

CHALLENGES AND RECOMMENDATION FOR PROMOTING TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING (TVET)

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INTRODUCTION



Introduction

Education and training for employment opportunities is vital for economic and social development in the developing countries. Technical and Vocational Education and Training (TVET) is viewed as a tool for productivity enhancement and poverty reduction in developing countries.¹ With technical revolution and innovations in science and technology, labor market needs have significantly evolved.² Thus, the vision of TVET is to train the youths and adults to prepare them for job market and to provide them a platform to increase their income and uplifting their livelihoods.

Technical and Vocational Education and Training: An Overview

UNESCO and the International Labor Organization (ILO) define TVET as “aspects of the educational process involving, in addition to general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding, and knowledge relating to occupants in various sectors of economic and social life.”³

In most developing Countries, the TVET refers to non-academic technical education and practical training that develop the skills and knowledge of apprentices (learners of trades or crafts) working in different sectors of industry and trainees/students trained in different technical vocational institutes, centers, and schools. The TVET is that part of the education system that provides courses and training programs related to employment with a view to enabling the transition from Secondary Education to work for young trainees/students (social objective) and supplying the labor market with competent apprentices (economic objective).

Technical and Vocational Education and Training institutes in developing countries have been playing two crucial roles in development: i) The first role is to provide training opportunities and career advancement avenues for the increased school leavers; ii) the second role is to provide skilled manpower that is needed at all levels of the economy. These skills should be able to lead to self-reliance in the absence of salaried employment and enhance the industrialization process.⁴

¹ Pavlova M. (2014). *TVET as an important factor in country's economic development*.

² AFDB. (n.d.). *What is Technical and Vocational Education and Training (TVET)*

³ AFDB. (n.d.). *What is Technical and Vocational Education and Training (TVET)*

⁴ Wahba M. (n.d.). *Technical and Vocational Education and Training (TVET) Challenges and Priorities in Developing Countries*. UNESCO.

As illustrated in Figure 1, TVET is further understood to be⁵

- An integral part of general education
- A means of preparing for occupational fields for effective participation in the world of work
- An aspect of continuing or lifelong learning and preparation for responsible citizenship
- An instrument for promoting environmentally sound sustainable development
- A method of facilitating poverty alleviation.

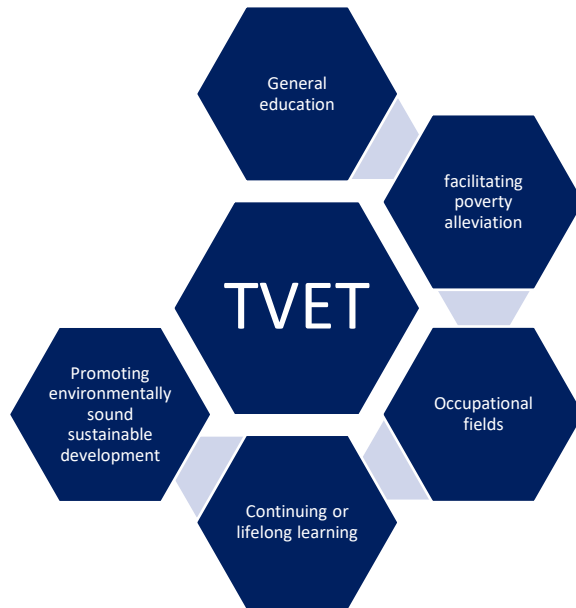


Figure 1: Composition of TVET

Role of TVET in Socio-Economic development

Employment generation and poverty alleviation

According to the International Labour Organization (ILO) World Employment Social Outlook 2022⁶,

- In Africa, nearly 5 million additional workers and their households fell below the extreme working poverty line, increasing the extreme poverty rate by 1.3 percentage points. In North Africa, the pandemic resulted in substantial losses in working hours in 2020, and a net decline in employment of over 2.1 million. Similarly, the recovery in sub-Saharan Africa remains highly uncertain as there was an estimated loss of 13.5 million full-time jobs and pushed more than 4.9 million workers and their families into extreme poverty. The pandemic has heightened the urgency of creating more decent work in Africa and signaled the need to rethink macroeconomic and sectoral policies in order to realign them with employment creation.
- Across Asia and the Pacific as a whole, total working time in 2020 fell by the equivalent of over 130 million Full-Time jobs. The pandemic is estimated to have driven over 2 million workers to fall below the extreme poverty line in Asia and the Pacific in 2020, and another 1.6 million to fall below the moderate poverty line, reversing some of the progress made in poverty reduction over recent decades. Among the groups most vulnerable to the pandemic in this region are informal workers, who account for high shares of employment in some of the heavily hit sectors.
- Across Europe and Central Asia, youth have been heavily affected by the pandemic and accounted for 77 percent and 61 percent of job losses in Northern Europe and Central Asia respectively.

⁵ Wahba M. (n.d.). *Technical and Vocational Education and Training (TVET) Challenges and Priorities in Developing Countries*. UNESCO.

⁶ International Labour Organization (ILO). (2022). *World Employment and Social Outlook Trends 2022*.

- In the Latin America and Caribbean region, the unemployment rate increased to 10.1 percent from 7.9 percent in 2019, with almost 28.8 million people getting unemployed.

Employment losses and reductions in working hours incomes in developing countries have led to reduced. Moreover, widespread unemployment and poverty have brought significant changes to the skills required in the labor market and also have an impact on the type of TVET offered. These statistics suggest that countries across the world need to undertake profound reforms of their TVET systems and financing mechanisms to deal with these fundamental shifts.

Developing Countries have a relatively large percentage of skilled yet unemployed people. This is a result of declining employment in the public and private sectors. Moreover, developing countries have a large cheap unskilled labor force, because of a lack of education and training, and thus the core role of TVET in enhancing the informal sector and in offering skills and knowledge to the unskilled is of utmost importance. Thus, there is a need to encourage establishment of development centers and vocational institutes that can impart relevant knowledge and skills to the workers.⁷

Chittagong Skills Development Center, Bangladesh

The Chittagong Skills Development Center (CSDC) is an industry-led private skills training center in Chittagong whose purpose is to develop Bangladesh's workforce in strategic sectors where human resources are scarce, mainly in the telecommunications and manufacturing industries. The CSDC started in 2007 as a collaboration among five companies, the Chittagong Chamber of Commerce and Industry, the AK Khan Foundation, and the Underprivileged Children's Educational Program to promote telecommunications skills development.

Objective: The CSDC is highly demand-responsive, offering tailor-made courses to employees in local industries to boost industrial productivity. Among the courses offered are leadership skills for managers, power system maintenance in telecommunications, strategic procurement, workplace team building, industrial safety, workplace training, and finance for nonfinancial professionals.

Impact: Since inception, the CSDC has delivered 164 training programs for about 2,930 people. In 2010, a total of 320 trainees received training in 21 programs, and in 2011, about 600 were trained in 33 programs. The center, which also offers courses in Dhaka, has no permanent facilities, but rents space as needed for the training. This, plus few permanent staff, keeps expenditures low. The center is now self-supporting through fees with some help from the participating industries.

TVET AND SDGs

The role of Technical and vocational education and training (TVET) has been identified as an enabler of the 2 of 17 Sustainable Development Goals (SDG) 2030 which have been illustrated in the Figure 2.

- **Through SDG4- Ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all.** SDG4 puts a special emphasis on lifelong learning (LLL) opportunities and TVET will help people to acquire the knowledge and skills needed to exploit opportunities and participate fully in society.

⁷ ADB. (2014). *Innovative strategies in Technical and Vocational Education and Training for Accelerated Human Resource Development in South Asia*.

- TVET also notably targets ‘equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university (SDG4.3) and a substantial increase in ‘the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship’ (SDG4.4).
- The empowerment of women and girls through Technical and Vocational Education and Training (TVET) gives them an opportunity to acquire job-related skills for meaningful employment, a key contribution to poverty reduction. Governments are therefore acting to improve women’s and girls’ enrolment in TVET courses, which have been primarily male-dominated.⁸
- **SDG8- Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all.** More specifically, SDG8.5 targets the achievement of full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.

As defined in the 2030 Agenda, TVET is thus expected to address various socio-economic demands by helping young people and adults to develop the skills they need for employment, decent work, and entrepreneurship, promoting equitable, inclusive, and sustainable economic growth.⁹



Figure 2: UN SDGs in the context of TVET

⁸ Commonwealth of Learning. (2020). *Policy Brief: Creating New Opportunities for Women and Girls: Enhancing Women’s and Girls’ Success in Technical and Vocational Education*.

⁹ Goncalves C. (2019). *Financing TVET: A comparative analysis in six Asian countries*.

CURRENT STATUS: A REGIONAL ANALYSIS



Current Status: A Regional Analysis

Current status of TVET in developing countries

TVET institutions in developing countries

The governments and the private sector in different developing countries have recognized TVET as an investment not a cost, with significant returns including the wellbeing of workers, enhanced productivity, international competitiveness, and economic growth in the long run.

The level of organization of TVET in countries across the world differs from place to place, and is delivered at different levels and different institutions. These institutions include polytechnics¹⁰, technical and vocational training schools and apprenticeship training centers.¹¹ Some of the TVET institutions established in developing countries globally are specified in Table 1¹²,

Table 1: TVET institutes in different regions

Region	Country	TVETs
Latin America and the Caribbean	Brazil	<ul style="list-style-type: none"> National Apprenticeship Services: 2789 Private and Public Technical Schools: 1838
	Chile	<ul style="list-style-type: none"> Centre for Technical Training: 42 Professional Institute: 42
	Uruguay	<ul style="list-style-type: none"> Private TVET Institutes: 1000 Vocational Schools: 221
Africa	Kenya	<ul style="list-style-type: none"> Technical Vocational Centers: 850 Technical Vocational Colleges: 123 National Polytechnics: 11
	Sudan	<ul style="list-style-type: none"> Federal Vocational Training Centers: 6 Public and private Vocational Training Center: 172 Institute for Training of Trainers and Supervisors: 1
	Rwanda	<ul style="list-style-type: none"> TVET Schools: 366 Public IPRCs and Polytechnics: 08 Private IPRC's and Polytechnics: 09
Asia	India	<ul style="list-style-type: none"> Polytechnics: 3867 Industrial Training Institutes: 14312
	Sri Lanka	<ul style="list-style-type: none"> Technical Colleges: 30 Colleges of Technology: 09

¹⁰ A Polytechnic institute is an institute offering instruction in a variety of industrial arts, applied sciences, or technical subjects. The aim of the polytechnic education is to create a pool of skill based manpower to support shop floor and field operations as a middle level link between technicians and engineers.

¹¹ Opoko A. et. al. (December 2018). The role of Technical and Vocational Education and Training (TVET) in Nation Building: A review of the Nigerian Case. *International Journal of Mechanical Engineering and Technology*.

¹² UNESCO. (n.d.). UNESCO-UNEVOC TVET Country Profiles.

		<ul style="list-style-type: none"> • Vocational Training Centers: 290 • Apprenticeship Training Institutes: 68
	Bangladesh	<ul style="list-style-type: none"> • Polytechnics Institutes: 439 • Technical School and Colleges: 172 • Technical Training Centers: 164 • Textile Vocational Centers: 50 • S.S.C. Vocational: 169

Participation of Youth in TVET

TVET also supports in building of the quality and skilled human capital capable of stabilizing and sustaining the development of a nation’s economy. This is because it provides students with life skills that stimulates their creative and innovative ideas needed to survive in the competitive business world of the 21st century. The business environment is changing at a fast pace due to the undeniable influence of rapidly emerging and changing technologies in a fast-globalizing world. This has increased the demand for variety in human skills necessary to respond to such drastic changes in a competitive manner for economic progress and business survival.¹³ Over the years, the number of people enrolling in these vocational institutes has also increased which has helped them to become self-reliant, self-sufficient, and independent. As

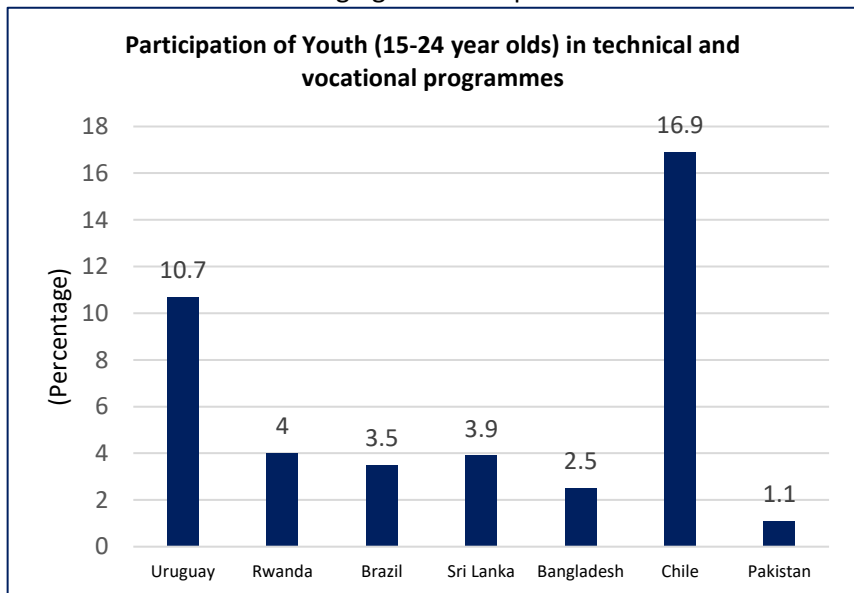


Figure 3: Participation of Youth (15–24-year-old) in technical and vocational programmes

illustrated in Figure 3, the participation of the total population of youth in vocational and technical programs in developing countries has been observed over the years,¹⁴. The participation of youth in vocational and technical programmes was the highest in Latin American countries such as Chile and Uruguay with 16.9 percent and 10.7 percent of the total youth participation respectively.

¹³ Opoko A. et. al. (December 2018). The role of Technical and Vocational Education and Training (TVET) in Nation Building: A review of the Nigerian Case. *International Journal of Mechanical Engineering and Technology*.

¹⁴ UNESCO. (n.d.). UNESCO-UNEVOC TVET Country Profiles.

CHALLENGES AND RECOMMENDATIONS



Challenges and Recommendations

Challenges in TVET Ecosystem¹⁵

- **Gender Divide:** One of the major challenges in growth of TVET Ecosystem is low enrollment of female students. Traditionally TVET was regarded to be a provision reserved for the male gender in Developing Countries. This belief has resulted in serious omissions in national government development plans where women are given a raw deal. Consequently, most of the TVET facilities are planned without taking the needs of females into consideration.¹⁶ For instance, lack of gender sensitive infrastructure such as clean washrooms that are a pre-requisite to maintain dignity, health and safety may cause female students to drop out. Moreover, social barriers such as family pressure to get married or not continue education and barriers to travel alone are among most of the communities in developing countries. These also contribute to women being discouraged from enrolling in vocational career training opportunities. Enrolment data from TVET institutions indicate that a very low percentage of the women's total enrolment is in Vocational areas within developing countries.
- **Lack of placement assistance:** Many vocational institutes lack efficient placement assistance including, assistance in the preparation of a Curriculum Vitae (CV) , providing information about different career options, various companies, open positions & apprenticeship opportunities, distributing job application forms, arranging exposure visits, organizing campus interviews and job fairs, developing linkages with employment agencies, etc. which may discourage students from continuing their education in TVETs. Graduates also face difficulty in finding employment as the apprentices sometime are not converted into full-time roles.
- **Limited Awareness amongst students and parents:** While on average two-thirds of the population in most developing countries generally work in jobs that require a skill level that is usually associated with vocational education and training, it is still a major challenge to change the mindset of parents, the community and stakeholders about vocational education being the second choice to academic education.
- **Limited capacity building of trainers and instructors:** Limited availability of competent and trained trainers in developing countries is one of the major challenges in developing countries. In many cases, instructors and trainers face difficulty in coping up with new technological changes and methods of vocational trainings. Thus, they usually tend to stick to traditional

¹⁵ Wahba M. (n.d.). *Technical and Vocational Education and Training (TVET) Challenges and Priorities in Developing Countries*. UNESCO.

¹⁶ Wahba M. (n.d.). *Technical and Vocational Education and Training (TVET) Challenges and Priorities in Developing Countries*. UNESCO.

methods of teaching which hinders the quality of skills impacted in TVETs in developing countries.

- **Limited financial support:** In Developing Countries, funding towards TVET is often limited as they are neglected in comparison to pure academic institutions. One major constraint that TVET is facing in developing countries, is the limited budget and this becomes the core issue as to why TVET Institutions are not able to employ trained trainers, assessors, and verifiers, support them in updating and upgrading their skills, purchase most appropriate training facilities, aids and technology for practical training (On-the-Job Training OJT) and accordingly are not able to market themselves effectively, etc.
- **Limited Infrastructure:** Various TVETs also have limited infrastructural facilities such as laboratories and proper equipment. Thus, students are forced to use outdated machinery and equipment which negatively impacts the efficiency of practical learning.
- **Lack of industry-specific trades:** Most TVETs offer trades that have low demand in the job market. Additionally, there is a mismatch between the training provided and the needs of the industry. Thus, the inability of the TVETs to provide trades that are relevant to the needs of the industries may create a sense of dissatisfaction among students.

Impact of COVID-19 on TVET Programmes

Impact of COVID-19: The sudden closure of a large majority of TVET centers, as a result of national lockdowns announced in many countries, seriously disrupted the continuity of TVET. According to a survey conducted by International Labour Organization (ILO), 90 per cent of respondents reported a complete closure of TVET centres in their countries in response to the spread of the pandemic and their governments' containment measures. In 114 countries (out of 126), a complete closure was reported by the majority of the respondents.

Challenges: The key barriers to TVET programmes after COVID-19 were:

- Lack of general and technological infrastructure (electricity, internet, connectivity and devices)
- Lack of effective and user-friendly distance learning platforms
- Lack of staff capacity to support distance learning through quality pedagogical resources
- Financial resource constraints and limited cash flows, in particular for small TVET providers led to shutting down of businesses and students dropping out.

Alternative approaches to practical skills training and assessment: Alternative approaches were introduced to provide practical skills training and conduct assessments throughout the crisis. Both online and offline platforms and tools were mobilized to conduct the practical aspects of training.

- Use of existing online platforms such as massive online open courses (MOOCs) and the Modular-Object-Oriented Dynamic Learning Environment (MOODLE), video tutorials, live video conferences and simulators were used.

- The use of offline platforms, included national television channels, to disseminate practical knowledge was observed in countries including the Democratic Republic of the Congo, Madagascar and Pakistan, and the development and distribution of written resources such as self-paced learning guides and learner notes were also used.
- TVET Standard on Open, Distance and e-Learning (ODEL), Kenya: At the end of March 2020, the Government of Kenya introduced “TVET Standard on Open, Distance and e-Learning” (ODEL) to overcome the challenges imposed by COVID-19. The approach followed - traditional distance education by correspondence courses, e-learning, blended learning to open learning centers and face-to-face provision (of TVET) with significant element of flexibility, self-study, and learning support. The quality of ODEL programmes has been equivalent to those offered at TVET institutions.

Recommendations: The way forward

- **Bridging the Gender gap:** In order to improve the enrolment of female students at TVETs, there is a need to introduce female-focused trades such as fashion designing, handicraft making, etc. Moreover, for various social issues such as traveling and mobility, accommodation inside the TVET institutes can be provided at nominal charges to female students. At the same time, monthly counseling sessions with female students as well as their families can also help to make them aware of the benefits of continuing the vocational training and create a positive environment for female students. Additionally, provision for supplementary facilities such as mess, and security systems can be made to make it more suitable for female students to live at the TVET institutes. Additionally, Gender-sensitive infrastructure including clean washrooms and provision of sanitary pads and creches should be ensured.
- **Enhancing employability and employment opportunities:** TVET institutes should establish dedicated training, career counselling, and placement cell for the students. A career counsellor as guest faculty can also be appointed to this cell to give career guidance to the students. Moreover, establishing MOUs with several companies to ensure employment post-completion of the apprenticeship will also add more guarantees to the placements and employment.
- **Creating awareness amongst prospective students and their families:** To remove the reluctance of graduates and their families regarding enrolling in a TVET institute, organizing frequent interactive sessions with relevant stakeholders can be extremely beneficial. For this activity, workshops can be organized with representatives from the industry, resource persons, professionals, local entrepreneurs, and alumni to help prospective students in choosing a career path and understand the benefits and employment opportunities after vocational training.

- **Systematic Professional Development of Instructors / Trainers / Teachers:** Capacity building workshops and trainings for Instructors / Trainers / Teachers should be conducted regarding how to use new technology and keep up with teaching methods of various vocational training. Trainers should be taught how to use digital mode to teach students online in case of any emergency and closure of institutes.
- **Better funding of TVET:** The government and policymakers need to pay more attention to the financial needs of TVET institutes. A proper budget should be allocated to each TVET center to employ trained trainers, assessors, and verifiers, support them in updating and upgrading their skills and provide appropriate training facilities, aids, and technology for practical training. TVET Institutions can also play an important role in the reproduction/upgrading of the training materials and facilities to reduce costs by applying virtual learning. The TVET Institutions can also reduce costs by negotiating the reproduction/upgrading of training packages designed and developed for several enterprises at a time, and get better prices from end users.¹⁷
- **Increase the number of industry-oriented trades offered.** Revision of trade offerings at the TVET institutes should be encouraged so that more in-demand, skill-based trades are available and this will improve the retention of students. Outdated trades which have limited takers or are low in employment demand should be dropped from the curricula. Good practical training should be provided by regularly updating the curricula, adding more workshop sessions, enhancing the use of equipment, involving students in class/project presentations, etc.
- **Improving the Infrastructural facilities:** The classrooms should be equipped with a sufficient number of chairs and benches for current students. Expansion of work labs can be done by increasing the number of machines or equipment for students to perform practical. Equipment such as computers should be updated with the latest software so that it complements the upgraded trade work.

¹⁷ Wahba M. (n.d.). *Technical and Vocational Education and Training (TVET) Challenges and Priorities in Developing Countries*. UNESCO.

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