of skills and job - Number of returnee migrants received online training/ERPL/RPL certification	Short-term to long-term	BMET, BTEB