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TVET Reform: Design an inclusive skills development program

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1 Background

Skills, knowledge and innovation are driving forces of economic growth and social development in any country of the world. Countries with higher levels of education and highly skilled citizens are not only more competitive in the global economy, but can also quickly respond to challenges and seize opportunities.

Bangladesh is the eighth most populous country in the world which presents an immense opportunity in terms of labour force. Technical and Vocational Education and Training (TVET) is essential in ensuring the country's competitiveness in the global labour market and ensuring decent work for all.

The TVET Reform Project is an initiative of the Government of Bangladesh (GoB). It is funded by the European Union (EU) and executed by the International Labour Organization (ILO) in partnership with government agencies. It will strengthen economic development by ensuring that technical and vocational education and training in Bangladesh is of a consistently high quality, accessible to students, internationally recognized and relevant to the needs of industry. By introducing new approaches such as competency-based training and assessment, structured apprenticeships and recognition of prior learning, quality vocational training will create pathways to decent work for all.

The reform recognises that for Bangladesh, as a country, to achieve a reduction in poverty, more people need to have access to both formal and informal TVET training to develop skills that will lead to employment. This includes underprivileged groups, which are traditionally under-represented in skills training.

To investigate which models of training and assessment work best with which student groups, the TVET Reform Project has facilitated the development of a number of partnerships between the government and the private sector. The pilot discussed in this publication is one of those collaborative efforts, focusing on increasing access of persons with disabilities and women with low levels of education to skills development programs.

2 Disability Profile: Bangladesh

Bangladesh is a developing country in the South Asia region which is home to more than 140 million people. It is a country of widespread poverty, with 31% of the population living below the poverty line (US $1.25 per day). It is a country which is rich in culture but poor in health, education, employment and social security services. Data from the World Health Organisation and the World Bank suggests that as many as one in ten people in developing countries are disabled. In Bangladesh, this statistic equates to over 14 million people, and these people are often living in the most difficult circumstances, receiving little support.

Government and non-government organisations deliver development programs to address the situation in the country but unfortunately, given the immense size of the population, these only manage to reach a small proportion of the population. For many years, persons with disabilities were excluded from almost all services, particularly those living in remote areas only accessible via poor quality road and water transport services. Disability issues were often not addressed within general development programs, largely due to lack of knowledge and understanding of how to address needs in program development, negative general public perception of disability, social and cultural beliefs and scarce resources.

The United Nations unanimously adopted the Convention on the Rights of Persons with Disabilities (CRPD) on 13th December 2006, which entered into force on 3rd May 2008. Being one of the pioneering countries to ratify the Convention, Bangladesh is pledge bound to implement the human rights treaty in its entirety ensuring the rights of persons with disabilities in the country.

To support the Government of Bangladesh in realising the objectives of the Convention on the Rights of Persons with Disabilities, the ILO's TVET Reform Project in Bangladesh is working on methodologies for enabling access of underprivileged groups to technical and vocational training courses. This pilot course is an important step in encouraging government and employers to consider the rights of persons with disabilities. The ILO's overall global objective is decent work for all and courses such as this demonstrate the benefits of integrating persons with disabilities within mainstream development efforts. This course also aims to simultaneously reduce other barriers to inclusion such as negative perceptions of disability, confidence and leadership capacity of persons with disabilities.

3 Consultation

Talking to people in the field was the first step in the process of developing a training course for persons with disabilities. Consultation was carried out over a number of months and included government training institutions, private organizations and disability-focused organisations.

Consultation was done through a combination of desktop meetings and visits to different areas, to directly experience what people with disabilities face in Bangladesh. Extensive situational research was also conducted, into disability statistics, labour, training and employment in Bangladesh. The quality of the consultation and research conducted was integral in the ILO developing a relevant, industry-oriented, flexible program.

Consultation was conducted in the following areas:

Ready Made Garments (RMG) sector	Viyellatex Group, Interfab Shirt Manufacturing Ltd, Urmi Garments, Shanin Group
Energy	Energypack Bangladesh Ltd
Flexible Intermediate Bulk Container (FIBC)	Sino Bangla Ltd, Dutch Bangla Pack Ltd DBPL, Gozaria, Munshiganj.
Motorcycle Servicing	Uttara Services Ltd (Bazaz), Atlas Bangladesh Ltd. (Honda), TVS Bangladesh (TVS), HS Enterprise Ltd, informal workshops in Dhaka, Bogra and Khulna
Refrigeration and Air Conditioning (RAC)	Shefalika Engg Works Ltd, Habib Refrigeration Works
Electrical	Shefalika Engg Works Ltd
Vocational Training Centres, Technical Training Centres, disability-focused organisations/advocacy groups	Jessore, Khulna, Chittagong, Dhaka and Vocational Technical Teachers Institute (VTTI) Bogra
Bangladesh Engineering Industries Owners Association	Small and medium engineering industries

After looking into these different sectors, the ready-made garment sector was selected for the pilot program. The following factors contributed to this decision:

1. Availability of employment after graduation.
2. History of successful programs implemented (e.g. Marks & Start).
3. Demonstrated industry enthusiasm for including persons with disabilities and underprivileged persons.
4. Industry need for skilled workers and scope (through training) to meet this need.
5. Contribution of RMG sector to national economy and annual gross domestic product.

Next, we looked for an existing program which focuses on employment of persons with disabilities in the readymade garment sector to thoroughly investigate. In order to plan the training methodology for the pilot, we wanted to look at an existing program and find out what approaches had been tried, what had worked and, most importantly, what had not worked in Bangladesh.

We focused on Marks & Start, a program which was implemented in 2006 by Marks & Spencer. A corporate social responsibility initiative first trialled successfully in Sri Lanka, the model offers two months of specialized training for persons with disabilities identified by the Centre for the Rehabilitation of the Paralysed (CRP) in Bangladesh. The program is funded by a group consisting of 22 organisations and is not only a successful example of disability inclusion in TVET in Bangladesh but also a sustainable income-generating activity model. The program consistently achieves high retention rates and over 200 persons with disabilities have already been successfully trained to date. These trainees have then been employed by readymade garment companies across Bangladesh.

"[Existing] vocational training is unsuitable, forcing industries to hire workers directly as helpers upon initial assessment and train them up on the floor.

The company employed about 40 persons with disabilities, they are working satisfactorily. Physical handicap to an extent restrains access, as these two major RMG sectors work on multi-level floors, creating possible fire and emergency evacuation risks in spite of using a buddy.

The Government of Bangladesh should really promote specific trade based intensified hands-on training".

David Hasanat, Chairman, Viyellatex Group

4 Mobilizing partners

The next step was to select the government and industry partners. This was done early to ensure that all parties were involved in the planning stages as well as in the implementation stages. When selecting partners, we looked for organisations that would be committed to the project's goals and focused on developing a sustainable model which could be replicated by industry. After a series of meetings, the following partnerships were finalised:

Centre for the Rehabilitation of the Paralysed

The Centre for the Rehabilitation of the Paralysed (CRP) is a reputed non-government organisation which was chosen as a partner because of their expertise and holistic approach to empowering persons with disabilities. CRP's work covers several areas of development including human rights and education, so technical education fitted perfectly within their scope.

The Viyellatex Group

Interfab Shirt Manufacturing Limited

The Viyellatex Group is a rapidly growing organization with demonstrated corporate social responsibility values and a commitment to the training and employment of persons with disabilities in Bangladesh. While it remains a 100% export-oriented organization, the company vision remains focused towards uplifting Bangladesh on a global scale. The group has achieved numerous awards for social and environmental performance over the years.

Interfab Shirt Manufacturing operates within the umbrella of the Viyellatex Group and is committed to the same global corporate social responsibility values. A major factor in choosing Interfab as a partner for this pilot was the space they were willing to set aside on the ground floor of their factory to accommodate persons with disabilities.

Gazipur Technical School & College

Directorate of Technical Education

Bangladesh Technical Education Board

Ministry of Education

Approximately 70% of major garment industries in Bangladesh are located in Gazipur, the hub of modern export oriented readymade garment factories in Bangladesh.

Gazipur TSC is located close to the Interfab factory, a strategic advantage for the pilot and also for future replication.

5 Planning the Pilot

Now that the sector had been decided and the partnerships needed to run the pilot had been established, we planned a program outline. The pilot would focus on training persons with disabilities and disadvantaged women for work in the ready-made garment sector and it would have two stages of competency achievement:

Stage 1 (4 months)	Off the job training and formative assessment conducted in the CRP vocational training centre. After summative assessment/testing, trainees could exit at this point, graduating with a National Training and Vocational Qualifications Framework (NTVQF) Pre-Vocational 2 Certificate.
Stage 2 (8 months)	On the job training and formative assessment conducted in the Interfab Shirt Manufacturing Factory. After summative assessment/testing, trainees could then graduate with an NTVQF Level 2 Certificate as well as comprehensive workplace experience.

Three steps were then undertaken:

1. **A basic skill need analysis was conducted** to specifically identify what a person needed to know and be able to do to work in that job. Industry representatives were consulted to ensure that the skills attained would be relevant industry-wide, not just for a single organisation's needs.

2. **This analysis was then discussed with disability experts** to identify the combination of skills that would be most feasible for the trainees, given their specific physical limitations. Many factors were taken into consideration, such as maintaining certain postures for long periods of time, repetitive movements using certain limbs, and required equipment adjustments.

3. **These finalised tasks were converted into units of competency under the NTVQF and, then, based on this, a Competency Skills Log Book (CSLB) was designed.** For organisations considering specifically replicating this woven RMG course, the first step would be to obtain copies of these units of competency and the CSLB, through contacting the ILO TVET Reform Project, relevant Industry Skills Council or RMG Sector Working Committee or the BTEB.

   For more information, please visit the ILO's project website:
   http://www.ilo.org/dhaka/Whatwedo/Projects/WCMS_106485/lang--en/index.htm

   The units of competency can be used directly, in conjunction with this guide, to run a course which can be nationally accredited.

For a new course or a different occupation, the organisation would need to work with the relevant Industry Skills Council, Sector Working Committee or the BTEB to develop additional units of competency or consider running a partially-accredited course, using a mix of the units developed in conjunction with some newly-developed units.

6 Venue and equipment

Before procuring equipment, extensive consultation was undertaken involving a number of experts:

International fashion industry expertise	International fashion industry consultant/qualified workplace trainer.
Disability expertise	Disability inclusion expert from ILO Geneva and reputable CRP instructor working with persons with disabilities.
Current industry expertise	Interfab production, industrial engineering and HR Department officers.

Both venues were taken into consideration; the facilities for Stage 1 at CRP and Stage 2 at Interfab.

Stage 1 Venue: Centre for the Rehabilitation of the Paralysed

The room designated for the course was approximately 600sft and had previously been used for tailoring and dress making. It contained a number of older model pedestal sewing machines and a few items of basic furniture.

When analysing the venue, there were two main challenges:

1. Originally, 20 trainees were to be included in the program but after assessment of the space available, it was found that a maximum of 16 electric sewing machines could be comfortably accommodated. Inclusion of 4 extra trainees would require expansion of the room by approximately 400sft, as well as the installation of a fabric cutting table of approximately 80sft. To solve this, it was decided that 12 trainees would be included in the course.

2. There was a need for a mini-cutting (rotary) machine with a retractable overhead flexible electrical coil, with a cutting table underneath to cut fabric pieces of 2-3 inches. This was not possible in the space available, and so an arrangement was instead made with industry to supply the necessary pre-cut fabric.

The reasonable adjustments needed to accommodate persons with disabilities were one of the key issues to be addressed when finalising the training venue. After considering these adjustments, the requirements were as follows:

Venue redesign	A new layout was needed so that the room could accommodate the machines, a gangway, instructors table, ironing table and other furniture/cupboards. This must all be accessible to persons with disabilities. It also must be ensured that other essential facilities exist and are accessible, including male and female wash rooms, prayer areas and rest rooms.
Electric sewing machines	To ensure students could attain a wide range of skills, the following machines were decided on: • 12 x plain sewing machines (one with an auto trimmer) • 1 x 5 thread overlock sewing machine • 1 x button hole sewing machine • 1 x button stitch sewing machine • 1 x chain stitch sewing machine Machines were sourced from JUKI through a representative in Bangladesh. The brand and machine configuration was recommended by Interfab. Machine configuration may change depending on whether the course focuses on knit or woven apparel, this course focused on woven apparel.
Reliable power supply	The new machines were electric-powered, so a reliable electricity supply was needed. Considering load shedding in Bangladesh, a generator with the capacity to cope with a high initial load (because of all the machines installed) was necessary. The generator was placed in a well ventilated space to ensure optimal performance. Properly designed electrical circuit boards, a changeover switch for generator to power development board and reverse transfer of power were also needed.
Adequate lighting and ventilation	The training room had windows which were open most of the time, allowing natural heat dissipation. Heat is an important factor to consider given the danger of fire and if natural dissipation is not possible, this must be compensated for. The room was well-lit naturally and therefore only minimal bay-wise overhead lighting was needed. Again, this may not be available in other institutions so it is important to compensate for.

Extra supplementary equipment was also provided for training purposes, this included a computer, printer, screen and speakers. A water purifier was also provided to ensure easy access to clean drinking water throughout the day.

Stage 2 Venue: Interfab Shirt Manufacturing

Interfab is one of a small minority of RMG factories in Bangladesh which includes persons with disabilities in its workforce. In placing the trainees in the venue, the only adjustments that were needed were an adjustable table (for a trainee who is extremely low in height), a specific placing on the ground floor for a trainee who needed two crutches for mobility and the implementation of a buddy system for the same trainee, for physical as well as social support. Much work was done however, in terms of capacity building and training of staff involved; these aspects will be outlined later in the publication.

Replication of the training course in a venue which does not already accommodate persons with disabilities would need consideration of the following major factors:

Access to premises	How do workers get to and from their residence to the premises? Safe entry/exit to the premises or secure accommodation must be ensured.
Access to venue/s	How do workers enter and exit the actual venue/s? Do ramps, lifts or hand rails needs to be installed where stairs exist? In case of emergency, how can staff quickly enter and exit the building? Do workers need to be placed in specific areas, such as lower floors, as lifts cannot be used in case of fire?
Access within venue/s	How do workers move around the factory? Do ramps, lifts or hand rails needs to be installed where stairs exist? How do staff access work areas, meal areas, wash rooms and rest areas and do they need to be placed close to these?
Adjustments to facilities	Do adjustments need to be made to work areas, meal areas, wash rooms or rest areas to ensure safety and accessibility? If rest areas are not already incorporated in buildings, these must be provided for persons with disabilities who may need to take more frequent breaks.
Adjustments to equipment	Do adjustments need to be made to the actual equipment that persons with disabilities use? This could include height/width adjustments to tables or chairs to incorporate different reach abilities.
Output expectations	Do adjustments need to be made to production output expectations for persons with disabilities?
Buddy systems	If buddy systems are not already in place, do systems that allow for split/shared shifts, physical/social support and assistance in emergencies need to be considered?

Fire is a significant danger in many factories, due to electrical short circuiting, discarded cigarette butts, heat emitted by machines and the abundance of flammable material. Fire fighting equipment and training are extremely important, particularly when persons with disabilities are employed. Production managers, floor supervisors and general staff need to be aware of what action to take in an emergency situation.

Both venues in this program were also thoroughly assessed for any other existing occupational safety and health hazards, which were then minimised as much as was possible. These included inherent risks in machine use (guards were installed on machines) and trip hazards arising from cords running across floors (cords were taped down). It was also ensured that well-equipped first aid box/s were easily accessible.

It is important to remember that **special training facilities do not have to be built in most cases; existing facilities just need to be assessed and modifications made if necessary.** An indicative costing outline for replication is included in Annex 2.

7 Industry involvement

Industry involvement was the key to the success of this program; representatives of industry were involved in all consultations and major decisions. Developing the course in line with their needs meant that the skills developed matched current industry needs and so not only were skill gaps filled in factories, but the probability of employment of trainees after graduation was vastly increased.

It is integral that a strong relationship is developed with industry, as much is needed from them as a partner. In this pilot, industry provided:

- Expertise and personnel in each stage of program development and implementation
- CRP and Gazipur TSC staff the opportunity to refresh their knowledge on the modern production process of export quality RMG apparel through industry attachments
- Visits to CRP by staff from various departments in Viyellatex to introduce and orient trainees with industry norms, production processes, quality standards, occupational safety and health expectations, etc.

To build the capacity of all partners, the ILO provided formal and informal training sessions on a number of areas, including:

- The importance of the recently-approved National Skills Development Policy and the implications of this for skill development in Bangladesh.
- The importance of the NTVQF (a major component of the policy) and the implications the framework has on training institutions across Bangladesh.
- The introduction of competency-based training and assessment methodology to Bangladesh, what it is and the benefits it offers to trainees, trainers, organisations and the sector as a whole.
- Specific actions institutions would need to take under the new policy to gain accreditation and certification.
- An overview of the role of Competency Skills Log Books in competency-based training and the benefits that they offer to all parties.

Viyellatex Group is already accustomed to the concept of disability inclusion so we did not need to provide additional training on this subject. **If the industry partner was not accustomed to disability inclusion however, support and training would need to be provided.**

"Let everybody know about this project, see the outcomes of it and let's spread the word. Only this way can we do something really good for disabled and underprivileged people. I will be happy the day when this initiative is replicated in all the factories and all areas of Bangladesh."

Ahasan Kabir Khan, Vice-Chairperson, Viyellatex Group

8 Staff capacity building/training

Traditional training is based on knowledge and understanding. The emphasis in competency-based training and assessment (CBT&A) however is not just on knowing, but on performing. CBT&A is focused on the development of work skills that have been identified and agreed on by industry. Instead of a theoretical approach, competency-based training and assessment is a practical, workplace-based approach which equips students with the skills that industry needs. It focuses on real work skills which are observable and measurable.

The outcomes of competency-based training and assessment are clearly stated at the beginning of training, so that:

- **Learners** know what they have to be able to do
- **Trainers** know what training or learning has to be provided
- **Organisations** know the skill level required by their people.

It is a shift away from the current teacher-centred, lecture oriented method in Bangladesh towards a learner centred, interactive and performance based learning environment. CBT&A prescribes a change in the role of the teacher from the traditional "information giver" to that of a learning support person. Trainees are required to take responsibility for their own learning and progress.

An imperative factor in the success of this course was the emphasis placed on building the competency-based training and assessment skills of the staff. This ensured that they understood competency-based methodology and, in addition, that their technical skills were relevant to the current needs of the industry.

Below is an outline of the capacity building achieved:

NGO capacity	Instructor completed an intensive CBT&A training program and a one-week industry attachment at Interfab. Training Coordinator completed an intensive leadership and management development program to equip him with the skills needed to coordinate the training program. Social mobiliser received informal training in the holistic approach of CBT&A.
Industry capacity	(Outlined in Section 7 above)
Public sector capacity	Instructor completed an intensive CBT&A training program and a one-week industry attachment at Interfab. He also spent four months co-delivering and co-assessing the training in CRP, and experience which will be invaluable in replication.

It is imperative that staff members are recruited for the entire program and staff turnover is not an issue, so that consistency is maintained throughout the program. If inconsistency arises, training of new staff and re-familiarisation with trainees can significantly disrupt the program and delay progress.

"The system here is quite different from how I used to teach earlier. Things are taught in a way that the students can easily absorb. The curriculum we follow here is industry approved. After training completion, trainees can easily prove themselves as skilled operators in the industry workplace."

Syed Farid Ahmed, Dressmaking Instructor, TSC Gazipur

9 Trainee recruitment

CRP operates approximately 68 outstation centres in Bangladesh including four fully operational divisional centres. It is in these centres that pre-screening for training suitability is conducted, which includes consulting parents to obtain their consent.

After the pre-screening process identifies a list of potential candidates, the following process was adopted for this course:

1 Meeting basic selection criteria

Age	18 years or above (National ID/Birth Registration certificate as evidence).
Education	Minimum age for employment in industry and minimum level of ability for operating machines must be identified. As the exit level after the first stage (off-the-job) is NTVQF Pre-Vocational Level 2, trainees' initial educational level should not be below Grade 3.
LLN skills	Basic level of Language, Literacy and Numeracy skills.
Health	Reasonable medical fitness and preference may be given to females or persons with disabilities. The disability must not inhibit sewing machine operation however.
Motivation	Personal motivation.

2 Interview

A short interview was then conducted with each of the prospective trainees. The interview panel included representatives of the ILO, CRP and industry, and was an opportunity to meet trainees in person and discuss the course further.

3 Final assessment

Representatives from ILO and CRP then met with Interfab senior management and human resources staff to collaboratively agree on final identification of the participants. A Training Needs Assessment was then conducted to identify any gaps in basic language, literacy and numeracy which would need extra effort.

4 Induction/familiarisation

Trainees were allowed to stay in CRP for seven days before the program started for acclimatization and orientation to their new environment under careful observation. During this time, instructors and social mobilisers carried out the following tasks:

- One-on-one and group personal interaction with each individual, understanding how to make them feel comfortable and about their disability.
- Familiarisation with the program, prospects ahead, partners involved and constant reminders of support available.
- Motivational goal-setting exercises focusing on easily-attainable objectives to build confidence.
- Constant reinforcement of positive messages and encouragement such as "others have done it and you can do it too".
- Continuous informal counselling sessions to cope with initial nervousness, uncertainty of future (common that society views disability as an ill omen which will bring bad luck to the family), fear of unknown and fear of failure.
- Continuous monitoring, particularly of those students not readily settling in, expert assistance can assist in these situations.
- If tension arises, try to smoothen out the situation by pacifying the trainee/s and not allowing other to focus on individual misfortunes.
- Special attention given to the hearing and speech impaired girls, using eye contact, body language, practical training aids, sign language and personal touches. These show empathy and understanding, thereby instilling confidence in the trainees to express themselves further.

If an institution does not already have expertise in working with persons with disabilities, it is essential to follow the above guidelines. Some additional points are included below:

- After the selection, the Training Coordinator must ensure all staff members are willing to execute a coordinated approach to the training program and show respect, care, empathy and sensitivity at all times. Working with persons with disabilities can be very rewarding, but must be planned and documented.
- Depending on extent and variety of disabilities, up to two weeks may be needed to orient and familiarise students before training begins.
- The environment must be conducive to positive, integrated learning.
- Adequate support networks must be established in advance with local disability-focused organisations. This will ensure that issues, if any arise, can be solved quickly.
- Instructors need to be aware that, at least initially, they will have to manage a dual role of a social counsellor as well a trainer. This is essential to slowly reduce the fear of failure and incompetence instilled in many persons with disabilities from a young age. They will also need to cope with any stigma attached to the trainees, which may cause conflict or discrimination between them and other students.

10 Development of course content

As outlined previously, firstly industry needs were identified; these were then discussed with disability experts and then units of competency were developed. Units were developed in close consultation with industry, to ensure that skills developed would match the current and future needs of the sector. An emphasis was placed on multi-skilling, to ensure the trainees could be flexible in the workplace. Before development of any material began, a thorough analysis of existing training materials in the market was undertaken, to minimise any possible doubling of effort.

The Units of Competency developed are as follows:

1 Apply Occupational Safety and Health (OSH) practices in the workplace.
2 Present and apply workplace communication in Bangla
3 Use specific English for the Ready-Made Garments (RMG) Industry
4 Use basic mathematical concepts
5 Use a plain sewing machine
6 Sew components of a garment
7 Sew components of garments using industrial folding attachments
8 Sew a mid range garment
9 Identify fabric and trims
10 Apply quality systems and procedures

These began quite simply as instruction sheets with sample stitching on paper and fabric and set time standards and were developed into a comprehensive set of ten units.

The first seven units were delivered and assessed at CRP and the last three units were delivered in Interfab. The ten units combined make up the nationally recognised NTVQF Level 2 Sewing Machine Operator qualification.

Detailed information on the units is included in Annex 3 and can also be accessed by contacting the BTEB or the relevant Industry Skills Council and requesting information on NTVQF Pre-Vocational 2 Sewing Machine Operator Qualification and NTVQF Level 2 Sewing Machine Operator Qualification.

Competency Skills Log Books (CSLBs) were also developed:

Competency Skill Log Books are used in competency-based training and assessment to record and certify skills attained during training, mainly to benefits persons with low levels of education. The CSLB outlines the units of competency and supports the gathering of evidence for each skill. They are used in conjunction with a portfolio of evidence, which in this case was a collection of signed and dated sewing pieces.

The log book and portfolio combined showcase trainees' work and give them a tangible record of their competency which they are then able to use to attain employment after course completion.

The CSLB developed in this course can be accessed by contacting the ILO TVET Reform Project, relevant Industry Skills Council or RMG Sector Working Committee or the BTEB.

11 Extracurricular activities and fun

Competency-based training and assessment stipulates two fundamental aspects for effectiveness:

a. Develop competency by intensive practice of essential skills
b. Make the training environment a highly conducive one – learn with fun!

Now that we have discussed competency, let us discuss fun:

A **positive learning environment** was created through soothing colours, colourful posters and success stories of past trainees, health and safety reminders, sewing displays, finished garments, trainee achievements and artwork.

Instructors engaged the trainees in lively information exchanges and **participative discussions** to take the focus from physical and social constraints to future achievement.

"I realize the persons with disabilities who have benefited from this opportunity will, through their example and I hope their success, lead to changing attitudes about people with disabilities in general, a process you have all helped to foster.

More people will certainly benefit in the long run from this achievement, from the attitudes it will help change, and from the work you will continue to do" **Ms Debra Perry, ILO Senior Specialist in Disability Inclusion, on her visit to Bangladesh.**

During breaks and allocated free time, **instructors joined with trainees** to play board games, spend time outside in the natural surroundings, share stories and watch videos together.

Regular meals and a nutritious diet were an important part of the program; food choices were decided with assistance from health experts and three regular meals as well as healthy snacks were provided to all trainees. Instructors regularly joined trainees during mealtimes.

Basic **life skills sessions** were interactive and included topics such as health (including sexual health), careful use of water both at work and in the home and the importance of maintaining personal hygiene.

12 Implementation Timeline

April 2011
Agreement signed between CRP and ILO

May 2011
Agreement signed between Interfab and ILO

May-June 2011
Training facilities upgraded and selection of trainees

July 2011
Inauguration Ceremony and training commencement

July–Nov 2011
Off-the-job training at CRP Training Centre for 4 months

Dec 2011-July 2012
On-the-job training at Interfab for 8 months

August 2012
Graduation with an industry-recognised qualification and twelve months industry experience (subject to assessment, submission of CSLB, etc).

13 Impact

Beneficiaries

This course has had a huge impact on the lives of the beneficiaries, who have not only experienced immense personal benefit, but are also now role models within their families and communities. They are becoming confident advocates for disability awareness and, from being almost completely financially dependent on their families, are on the path to financial independence. In the words of one of the young women;

"The training at CRP led to my employment at Interfab. It has changed my life"

Taking a bigger picture approach, not only have the lives of these women been turned around, but their success has also created a model for integrating persons with disabilities into the mainstream workforce of Bangladesh.

CRP

CRP is already a well-respected training and rehabilitation organisation working with persons with disabilities in Bangladesh. This program has further strengthened their commitment as an organisation but more importantly, it has strengthened their linkage to industry. This is important for two reasons; firstly it is essential for ensuring that their trainees are able to smoothly transition into employment upon conclusion of training and secondly, close consultation and linkage with

industry ensures that their training continues to meet current industry needs. After the success of the two groups of trainees who are currently all working in Interfab, CRP is currently working with their third batch of trainees.

Industry

The RMG sector is quickly expanding in Bangladesh and one of the major constraints to its growth is the lack of skilled local workers. Persons with disabilities can help to fill this gap, particularly in factories based in less urbanised areas, where workers are increasingly difficult to recruit. These beneficiaries have helped to demonstrate that underprivileged people, people with low education and persons with disabilities can become skilled workers through quality training, and can be mainstreamed into formal TVET programs.

The Viyellatex Group are continuing to mainstream persons with disabilities into their workforce. **They have shown the way for other organisations to include persons with disabilities and underprivileged people in their workforce.**

"We believe that social initiatives like this improve our commercial operations and business. They also have marketing impact. Social initiatives give us an edge because buyers get a positive notion that we are different from other companies"
David Hasanat, Chairman, Viyellatex Group

Through replication, it is hoped that the Viyellatex Group will become one of many organisations throughout Bangladesh which will employ persons with disabilities and underprivileged persons. **As skill needs exist across a number of industries in Bangladesh, it is even hoped that the RMG sector itself will become a model to other sectors in employing persons with disabilities and underprivileged persons.**

Government

With the recent approval of the National Skills Development Policy, public training institutions will be updating the courses which they deliver to meet the requirements of the National Training and Vocational Qualifications Framework. This will mean converting all courses delivered into CBT&A format, and up skilling all staff to deliver and assess these.

Gazipur Technical School and College now possesses the skills and capacity to deliver and assess in CBT&A format, mainstream persons with disabilities into their programs, and forge the links with industry that are needed to ensure their courses are relevant. **They have the ability now to become a model public training institute.**

"Disabled and underprivileged people are a part of our society; it is our responsibility to bring them into the mainstream. We have been encouraged and inspired by the success of this training pilot. If private sector training providers show their interest in similar training programs for the disabled and underprivileged, the DTE is prepared to offer them all necessary support."

Md. Shahjahan Mian, Director-General, Directorate of Technical Education

Through replication, it is hoped that Gazipur TSC will become one of many public training institutes throughout Bangladesh which will include persons with disabilities and underprivileged persons into their training courses. **As outlined previously, it is hoped that the RMG sector itself will become a model to other sectors and qualifications in different areas in public training institutes will also include persons with disabilities and underprivileged persons.**

14 Lessons learned

There were many lessons learned during this program, many of which have already been mentioned in previous sections and many which are summarised in the next section. The three most important lessons learned however are discussed below:

PWD mainstreaming

This pilot has demonstrated that a mainstream competency-based program can be reasonably adjusted to include persons with disabilities and underprivileged trainees.

Industry linkage

By networking with industry, successful training models can be developed to provide training and employment opportunities to persons with disabilities. Industry is interested in recruiting persons with disabilities not only to fulfil corporate social responsibility obligations but also because it makes good business sense. As the Chairperson of Viyellatex said during the graduation ceremony of the trainees, **'persons with disabilities are proved to be more committed to their work and are an asset to any organisation'.**

Removing stigma

Persons with disabilities across the world face stigma in many facets of everyday life. In developing countries particularly, disability is seen as a sign of misfortune to the family and the community. The confidence that developed with the skills learnt in this program helped individuals to focus on their ability instead of their disability however, and allowed them to realise that they could become skilled employees of a reputable

organisation. Their families and their communities realised this, and one of the most basic examples of a change in mindset is that graduating trainees regularly face multiple marriage proposals from local families.

15 Replication

In addition to the advice provided in previous sections, institutions planning replication of the program will also need to ensure:

Consultations	Comprehensive consultation must be undertaken with industry and local training providers, which includes identifying existing local programs. **(Further details: Section 3)**
Mobilising partners	Partners must be selected carefully and must be willing to provide long-term, sustainable commitment. If the industry and training provider does not have expertise in disability, one of the key partners should be a local disability-focused organisation or a Disabled People's Organisation (DPO) and this organisation should be involved in all key decisions. One of the partners must have the capacity to deliver life skills training sessions to complement technical skills development. **(Further details: Section 4)**
Planning the Pilot	Thorough program planning must be undertaken before any decisions are made, with clear goals and objectives set. A Skill Needs Analysis must be undertaken, and this must then be reviewed with disability specialists to determine feasibility. Efforts should be made to link the course to the NTVQF to provide career progression opportunities to graduates. **(Further details: Section 5)**

Venue/Equipment	Venues must be assessed for occupational safety and health hazards. Machines, fabric, samples, etc currently used by industry must be used to ensure a smooth transition into employment. Uninterrupted power supply (for machine use), adequate lighting and ventilation (to minimise fire risk) and water purifiers (for safe drinking water) must all be ensured. Access to premises, access to venue/s, access within venue/s, adjustments to facilities, adjustments to equipment, output expectations and buddy systems must all be considered. **(Further details: Section 6)**
Industry involvement	Industry must be involved at every stage and included in every key decision. They also must be willing to be in close contact with the institution and allow for instructors to undertake industry attachments within their premises. Formal and informal training sessions may need to be provided to partners on the principles and benefits of CBT&A, the role of Competency Skills Log Books and a number of other skills development topics. Training on disability inclusion for all parties will also be needed. **(Further details: Section 7)**
Staffing	At least one instructor must have CBT&A training and must undergo at least one industry attachment. To minimise disruption during training, consistency should be maintained in staffing throughout the program. Under the new National Skills Development Policy, a CBT&A qualified instructor will be required for accreditation. Instructors, supervisors and managers need to be sensitive and respectful of the needs of trainees and it is imperative that they are provided with training on this if they do not have previous experience. Depending on trainee numbers, it is important to not only recruit instructor/s, but also to involve a Training Coordinator to liaise with industry, oversee the program and recruit social mobilisation staff to support trainees. **(Further details: Section 8)**
Trainee recruitment	A comprehensive and planned recruitment process must be followed, including basic selection criteria, interviews and assessment. This will maximise successful completion rates. A comprehensive induction/familiarisation process must be planned and implemented, with special attention given to students with visual or hearing impairments. A strong focus on social and psychological integration is essential because able-bodied trainees tend to be overbearing compared to persons with disabilities who can be very serious until they

	feel comfortable in their new environment. **(Further details: Section 9)**
Course content	The program should try to link with nationally-recognised qualifications from the National Training and Vocational Qualifications Framework. It must also adhere to CBT&A methodology endorsed by BTEB. Consultation with industry is needed to decide relevant competency standards and units to be included in commensuration with the relevant NTVQF level. Repetition of skills learnt and continuous practice are essential to CBT&A training, through interactive participation. This requires an adequate supply of pre-cut fabrics. Repetition helps to build dexterity and progressive assessments build confidence. Work with persons with disabilities must be participant-focused and learners must be constantly encouraged to ask questions and challenge concepts. Additional life skills training must be provided, either by industry or by a partnering organisation. **(Further details: Section 10)**
Extracurricular	A fun and interactive learning environment must be created, and instructors must participate in extra-curricular activities with the trainees. Healthy, nutritious and regular meals must be ensured. Additional information about important supplementary topics such as health and hygiene must be provided. **(Further details: Section 11)**

Annex 1: Glossary of key terms and acronyms

Apprenticeship	Any system by which an employer undertakes by contract to employ a person and to train them or have them trained systematically for a trade for a period of which the duration has been fixed in advance and in the course of which the apprentice is bound to work in the employer's service
BMET	Bureau of Manpower, Employment & Training
BTEB	Bangladesh Technical Education Board
Decent Work	Decent Work refers to opportunities for women and men to obtain work in conditions of freedom, equity, security and human dignity
DTE	Directorate of Technical Education
Employability	Portable competencies & qualifications that enhance an individual's capacity to utilise education and training opportunities to secure & retain decent work, to progress within enterprises & between jobs, and to cope with changing technology and labour market conditions
EC	European Commission
IGA	Income Generation Activity
GOB	Government of Bangladesh
HRD	Human Resource Development
HSC (Voc)	Higher Secondary Certificate (Vocational)
ISC	Industry Skills Council
Instructor / Trainer	A public or private sector employee who delivers training
MEWOE	Ministry of Expatriate Welfare & Overseas Employment
MOE	Ministry of Education
MOLE	Ministry of Labour & Employment
NGO	Non-Governmental Organization
NSDC	National Skills Development Council
NTVQF	National Technical and Vocational Qualifications Framework
OSH	Occupational Safety and Health
PPP	Public Private Partnership
PWD	Persons with Disabilities
RPL	Recognition of Prior Learning
Skills Development	The full range of formal and non-formal vocational, technical and skills based education and training for employment and or self-employment
SME	Small & Medium Enterprises
SSC (Voc)	Secondary School Certificate (Vocational)
TSC	Technical School and College
TTC	Technical Training Center
TVET	Technical & Vocational Education & Training

Annex 2: Indicative costing outline

Item	Units	Unit price (BDT)	Total price (BDT)
INITIAL SET UP COSTS			
Sewing machines (outlined above)	20	276,000	1,380,000
15 KVA diesel generator	1	290,000	290,000
Computer, projector, printer	6	20,000	180,000
Venue redesign	1	250,000	250,000
Trainee accommodation/increased accessibility	1	360,000	360,000
Subtotal			**2,460,000**
+ 10 % contingency/price escalation			246,000
Total initial set-up costs			**2,706,000**

Item	Units	Unit price (BDT)	Total price (BDT)
RECURRING COSTS (per 4 month program)			
Administration staff	1	72,500	72,500
Instruction staff	2	72,500	145,000
Social mobilisation staff	1	72,500	72,500
Trainee student allowances	20	14,000	280,000
Selection /induction	1	20,000	20,000
Utilities/fuel/maintenance	1	30,000	30,000
Teaching and learning material (excluding cut fabric supply from industry which was free of charge)	1	30,000	30,000
Consultative meetings, visits and associated costs	1	25,000	25,000
Industry attachment	1	10,000	10,000
Industry orientation	1	15,000	15,000
Subtotal			**700,000**
+ 10% contingency/price escalation			70,000
Total recurring costs (per 4 month program)			**770,000**

Indicative costing outline assumptions:

- 20 total trainees, inclusive of persons with disabilities.
- 20 new JUKI-brand sewing machines purchased (13 x plain (13, 1 x plain with auto trimmer, 1 x chain stitch, 1 x button hole, 1 x button stitch, 3 x 5 thread over lock)
- Machine cost based on last purchase price +predicted 10% price escalation.
- Generator cost based on high rating required to run all machines during power outage.
- Venue space approximately 900 ft x 30 ft x 30 ft, well ventilated with natural room heat dissipation and natural lighting.

All costs mentioned are indicative and subject to change at any time depending on additional import/construction costs, etc.

Annex 3: NTVQF Information

Structure of qualifications in the new National Training and Vocational Qualifications Framework

NTVQF Levels	Pre-Vocation Education	Vocational Education	Technical Education	Job Classification
NTVQF 6			Diploma in engineering or equivalent	Middle Level Manager/Sub Assistant Engr etc.
NTVQF 5		National Skill Certificate 5 (NSC 5)		Highly Skilled Worker / Supervisor
NTVQF 4		National Skill Certificate 4 (NSC 4)		Skilled Worker
NTVQF 3		National Skill Certificate 3 (NSC 3)		Semi-Skilled Worker
NTVQF 2		National Skill Certificate 2 (NSC 2)		Basic-Skilled Worker
NTVQF 1		National Skill Certificate 1 (NSC 1)		Basic Worker
Pre-Voc 2	National Pre-Vocation Certificate NPVC 2			Pre-Vocational Trainee
Pre-Voc 1	National Pre-Vocation Certificate 1 NPVC 1			Pre-Vocational Trainee

Description of Competency

Note: Level 1 to level 4 where a person is a competent trade person. Above Level 4, one becomes involved with higher level specialist skills and supervision.

NTVQF Level 4	**Skilled Worker** **As in Level 3 plus:** • **Can perform all types tailoring work without supervision.** • **Can demonstrate all the skills of a competent tradesperson.**
NTVQF Level 3	**Semi-Skilled Worker** **As in Level 2 plus:** • **Sew components of a mid range garment / article.** • **Assemble a mid range garment / article.**
NTVQF Level 2	**Basic-Skilled Worker** **As in Level 1 plus:** • **Can work with limited supervision.** • **Use a range of sewing machines.** • **Sew components of a simple garment/article.** • **Assemble a simple garment / article.**
NTVQF Level 1	**Basic Worker** • **Knows the basic tools & equipment used in the readymade garment industry.** • **Can sew specific component of a garment in a well defined production layout.** • **Knows one or two skills in component sewing in the production line up.**
Pre-Voc 2	**Pre Vocation Trainee/Helper** • **Learning basic skills, including improving literacy and numeracy to achieve equivalency and gain entry-level qualification to NTVQF Level 1.**
Pre-Voc 1	**Pre Vocation Trainee/Helper** • **Learning language, literacy and numeracy skills through basic technical competencies.**

Competencies used in pilot project (specifically for woven garment industry)

No.	Units of Competence
1.	Apply Occupational Safety & Health (OSH) practices in the workplace
2.	Present and apply workplace communication in Bangla • Verbal • Written • Reading
3.	Use specific English for the Ready Made Garments (RMG) Industry
4.	Use basic mathematical concepts
5.	Use a plain sewing machine 5A. Identify the parts of an industrial sewing machine and equipment • Plain sewing machine with auto trimmers • Plain sewing machine without auto trimmers • Overlocker • Chain stitch • Button hole machine • Button sewing machine 5B. Prepare sewing machine/s for operation 5C. Identify poor machine performance and rectify
6.	Sew components of a garment 6A. Use a sewing machine to sew woven components 6B. Use an overlocker to sew basic work pieces 6C. Use a chain stitch machine 6C. Use a buttonhole machine 6D. Use a button sewing machine
7.	Sew components of garments using industrial folding attachments 7A. Yoke joints 7B. Shoulder joints 7C. Sleeve joints 7D. Armhole topstitch 7E. Cuff joints 7F. Bottom hem
8.	Sew a mid range garment
9.	Identify fabric and trims
10.	Apply quality systems and procedures

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