

Strengthening Bangladesh's Workforce: An Analysis of qualification framework-NTVQF Implementation Challenges, Gaps and Opportunities



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ABSTRACT

The qualification framework of National Technical and Vocational Qualifications (NTVQF) has been implemented in Bangladesh to enhance the quality and standardization of technical and vocational education and training (TVET), its implementation has faced challenges and also presented opportunities for improvement. NTVQF includes the requirement for capacity building, resource constraints, stakeholder coordination, awareness among industry-academy partners [training service provider (TSP)] and curriculum. Gaps and opportunities for progress include the potential for competency-based training and assessment (CBT&A), aligning TVET with market demands, supplies and promoting national and international recognition of qualifications. Moving forward, addressing these challenges will involve strengthening institutional capacity, improving coordination, collaboration, engaging industries, training service providers, curriculum and ensuring efficient resource allocation for effective implementation of the NTVQF in Bangladesh practice National Skills Development Policy (NSDP) 2011 and 2022.

Keywords: Qualification Frame work, National Technical and Vocational Qualifications Framework (NTVQF), Technical and Vocational Education and Training (TVET), Competency-based skills training and assessment (CBT&A), National Skills Development Policy (NSDP).

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1. Introduction

In Bangladesh, according national skill development policy 2011 and 2022 the implementation of the National Technical and Vocational Qualifications Framework (NTVQF) has aimed to enhance the quality and standardization of technical and vocational education and training (TVET). While this initiative has brought about plentiful opportunities, it has also encountered various challenges. Some of the challenges include the need for capacity building among TVET institutions (training service providers), limited availability of resources, gaps in coordination among stakeholders, and a lack of awareness among industry partners. However, the implementation of the NTVQF also presents opportunities for improvement. These opportunities include the potential for competency-based skill training and assessment, aligning TVET with market demands, supply and promoting international recognition of qualifications. To move forward successfully, it is crucial to address these challenges and seize the opportunities. This can be achieved through efforts such as strengthening the institutional capacity of Bangladesh Technical Education Board, National Skills Development Authority and skills related government department (23) improving coordination among stakeholders, engaging industries in the TVET system, and ensuring efficient allocation of resources. By doing so, the effective implementation of the NTVQF in Bangladesh can be realized, leading to improved TVET quality and enhanced skills

development for decent employment in the country.

2. Literature review

2.1. National Skills Development Policy 2011

The National Skills Development Policy 2011 was approved at the NSDC Executive Committee Meeting in April 2011 and adopted by the Ministry of Education. Recognizing the issues with TVET education, the policy emphasizes training and programs that are more adaptable and demand-driven. It places a strong emphasis on the system of skills development, which includes the Skills Quality Assurance System, Competency-based Industry Sector Standards and Qualifications, and the National Technical and Vocational Qualifications Framework (NTVQF).

2.2. The Bangladesh Technical Education Board Act (2018)

identified the Bangladesh Technical Education Board's (BTEB) key role in promoting the classified workforce up to the mid-managerial level of the job market through the implementation of NTVQF. The National Skills Development Policy (2011), by the National Skills Development Council, emphasizes skills for job market relevance and introduces competency-based training and assessment (CBT&A) and the qualification framework as the National Technical Vocational Qualification Framework (NTVQF). National Skills Development Policy 2011 strongly provides a guideline for implementing the NTVQF with strong

participation from industry and employers. 8th Five-Year Plan (July 2020–June 2025) GOB emphasizes and sets target indicators for TVET to meet the Sustainable Development Goal (SDG), especially the quality education indicator (SDG 04, 08). The Eighth Five-Year Plan strongly recommends the implementation of NTVQF and provides directions for supporting the whole implementation process. BTEB's "A Report on Matching of NTVQF Qualification with the Occupations of Present Employment Market" (2018) identified the number of graduates produced by BTEB and its status of matching the needs of the employment market. Rafique, A (2017) give emphasis on low skill and low productivity of the unclassified employed and how the upcoming workforce prevails in all public and private sectors of the economy and services. To provide its citizens with educational credentials that meet the demands of the labour market, Bangladesh must overhaul its education and training system.

The government's primary goal is to raise the standard of life for the majority in order to become a middle-income nation by 2021 and a high-income nation by 2041. We require faster economic growth in order to achieve this. Because of its inclusive state policy, cautious fiscal policy, many reform initiatives, and ongoing development efforts, Bangladesh has seen higher GDP growth and per capita income in recent years. One of the most important elements of social and economic development that is sustainable is a skilled labor force. The creation of a competent workforce and decent work are prioritised in both the UN Sustainable creation Goals (SDGs 4 and 8) and the Government of Bangladesh's 7th Five Year Plan.

According to reports, Bangladesh's workforce's skill level does not match the country's present growth trajectory. Low skill levels have been shown to be the main obstacle to Bangladesh's development. By increasing competence and competitiveness, among other things, training turns workers into human capital and keeps them relevant.

The Government of Bangladesh recognized the need for improvement of the country's Technical and Vocational Education and Training (TVET) system and its commitment is reflected in the adoption of the National Education Policy 2010 and National Skills Development Policy 2011 and 2022. These policies have outlined the routes for expansion, diversification, extension and development of technical and vocational training programmes to improve the quality and consistency of NTVQF (nationally recognized qualification).

2.3. Qualifications frameworks

A person receives a qualification when a qualified entity certifies that they have acquired the necessary knowledge, abilities, and/or broader competencies. An assessment procedure or the successful completion of a course of study are two ways that the standard of learning is verified. A study program and/or work experience can be used for learning and assessment towards a qualification. Official recognition of worth in the job market, as well as in further education and training, is granted by a qualification. A legal right to practise a trade may be a qualification. A qualification framework seeks to improve understanding of qualifications (degrees, certificates, or recognition of experiential learning and skills) in terms of the information they give an employer about the competencies of potential employees. Because frameworks are made to explain the connections between qualifications, they can be used to build pathways within educational systems.

According to the ILO (2010), almost 100 nations are currently participating in some capacity in the creation or

implementation of qualification frameworks, making the focus on NQFs crucial. Governments are increasingly using qualifications frameworks as a tool for policy reform, whether the goal is to make education and training programs more flexible and relevant, to make it easier to recognize prior learning, to encourage lifelong learning, to make qualification systems more transparent, to create quality assurance systems, or to open up opportunities for credit accumulation and transfer.

Despite the growing global interest in NQFs, empirical research on their actual design, implementation, and labor market results is lacking. This international comparative study of the effects and application of credentials frameworks is a crucial first step in bridging this gap.

A significant step towards accomplishing the nation's objectives for poverty alleviation and economic development is the present NTVQF program (UIL, NFQ, 2015). The Bangladesh NTVQF supports a clear and nationally consistent system for skills training and qualifications that are appropriate for both local and foreign employment. The government, industry skills councils, and non-governmental organizations are among the interested parties who are enthusiastic about the NTVQF. At first, there was a lot of doubt about going to scale, which means full implementation in all schools, curricula, and occupations (ILO/Mia, 2010). Bangladesh will take steps to implement the NTVQF and address any local circumstances in the future.

2.4. The link between qualifications and curricula is evolving

In many nations in the European Union's neighborhood, qualifications and curricula are frequently inextricably linked, as I have already mentioned. Frequently, curricula were narrowly specialised and extremely closely structured. Additionally, the definition of curriculum varies per nations much as qualification does. However for training purposes it refers to the activities, exchanges and experiences that take place within a structure learning process. In Eastern Europe and the Balkans traditional vocational education and Training (VET)-employers ties were severed by the upheavals of 25 years ago. Restricting 'training' schools had the unavoidable effect of rebalancing theory over practice and possibly diluting VET by adding to many broad subjects. As the learners enrolled in general education has increased vocational education and training (VET) has occasionally experienced a further relative decrease. Additionally, rather than being based on learners needs or the job market, in this regard VET curriculum frequently continue to be supply driven based tools equipment's materials that is readily available. However, result-based approaches curriculum and qualifications as well as the market demand of occupational standard (Competency standard-CS) have aided countervailing tendency in recent years to better relate qualifications employments need. Quality assurance body can develop curriculum that are better matched to provide students employable skills by outcome which must match the national qualification framework (NQF) description. This approach is more transparent, more adoptable in terms of the type of teaching and assessment it permits and more sensitive to the evolving demands of the labour market. There are initiatives to start learning with qualifications. Individual qualifications which have related learning with qualification which have related learning objectives and assessments standard are influenced by NQF level descriptors, which have an impact on qualification level descriptors. It is significant that workplace competencies not the curriculum serve as the basis for the

learning outcomes. Instead of the curriculum guide to the learning process, learning modules and curriculum are then created to assist learner in reaching the outcome. This makes it possible to distinguish between qualifications and courses. Compared to beginning VET (IVET) where schools must provide younger learners with a broader range of topics in addition to more focused occupational standard making the transition to outcome-based curriculum easier. However, it seems that the effect on NQFs and qualifications reforms on teaching and learning are still less significant than those of defining qualifications creating a NQF identifying the relevant national stakeholders and putting new quality assurance procedure into place, the literature review reveals the challenges and opportunities for strengthening the Bangladesh workforce through the NTVQF. Addressing challenges related to awareness, funding, curriculum alignment, teacher training, industry engagement, and quality assurance is essential. Capitalizing on opportunities for economic growth, youth employment, industry collaborations, and international cooperation can contribute to the successful implementation of the NTVQF and the overall development of the workforce in Bangladesh. To fill this research gap and gain a clear understanding of the challenges and opportunities in the implementation of NTVQF in Bangladesh, future research could conduct surveys, interviews, case studies or make use of existing data. This would add to the body of knowledge already in existence and offer perspectives to stakeholders, educators, policymakers, and implementers of TVET in Bangladesh.

3. Research objectives

- To identify the key gap and challenges to implementing the NTVQF in Bangladesh.
- To investigate the opportunities that arise from successful implementation of the NTVQF.
- To Identifying the gaps between the TVET system aligned with NTVQF and industry demands.

4. Research Design and Methodology

4.1. Study area: The study are limited in the rural urban context and data collection area will be Dhaka, Chattogram, Cox's Bazar, Narayanganj, and Gazipur district in this context.

4.2. Data source and Data collection techniques

Both primary and secondary sources will collect data. Using a standard questionnaire the chosen industry, NTVQF graduates and training service provider are survey in order to get primary and at filed level. With 2,18,991 NTVQF graduates from the Bangladesh Technical Education Board (BTEB), the country's Ministry of Technical and Madrassa Education division is home to them. There are thirteen sectors in all.

4.3. Sampling

All the NTVQF graduates, industry, workplace will cover under this study. However due to certain restrictions and study budgetary restraints it not be feasible to every NTVQF graduates industry and workplace countrywide. Data will be collected in the districts of Dhaka, Chattogram, Cox's Bazar, Narayanganj, and Gazipur because the study is limited to a rural urban setting. A multi-stage sampling technique will be used in this investigation. In order to administer the survey, eight (8) variables (indicators) are expected.

4.4. Expectable Variable (indicators)

1. Employment rate

2. Availability of job
3. Wage and salary
4. Market responsiveness
5. Potential occupations/trade
6. Potential Sectors
7. Level of Competency
8. Industries demand

4.5. Respondent and participants

Respondents include employers, job placement officers, RTO managers or principals, and NTVQF graduates.

4.6. Study tools

- Face-to-face interview
- Focus Group Discussions (FGDs)
- Key Informants Interviews (KIIs)
- Case studies
- Physical observation

4.7. Analytical frameworks

1. USE
2. Average USI
3. Regression analysis
4. Factor analysis

4.8. The study's validity and reliability

Reliability and validity maintenance are essential components of any research and study. Validity and dependability were upheld in a professional manner in the current study. Additionally, prior to gathering survey data, the research team met with the study supervisor and national TVET specialists to validate the questionnaire. The term "reliability" essentially refers to the use of appropriate and trustworthy instruments and measuring scales for assessing beliefs or phenomena. In social research, the Likert Scale is a widely accepted instrument for judging opinion. A 5-point Likert scale was used to rate the opinion-based items in this study: 1 on the scale indicated strongly discontent, 2 dissatisfaction, 3 neutrality (neither agree nor disagree), 4 agreeable, and 5 strongly satisfactory. However, questions are occasionally tagged with "yes" or "no" answers.

4.9. Data analysis and presentation

The collected data will entry in the Excel or SPSS programme and it analyze or another statistic soft wire. The analysis's findings and conclusions were presented using a variety of visual aids, including tables, bar diagrams, pie charts, and column- and line graphs. Third, after being contrasted with qualitative observations, the quantitative conclusions were examined, confirmed, supplemented, and even countered. Qualitative data observations and opinions were analysed to see if the results were considered sufficiently compatible with the study challenge and setting. Essentially, a thematic analysis was performed on the qualitative data. Once the main and important points of view were categorized into several thematic areas, the subject of cross-examination, repeated arguments, and corroboration was carefully investigated before any firm conclusions were made.

5. Findings

Bangladesh has a standardized system called the National Technical and Vocational Qualification Framework (NTVQF) that aims to increase the caliber, applicability, and accessibility of technical and vocational education and training (TVET).

NTVQF implementation has, nevertheless, encountered a number of difficulties, opportunities, and gaps. An analysis of these factors typically highlights a mix of systemic, educational, and workforce-related issues and insights.

5.1. Implementation Challenges

Institutional Capacity: Many educational institutions lack the resources and infrastructure needed to implement the NTVQF fully. Inadequate training facilities, outdated curricula, and a shortage of qualified instructors have hindered effective deployment.

Industry Linkages: The demands of the labor market and vocational training programs are very different. Employers frequently observe a gap between training curriculum and industry demands when they discover that graduates lack practical skills.

Funding and Resource Constraints: Limited funding for TVET programs constrains the ability of institutions to update training materials, invest in equipment, and provide adequate teacher training.

Awareness and Social Perception: The social perception of vocational training remains low in Bangladesh, with many students and families viewing it as a lesser alternative to academic education. This reduces the demand for TVET courses and limits the framework's reach.

Quality Assurance Issues: The NTVQF faces challenges in standardizing and maintaining consistent quality across institutions. A lack of rigorous assessment and monitoring mechanisms has led to variable outcomes in training quality.

5.2. Gaps in NTVQF Implementation

Curriculum Relevance and Flexibility: Many courses under NTVQF lack alignment with current industry demands and technological advancements. This results in gaps between what is taught and what is required in the workplace.

Skills Recognition and Certification: There is a need for better systems to recognize and certify informal skills and competencies gained outside formal education, which would enable more people to benefit from NTVQF certification.

Teacher Training and Development: Teachers in the TVET sector often have limited exposure to modern industry practices, and pedagogical training, affecting the quality of instruction. Continuous professional development and alignment with industry trends are needed.

5.3. Opportunities for NTVQF Enhancement

Strengthening Industry Partnerships: Creating more robust links between vocational institutions and industries could improve curriculum relevance, offer on-the-job training, and facilitate smoother transitions from training to employment.

Increasing Government and Private Sector Investment: Enhancing budget allocations for TVET and encouraging private sector involvement can provide the financial support needed to modernize infrastructure, update equipment, and improve teacher training.

Promoting Digital Skills and ICT Integration: As Bangladesh moves towards a digital economy, incorporating ICT skills into vocational training can equip students with essential tools for modern jobs and enable more online and flexible learning options.

Improving Public Awareness and Changing Perceptions: Campaigns to promote vocational training as a valuable educational pathway could help shift societal views and increase enrollment in NTVQF programs.

Recognition of Prior Learning (RPL): Recognizing the skills of individuals in the informal sector and granting them NTVQF certification can boost employment opportunities and formalize skill recognition across industries.

Mutual Recognition Agreements (MRA): The number of Bangladeshi workers working abroad is estimated to be between 14.9 million and 15.5 million. Bangladesh is the sixth largest migrant-sending country in the world, and the Bangladeshi diaspora has been a key factor in the country's development. Bangladesh can sign Mutual Recognition Agreements (MRAs) with foreign nations when a consensus has been reached regarding job role matching. MRA signatory nations would recognize the National Qualification Framework (NTVQF). The basis for the recognition would be TVET results that are acceptable, comprehensible, and shared by Bangladesh and the countries of destination.

The NTVQF framework in Bangladesh has significant potential to bridge the skills gap in the workforce and support economic development. However, realizing this potential requires addressing the challenges of quality assurance, funding, industry alignment, and societal perception. With strategic investments and reforms, NTVQF could be positioned to meet the evolving demands of both learners and the job market, ultimately contributing to a more robust and inclusive TVET ecosystem.

6. Recommendation

Stakeholder awareness and involvement: To support the successful implementation of the NTVQF, it is essential to increase stakeholder awareness. This includes increasing awareness of the benefits of the NTVQF, improving understanding of the specific implementation challenges and opportunities, and providing clear information on how stakeholders can engage. To achieve this, media campaigns, workshops, training sessions, and public engagement forums can be organized.

Emphasis funding constraints: Adequate funding is essential for successful NTVQF implementation. The government should increase investment in workforce development initiatives, introduce innovative financing arrangements, and seek internal and external funding.

Promote international cooperation: International cooperation can support the effective implementation of NTVQF in Bangladesh. This involves collaboration with international organizations, development partners, and other countries to learn from global best practices and share knowledge and expertise.

Regular updating curriculum alignment: The curriculum should be aligned with national industry standards and

regularly updated to reflect industry needs. This can be achieved through close collaboration between industry and education stakeholders.

Enhance teacher, assessor training: Teachers and instructors, assessors should receive appropriate training to effectively implement the NTVQF. Programs for teacher preparation should be created to enhance the instruction of technical and vocational skills and to employ more creative teaching techniques (pedagogy training)

Strengthen quality assurance: To ensure quality outcomes, robust quality assurance mechanisms are necessary. This can be achieved through the establishment of a regulatory body responsible for monitoring the quality of training providers, assessments, qualifications, and certification.

Promote industry engagement: Industry engagement is crucial in ensuring the relevance and responsiveness of TVET programs. Employers should be actively involved in the design and delivery of training programs. Industry networks and partnerships should be strengthened, and incentives should be provided to encourage industry engagement.

Strengthening regulatory framework: Clear regulations and standards should be strengthened to ensure the consistency and quality of the NTVQF implementation. These regulations should ensure that NTVQF qualifications are recognized nationally and internationally.

Monitor and evaluate progress: Continuous monitoring and evaluation are necessary to measure the progression and success of NTVQF implementation. Annual reviews and periodic evaluations should be conducted to identify areas for improvement, ensure compliance with the standards, and modify policies and strategies as required.

These recommendations include increasing stakeholder awareness, addressing funding constraints, ensuring curriculum alignment, enhancing teacher training, strengthening quality assurance, promoting industry engagement, establishing a supportive regulatory framework, monitoring and evaluating progress, and promoting international cooperation. Through this implementing activities of recommendations, Bangladesh can improve the quality and relevance of its employable workforce development programs, enhance youth, and NEET employment prospects, and ensure a more inclusive and equitable economy.

7. Conclusion

The National Technical and Vocational Qualifications Framework (NTVQF) represents a critical step towards aligning skills development with national and global labor market demands in Bangladesh. This study has explored the multifaceted challenges, identified key implementation gaps, and highlighted emerging opportunities within the current framework.

Findings reveal that while the NTVQF offers a structured approach to qualifications, several obstacles hinder its full realization. These include limited stakeholder awareness, weak institutional capacities, fragmented industry linkages, and insufficient policy coordination. Moreover, the inconsistent application of standards and lack of systematic recognition of informal skills further dilute the framework's effectiveness.

These include strengthening infrastructure and resource availability, promoting better coordination among stakeholders, addressing the skills gap through curriculum alignment with industry needs, and engaging industry partners in the NTVQF implementation process. Additionally, efforts should be made to enhance the international recognition of NTVQF qualifications, potentially opening doors for global employment opportunities for Bangladeshi graduates, implementing the recommended strategies and addressing the challenges identified in the study will help strengthen the Bangladesh workforce, align it with industry demands, and contribute to sustainable economic growth and development, the challenges head-on and capitalizing on the identified opportunities, Bangladesh can make significant progress in the successful implementation of the NTVQF, ultimately leading to an improved TVET system, better industry alignment, and increased opportunities for individuals in the domestic and international job markets.

Literature References

1. UIL_Global_Inventory_of_NQFs_Bangladesh.pdf BANGLADESH, UNESCO Institute for Lifelong Learning BBS, 2018 Labour Statistics in Bangladesh-An empirical analysis.
2. BIDS Report 2017, LABOUR MARKET AND SKILL GAP IN BANGLADESH (Macro and Micro level Study), Dhaka Bangladesh.
3. ADB-SEIP 2022, Report of tracer study (tranch2), Bangladesh BTEB 2022-2023 Annual report.
4. ILO, 2010 The implementation and impact of National Qualifications Frameworks: Report of a study in 16 countries.
5. UNESCO Institute for Lifelong Learning 2015, Global Inventory of Regional and National Qualifications Frameworks, Germany.
6. ADB 2017 ADB Support for TVET Development in Bangladesh.
7. ILO 2016 National Technical and Vocational Qualifications Framework (NTVQF): Policy Measures towards Skilled Workforce.
8. Kaur, S., et al. 2019 Key Challenges and Opportunities of Implementing the National Technical and Vocational Qualifications Framework (NTVQF) in Bangladesh. *Journal of Technical Education and Training*, 11(3).
9. ILO 2016 Khatun, F., et al. National Technical and Vocational Qualifications Framework (NTVQF): Policy Measures towards Skilled Workforce. Dhaka, Bangladesh.
10. World Bank (2017) Technical and Vocational Education and Training (TVET) Reform Project, Bangladesh: Mid-Term Review.
11. BTEB 2018 Matching of NTVQF Qualification with the Occupations of Present Employment Market.

12. NAEM 2021 Standard of Technical and Vocational Education and Training: An Evaluative Study of the Technical Training Centre.
13. Dr M Amanullah (Mak) Khan (2019) Situation Analysis of Bangladesh TVET Sector: A background work for a TVET SWAp.
14. A. M. Zahirul Islam, (2019) A Study on Employment Challenges of NTVQF Graduates in Bangladesh.
15. ILO 2015 Benchmarking of qualifications frameworks.
16. M. Mulder (2007). Competence – the essence and use of the concept in ICVT. *European Journal of Vocational Training*, issue 40, p. 5-21.

Related Studies/References

1. NAEM July 2021, Standard of Technical and Vocational Education and Training: An Evaluative Study of the Technical Training Centres (TTCs) in Bangladesh.
2. ADB-SEIP 2022, Report of tracer study (tranch2), Bangladesh.
3. BIDS Report (2017), LABOUR MARKET AND SKILL GAP IN BANGLADESH (Macro and Micro level Study), Dhaka Bangladesh.
4. ILO, 2010 The implementation and impact of National Qualifications Frameworks: Report of a study in 16 countries.
5. UIL_Global_Inventory_of_NQFs_Bangladesh.pdf BANGLADESH, UNESCO Institute for Lifelong Learning.
6. UNESCO Institute for Lifelong Learning 2015, Global Inventory of Regional and National Qualifications Frameworks, Germany.
7. ADB-SEIP 2022, Report of tracer study (tranch2), Bangladesh.
8. Benchmarking of qualifications frameworks, ILO Country Office for Bangladesh.