



Quality improvement in technical and vocational education and training in Bangladesh

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Abstract

Bangladesh has the high density of population as her Population Density per sq.km is 1124.7; a total of 163.47 million (male: 50.6% and female: 49.4%) live in this 1, 47,570 sq. km. (56,977 sq. miles) area. Among this huge population there are 61.1% population are under the age band of 15 to 64 years, working age groups. The skills development system in Bangladesh can be classified into four main segments with its formal and non-formal mode of education. The major challenges are of implementing TVET with quality to address the issues of high density with high working age group population. A total of 214 strategies with some sub categories in 22 different major is heads to address the above mentioned challenges, the. Maintaining the quality of training programs and training providers is of crucial importance. Improved quality will increase the return to industry and the community in general, and make skills development and TVET a more attractive option for learners and employers in Bangladesh. Improved quality is also necessary so that learners and employers, both in Bangladesh and abroad, can be assured that qualifications issued in Bangladesh truly reflect the standard of knowledge and skills that they claim.

Keywords: technical, vocational, training, education and development

1. Introduction

Skills, knowledge and innovation are important driving forces of economic growth and social development in any country, and those countries with higher levels of education and skills, adjust more effectively to challenges and opportunities in the global economy ^[1]. A comprehensive national skills development policy in Bangladesh will guide skill development strategies and facilitate improved coordination of all elements of skills training and the parties involved. The Skills Development Policy will contribute to the implementation of other national economic, employment, and social policies so that Bangladesh can achieve its goal of attaining middle income status in 2021 (NSDP 2011) ^[2].

Technical and Vocational Education and Training (TVET) is the act or process of acquisition of practical skills, attitudes, understanding and knowledge relating to occupation in various sectors of economic and social life (UNESCO) ^[3]. TVET programs provide an education that directly relates to getting a job. TVET is building Skills for work and life. People should primarily be educated in TVET to perform a skilled job ^[4].

2. Methodology

For this study primary and secondary data related to quality improvement in technical and vocational education and training for development were collected and finally analyzed by using different statistical software.

3. Result and Discussion

Skilled workforce is an essential pre-requisite of national development. There are many countries in the world having

high per capita income but they are not developed countries, because they don't have technical control over their natural resources. Bangladesh lies in the developing nation as her per capita income is US\$ 1314 (2014-2015) and the vision is going to be middle income country by 2021 and be developed country by 2041 ^[5]. Our strategies are taken to enhance control over our natural resources and of course control over our human resources to make them human capital by providing quality TVET in our country.

3.1 Demographic scenario of Bangladesh

Bangladesh has the high density of population as her Population Density per sq.km is 1124.7; a total of 163.47 million (male: 50.6% and female: 49.4%) live in this 1,47,570 sq. km. (56,977 sq. miles) area (<http://countrymeters.info/en/Bangladesh>, date: 15.10.2016). Among this huge population there are 61.1% population are under the age band of 15 to 64 years, working age groups (Labor Force Survey Report 2013, Bangladesh Bureau of Statistics, October 2015). Moreover, BBS report shows that there is only 58% population of the working aged groups are being employed in agriculture (45%), industry (21%) and service (34%). In addition, the workforce receives vocational training to do their job are very low as 46.6% of 15-29 age group, 52.8% of 30-64 age group and 0.6% over 65 age group (LFS report-2013). The record of the formal TVET under Bangladesh Technical Education Board is so alarming that only 13.11% of students under secondary and higher secondary level of education having formal TVET. We have another challenge to face that 2030 would be the crucial year for our country as the country would have least dependency

ratio at that time (Nation Master Website). The maximum 120 million populations out of 180 million would be in working age group in the 100 years.

3.2 Skills development system of Bangladesh

The skills development system in Bangladesh can be classified into four main segments with its formal and non-formal mode of education:

- Public (delivered to varying degrees by numerous ministries);
- Private (receive some form of government subsidy e.g. MPO and grants);
- Private (commercial training institutions);
- NGOs (non-profit institutions); and
- Industry based (institutions managed by industry and training delivered in the workplace, including apprenticeships).

Each of these segments offers a wide variety of formal and non-formal training programs to different target groups using different approaches to delivery and assessment.

3.3 TVET quality and Bangladesh technical education board (BTEB)

Bangladesh Technical Education Board was established as statutory body in 1967 ^[6] by Act of Parliament for the following major functions of ensuring TVET quality in Bangladesh:

- Introduce Trades/Technologies and prescribe courses of instruction and develop curriculum.
- Grant recognition to or to withhold or withdraw recognition from educational institutions offering courses in technical education.
- Prescribe conditions governing admission of students.
- Monitoring and Evaluation of academic functions of TVET Institutes.
- Hold, conduct and regulate examinations on completion of course and curricula of Technical Education.
- Grant Diplomas/Certificates to persons who have passed examinations held by the Board.

BTEB has developed

- 28 different curricula for 360 hours to 4 years' duration within December 2015.
- A total of 7773 institutes (Public: 5.66% and Private: 94.34%) having 714644 seat capacity (Public: 9.39% and Private: 90.61%) have been accredited within December 2015; and.
- The teacher-student ratio found as per BTEB and BANBEIS report 2015 was 1:34 (30903:1038820).
- Competency Based Training and Assessment (CBT&A) system has been piloted since 2012 under BTEB. 12 industry skills councils (ISCs) are functioning with BTEB for developing competency standards in different occupations. About 10,000 certifications have already been made with ensuring quality under CBT&A ^[7].

3.4 Challenges of improving quality of TVET in Bangladesh

The major challenges of implementing TVET with quality to address the issues of high density with high working age

group population are as follows-

- Provide appropriate skilled training for our economic development.
- Provide appropriate infrastructure facilities.
- Provide adequate number of trained and skilled teacher/trainer.
- Provide sufficient tools, equipment and raw materials or funds required for TVET.
- Increase Social Status of TVET Graduates.
- Promote industrial linkages or involvement to enhance quality TVET-
 - ✓ To develop curriculum.
 - ✓ To provide hands on training.
 - ✓ To exchange academics, trainers and experts.
 - ✓ To support institutes by creating lab/workshop facilities.
 - ✓ To mobilize public private partnership.
 - ✓ To produce young skilled workforce for the market needs.
 - ✓ To increase active and effective support to industrial attachment.

3.5 Initiatives taken for improving quality of TVET in Bangladesh

3.5.1 National skills development policy 2011

Formulates a total of 214 strategies with some sub categories in 22 different major heads to address the above mentioned challenges, the. Maintaining the quality of training programs and training providers is of crucial importance. Improved quality will increase the return to industry and the community in general, and make skills development and TVET a more attractive option for learners and employers in Bangladesh. Improved quality is also necessary so that learners and employers, both in Bangladesh and abroad, can be assured that qualifications issued in Bangladesh truly reflect the standard of knowledge and skills that they claim. Quality assurance is also an important strategy to improve the relevance and delivery of formal and non-formal education and training programs. Consequently, the Bangladesh Skills Quality Assurance System will be introduced to improve the quality of skills development in Bangladesh ^[8].

Bangladesh has developed National Technical and Vocational Qualification Framework (NTVQF) consisting six major levels and 2 Pre-vocational levels for defining the quality of the workforce. The NTVQF will also provide a new benchmark for the international recognition of the skills and knowledge of Bangladeshi workers, who are recognized as an increasingly important export for this country. NSDP 2011 formulates strategies for ensuring the quality of TVET as follows:

- Introduce consistent naming of credentials for formal and non-formal skills based education and training.
- Provide formal recognition of workplace skills obtained in both the formal and informal economies.
- Provide high-quality skill outcomes to maintain individuals' employability and increase their productivity.
- Improve the alignment of formal and non-formal training programs with industry requirements.
- Increase options for students by broadening program and progression pathways.

- Support lifelong learning by providing recognized pathways for workers to raise the level of their knowledge and skills throughout their working life, and beyond.
- Development of nationally recognized units of competency and qualifications.
- Accreditation of learning and assessment programs.
- Auditing of training providers for compliance against quality standards.
- Validation of assessment tools against units of competency.
 - a. Monitor and review skills development practices in the industry sectors and identify and overcome deficiencies.
- Develop industry specific skills development policies and practices.
- Develop industry's capability to deliver the skills training and upgrade their employees in order to improve productivity and enhance the welfare of employees.
- Provide leadership and strategic advice to the skills system on skills development needs and priorities for those industry sectors covered by the council.
- Support the delivery of industry relevant training and/or professional development programs for instructors and trainers.
- Contribute to the development and review of skills standards and qualifications and participate in the development and review of new training curriculum.
- Advocate and facilitate workforce development activities in industry.
- Produce sector skills development plans as required on a regular basis.
- Support strengthening of industrial apprenticeship programs; and
- Develop partnerships with training providers and support improvement of skills programs in schools, colleges, industry and enterprises.

3.5.2 National education policy 2010

Formulates a total of 25 strategies mentioned in the 'Chapter-5: Vocational and Technical Education'. For ensuring quality of TVET the following strategies are mentioned ^[9]:

- Pre-vocational and Information Communication Technology education will be introduced in every stream of primary education to create skilled manpower. All students of primary level must complete 8-year cycle with pre-vocational and ICT courses as included in the curricula of Classes VI to VIII.
- Facilities will be created for the students of this stream so that they can gradually go up for higher education in their desired technical subjects.
- In the vocational and technical educational institutions, teacher-student ratio will be 1:12.
- In every curriculum of vocational and technical education, highest importance will be given to achieving proper competencies. Computer and ICT will be included as compulsory subjects in vocational and technical education curricula.
- Apprenticeship program will be introduced nation-wide. The Apprenticeship Act 1962 will be updated and revised.
- Special attention will be given to the students with disabilities to ensure their participation in the vocational and technical education.

- Hands-on training within mills and factories on the subjects studied will be compulsory for teachers of all levels. To ensure training for every teacher of vocational and technical education, posts/seats in VTTI and TTTC will be increased and if necessary, the number of such institutes will also be increased.
- Adequate number of relevant books in Bangla will be authored, translated and published to facilitate vocational and technical education.
- Government budget will be allocated on priority basis in the sector of vocational and technical education.
- Appropriate steps will be taken to fill in the vacant posts in vocational and technical institutes.
- Public-private partnership collaboration will be encouraged to establish new technical and vocational institutes and to develop their management. But boys and girls belonging to insolvent families will have opportunities to study in these institutions.
- Technical and vocational institutions can run two shifts for Diploma in Engineering and other diploma courses in order to ensure the highest use of their infrastructure and other facilities. But attention will be given to maintain quality and to ensure standard contact hours.
- Necessary stipends will be given to them as financial help. Such students will be brought under vocational curriculum within a reasonably acceptable time-frame.
- Private sector will be encouraged to establish quality vocational and technical institutions. Priority will be given to them for inclusion of MPO for the teachers of these institutes. Necessary resources, materials and instruments and financial support will also be provided.
- A survey will be conducted about the needs of the countries that import manpower from Bangladesh. Course materials in vocational and technical education will be included accordingly. Provision will be there to train the students to have some primary skills of the languages of those countries.
- The curricula of vocational and technical education will be constantly under review and revision in view of job markets of home and abroad.
- In future, steps will be taken to establish a technical university.

3.5.3 After analyzing the policy implications

It is essential to ensure quality of TVET to meet the need of policy demands. Now it is time for focusing the implementation of strategies advised to take for TVET quality enhancement. The following steps can be implemented on priority basis:

- Awareness build up program.
- Program for bridging the technological gap.
- Recruit adequate number of skilled and trained teacher/trainer.
- Financial assistance program.
- Traineeship program.
- Work-based learning program.
- Internship program.
- Industry-Institute Collaboration program.
- Joint research program.
- Curriculum updating program.

- Establishing partnerships between different ministries.
- Establishing core committee including members of different ministries along with development partners under NSDCS with monitoring the Industry Academia Collaboration.
- Formulate laws and wage structure for incorporating Apprenticeships or Interns as workforce.
- Create skill database with networking of different countries.

4. Conclusion

A large number of working age people of our country is out of formal Technical and Vocational Education and Training (TVET) which is one and only educational mechanism to convert these populations to employable workforce to contribute to develop the national economy of our country. The major targets of expanding TVET in our country are to satisfy the growing needs of industry, to facilitate job for unemployed youth and widespread underemployment, to find employment matching the requirements of the private sector in line with labor market demands, to become more employable, to be better equipped for business and employment opportunities, to improve socio-economic conditions, create jobs and alleviate poverty, to promote industrial linkages in the skill training delivery and to produce young skilled workforce for the market needs.

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