RESEARCH REPORT

ON

COMPETENCY STANDARD RELATED FACTORS AFFECTING THE EXPANSION AND IMPLEMENTATION OF NTVQF SYSTEM IN BANGLADESH

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Acronyms and Abbreviation

AQF	Australian Qualification Framework
BTEB	Bangladesh Technical Education Board
BNQF	Bangladesh National Qualifications Framework
BMT	Business Management Technology
CS	Competency Standards
CBC	Competency Based Curriculum
CAD	Course Accreditation Documents
CBT	Competency Based Training
CBE	Competency Based Education
CBLM	Competency Based Learning Materials
CBT&A	Competency Based Training & Assessment
DACUM	Developing a Curriculum
DTE	Directorate of Technical Education
EoC	Element of Competency
GC	Generic Competency
HSC (VOC)	Higher Secondary Certificate (Vocational)
HR	Human Resources
ISCO	International Standard Classification of Occupation
ILO	International Lobor Organization
ICT	Information and Communication Technology
ISC	Industry Skills Council
KII	Key Informant Interview
KOICA	Korea International Corporation Agency
NSDP	National Skills Development Policy
NTVQF	National Technical and Vocational Qualification Framework

NSC	National Skill Certificate
NSDA	National Skills Development authority
NGO	Non-Governmental Organization
NSDC	National Skills Development Council
OBE	Outcome Based Education
OSC	Occupation Specific Competency
PC	Performance Criteria
QAM	Quality Assurance Manual
RTO	Registered Training Organization
RPL	Recognition of prior Learning
SCDC	Standard and Curriculum Development Committee
SDG	Sustainable Development Goals
SSC (VOC)	Secondary School Certificate (Vocational)
SCDC	Standard and Curriculum Development Committee
SSC	Sector Specific Competency
SOA	Statement of Achievement
TMED	Technical and Madrasha Education Division
TVEC	Tertiary & Vocational Education Commission
TVET	Technical and Vocational Education and Training
TNA	Training Need Analysis
TSC	Technical Sub Committee
TSEDA	Technical Education and Skills Development Authority
TAFE	Technical and Further Education
UoC	Unit of Competency
WOK	Web of Knowledge

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Abstract

The aim of the study was to examine how and what extend competency standard related factors like quality of CS, duration and level of CS in qualification framework and assessment strategies affecting the enrollment, expansion and implementation of NTVQF in Bangladesh. The findings comprehended that the format, structure, quality and industry relevance of CSs are satisfactory, contents are sufficient, current and authentic and comparatively near to similar of Philippine, Sri Lanka and Australia. The existence and quality of evidence guide as critical aspect of the competency, underpinning knowledge & skills, required attitude, resource implication, methods of assessment and context of assessment are quite good and acceptable but other proxy factors like fixed and same duration 360 hours training course for each and every occupations, level-based training instead the provision of unit-based training, assessment and certification strategies, substandard positioning of the levels in framework but tapping higher order complex and unjustified competency units in that very initial levels, too many levels in a single occupation, existence of nomenclature of the job class in qualification framework and in some cases substandard pre requisite qualification critically affecting the implementation of NTVQF.

These affecting factors creating unwillingness towards training under qualification framework, reducing trainee enrollment, losing interest and in some cases making inability for receiving training and further training in upper levels, ultimately creating proxy obstacle in expansion of training and education under qualification framework.

The way of salvation from the affecting factors are - initial level of qualification should be started and placed in different appropriate levels according to the criteria defined in level descriptor, eliminate the name of job class from the qualification structure, duration of occupational courses should be varied from occupation to occupation and level to level as practicing by the other countries based on a complete job role in various considerable context. Introducing notional hour instead of nominal hours for the units & courses and unit-base credit system need to be introduced for waiving the achieved credit during the swap of students / trainee from training to education or education to training.

CHAPTER 1: INTRODUCTION

Classified competence workforce is one of the main prerequisites for increasing productivity and sustainable development. The digitalization impact like deceptive, disruptive, dematerialize, demonetize and transparent democratization as well as trends of changing national, regional and global job market specially after covid-19 situation, the employers focuses more on productive classified workforce. Total scenario of job market is changing in the new normal situation during and after pandemic. Peoples are working globally either in real workplace or virtually from home facing competitive situation. Whatever the working situation, the philosophy is that the employee must be skills and productive. In order to sustain in the competitive market and achieving Sustainable Development Goal (SDG), most of the countries trying to build a close relationship between demand and supply through matching qualification with occupation. For producing work ready flexible workforce most of the country in globe restructured and still restructuring their educational and occupational qualification in context of local need, habitude, culture. International Standard Classification of Occupation (ISCO) structure, codes and guidelines (ISCO-08, Volume-1, ILO, Geneva), describe classified level wise qualification on the basis of knowledge, skills, attitudes and responsibilities of the human resource. Most of the developed and developing countries already classified their skill workforce in different levels according to their qualification framework. Regular workforce forecasting, production of need based workforce and maintaining as well as utilizing level wise human resource pool in national database is the basis of strategic workforce plan. The classified national workforce database is too important for the government, the employers, training providers and NGO's for planning and placing workforce in right time in right position of right places. For focusing and materializing such activities government introduced National Technical and Vocational Qualifications Framework (NTVQF) in 2009 and implementing the framework since 2012 following the strategies and guideline of NSDP-2011 in Bangladesh, brief outline of NTVQF implementation status and issues as well as the rationale of this study in Bangladesh context are illustrated below.

1.1 Background:

Like other countries in the globe, Bangladesh developed a partial qualification framework for the technical and vocational arena, titled as National Technical and Vocational Qualifications Framework (NTVQF) with the aim to produce classified skill and productive workforce in 2011.

This qualification framework NTVQF initially formed by the government and define the job class by level descriptor and on the basis of level description their occupational qualifications i.e. competency standard is set incorporating underpinning knowledge, skills and responsibility within the six occupational levels. For accessing to the NTVQF training framework, the minimum required educational qualification is class eight or grade eight. Two prevocational levels also appended with this framework in Bangladesh context, so that the illiterate existing workforce having hands on skills but no literacy or numeracy, can access to the pathway of mainstream NTVQF system. After receiving prevocational training and achieving certificate in the pre-vocational levels from a recognized government certification body, the certified graduates have the provision to enroll in mainstream NTVQF levels.

Table -1.1: NTVQF Structure with Job Classification

NTVQF Levels	Education Sector			Job Classification
	Pre-Vocational Education	Vocational Education	Technical Education	
NTVQF 6			Diploma in engineering or equivalent	Middle Level Manger / 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 Prevocation Certificate-NPVC 2			Pre-Vocation Trainee
Pre – Voc 1	National Pre – vocation Certificate 1 – NPVC 1			Pre-Vocation Trainee

Source: National Skill Development Policy, 2011. Bangladesh Gazette, May 29, 2014

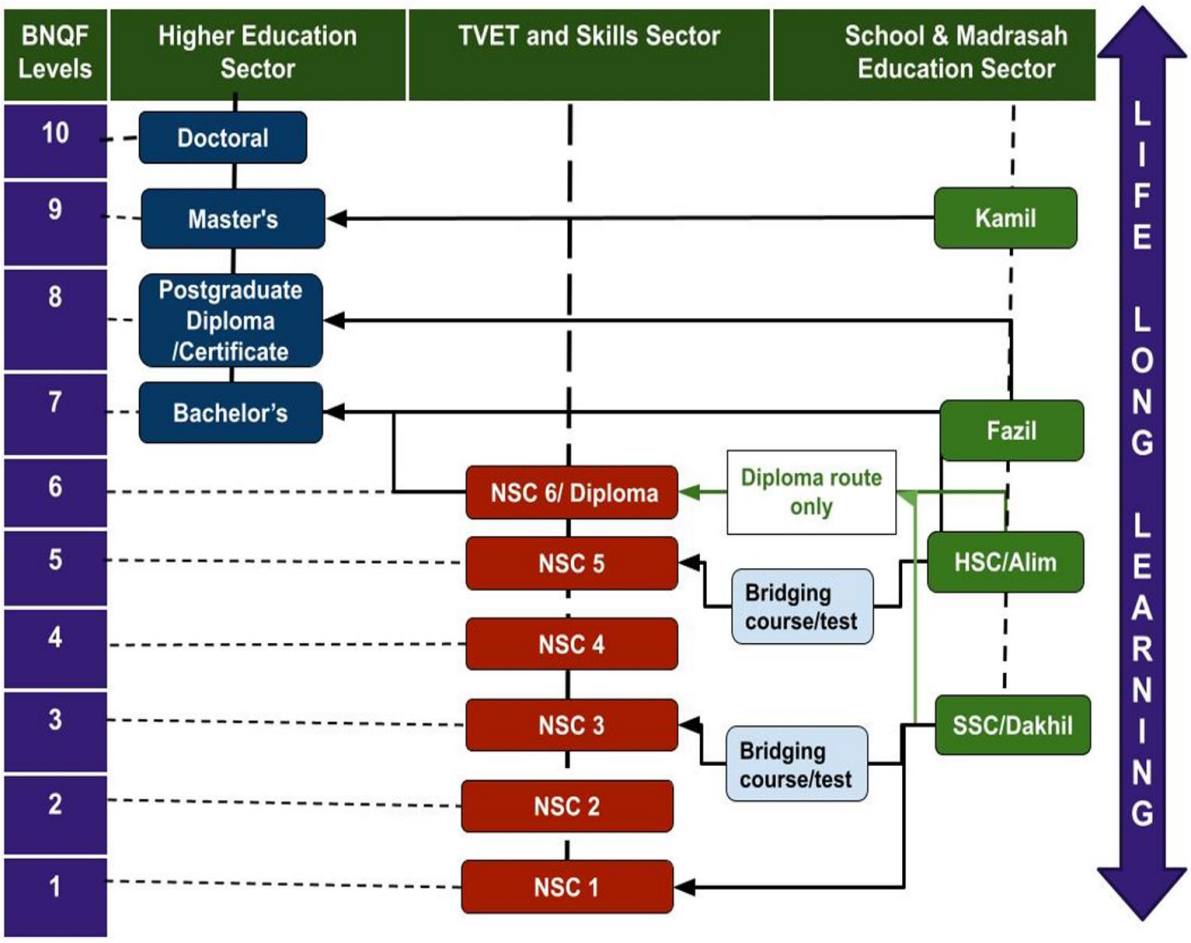
Training and certification under NTVQF system start in 2012 where BTEB acts as the standardization and certification body as defined in National Skills Development Policy 2011 under the supervision and guidance of the then National Skills Development Council (NSDC). Since 2012 the total NTVQF certified graduates are more than 0.148538 million up to level 5 in different occupations of 12 industry sectors. BTEB approved a total of 471 competency standards of 232 occupations, organized by BTEB but lead by Industry Skills Council (ISC) involving the industry workers and professional. The training program is implementing through 521 Registered Training Organization (RTO) where both training and assessment facilities are ensured during accreditation of the institute and courses. (Source: BTEB, DD (Course Accreditation) through KII)

Recently government of Bangladesh approved the structure of BNQF shown below in figure1.1, which is actually the wider extension and expansion of qualification framework where all the education and training qualifications for Bangladesh are incorporated, define and structured.

The BNQF structure is constituted based on 3 unique streams of education and training (Figure - 1.1) where whole existing NTVQF system is merged and incorporated in a unique vertically articulated pathway naming as TVET and Skills (BNQF level 1 to 6). The other two new incorporated streams are higher education (BNQF level 7 to 10) and School and Madrasha Education (BNQF level 3, 5, 7 and 9) where horizontal articulation of NSC certification provision in different levels under TVET and skills sector, given the opportunity of a students or trainee to achieve occupational / skills certificate through completing a bridging course or attending in a challenge test as an RPL candidates which is the indirect promotion of lifelong learning.

Government directed Bangladesh Technical Education Board for aligning all technical vocational education programs like SSC(VOC), HSC(VOC), HSC (BMT) and diploma courses with NTVQF / NSC so that a student can achieve dual certificate and move to vertical pathway of TVET and Skills sector by transferring the achieved credit.

Figure -1.1: BNQF Structure



Source: BNQF, 2021, Published by Ministry of Education, Bangladesh

So, for new qualification system credit for the unit of competency need to be accounted which is a missing parameter in the CS of existing system. For smooth and proper implementation of occupational training the quality of Competency Standard (CS) and Competency Based Curriculum(CBC) , Quality Assurance Manual (QAM), Course Accreditation Documents (CAD), Quality of Competency Based Learning Material (CBLM), assessment tools and existence of other legislating and guiding documents like BTEB act-2018, NSDA act-2018 and CBT&A implementation and assessment guideline including guideline for Recognition of Prior Learning (RPL) and e-RPL are very important documents and instruments. These documents and instruments play vital role during the implementation of training program under qualification frame.

1.2 Rationale of the study:

Qualifications framework implementation and expansion depends on many factors and parameters like structure of the framework, standard and curriculum contents, number of levels in the framework. It is also depending on occupational standard, level descriptors, strategies, process and procedure of implementation, course and institute accreditation procedure, trainee registration, course delivery strategies and assessment procedure. These factors and facts may vary from country to country base on their own education and training, skills status, learning context and availability of facilities and cultural background.

Since its start of implementation the stakeholders faced and still facing many issues and challenges like parallel existence and domination of traditional training system, creating obstacles to explore the new system by the officials habituated with traditional system due to no eagerness to learn, lack of interest to access in qualification framework by the training provider, lack of coordination among the skills development bodies / authorities, contradictory malpractice of TVET and skills authority in skills development certification are the challenge to implement NTVQF in The other issues related to deaccelerating the expansion of NTVQF might be illustrated as- duplication of same works by different individual organization, trend and tendency of not coming under the qualification framework, lack of certified trainers and assessors, discrete and uncoordinated skills development program by different ministries, directorates and other private organization. It also includes no incentives provision for the NTVQF certified graduates or put out the NTVQF certified graduates from recruitment rules or processes, lack of campaign or dissemination program about the potentiality of NTVQF certifications and lack of strong commitment of the stakeholders as well as the policy maker regarding elimination of the issues.

Beside those issue and challenges there are some competency standard related factors influencing the trainee enrollment, implementation and expansion of NTVQF system which is under the control of certification authority and need to address immediately. From perception the affecting factors may include – fixed time course duration (360 hours) for all occupational levels, existence of the nomenclature of job classes in framework structure, substandard positioning of CS (Competency Standard) levels, too many levels in a single occupation, no provision of short

duration (unit base) training and certification, missing of credit system, industry responsiveness / relevance of the CS. Some of the stakeholder's idea is that CS related documents like QAM (Quality Assurance Manual), CAD (Course Accreditation Document), CBC (Competency Based Curriculum), CBLM (Competency Based Learning Material), quality of CS and assessment tools including assessment criteria like not involving / engaging the academicians in summative assessment are also important barrier of wider expansion of CBT&A (Competency Based Training and Assessment) system under qualification framework.

This very important policy as well as practical implementation issues and influencing factors need to be addressed, analyzed and mitigated considering national and regional context, global practice as well as based on stakeholder's opinion from their practical experiences of implementation based on research findings.

1.3 Scope and Limitation:

Lot of factors are influencing the implementation of NTVQF like parallel existence and domination of traditional training system, lack of coordination among the skills development bodies / authorities, contradictory malpractice of TVET and skills authority in skills development certification, duplication of the works (same CS and curriculum materials and related documents development/ preparation) by different national organizations, lack of willingness to come under qualification framework, lack of certified trainers and assessors, discrete and uncoordinated skills development program by the ministries, directorates, NGOs and private organization, no incentives provision for the NTVQF certified graduates or put out the NTVQF certified graduates from recruitment rules and advertisement , lack of campaign or dissemination program about the potentiality of NTVQF certifications, lack of strong commitment of the stakeholders as well as the policy makers regarding elimination of the issues. Beside these important issues and challenges some CS related factors like fixed duration training for all occupations, rigidness in level based training and certification without the practice duration, substandard positioning of the graduates in job classification in qualification framework, setting the standard in lower level and quality of CS are the common influencing and affective factors in NTVQF implementation. There is a remarkable lack of research on the topic to inform policies and development activities. Due to the direction and set principle of taking narrower but in-depth research as a study, all the above-

mentioned factors are not considered and addressed in the study. Instead of covering all those issues only CS related factors are taken as research topic.

This is a higher order cognitive thinking level study. Only high experienced and active professionals and practitioners could be contributed in this type study as the respondents. So, the respondents are selected based on the capacity and competency in the related field. Only the certified graduates in highest skills level 4, currently working as trainer / assessors are included in the study. Beside these the master trainer who have CBT&A level 4 certificate from BTEB and foreign training / certificate in CBT&A methodology level 5 are included as respondents in master trainer category. Some of the experts involved in NTVQF system since its start of implementation and currently contributing for developing competency standard also included as process expert in the study. So for collecting primary data, only the related process experts, selected master trainers and the most senior level assessors who have clear understanding on CS as well as qualification framework are the targeted population for this research. The respondents are selected very carefully mostly from Dhaka city so that they can be easily accessed. Rest of respondents also accessible due to their well ability to correspondent using ICT tools.

1.4 Statement of the problem:

Some of the competency standard related factors identified from perception by the researchers and a few numbers of mainstream stakeholders that the identified influencing factors distressing the enrollment of trainee, mislay the interest of further training in upper levels, reduce the quality of training & assessment, demotivated the trainee & trainers and ultimately de-accelerate the skills development program and activities under qualification framework. These very important practical implementation issues need to be addressed and mitigated immediately based on research findings and recommendation.

1.5 Research questions:

This study attempts to find how the CS related factors like setting levels of the occupational standard, period of the unit of competency and duration of the occupational courses affecting the implementation of NTVQF in Bangladesh

Based on the main purpose of the study the research questions are as follows:

1. What is the competency standard related factors affecting the implementation of NTVQF in Bangladesh?
2. What are the consequences of the CS related affecting factors in popularization, Implementation and expansion of NTVQF in Bangladesh?
3. How can get rid of and be accommodated these affecting factors to ensure wider expansion of NTVQF in Bangladesh?

Chapter and Section Outline of the report:

The research report is outline in major six chapters and quite a few sections in chapter five. **Chapter one** comprises the introductory feature of the research like background and rationale of the research, scope and limitation of the study, statement of the problem and research questions.

Chapter two and three illustrated by related literature review and encompasses methodology of the research including population, sampling procedure, tools of data collection and procedure of data analysis and a conceptual framework for conducting the study.

Chapter four stands the data analysis, presented in two parts –(i) comparative analysis of secondary data based on some CS related influencing parameters of Bangladesh, Sri Lanka, Philippine, Australia and India (ii) Analysis of primary data found from the respondents by the questionnaire and (iii) the analysis of the opinion and suggestion provided by the key Informant Persons through KII.

Chapter five, the most important part of the study report is findings of the research, organized in three sections- (A) Identification of the CS related affecting factors, (B) Consequences of the affecting factors and (C) Ways of Salvation from the affecting factors.

Chapter six illustrated with the general discussion and conclusion of the study including requirement of further study and actions followed by other parts like reference and appendix

CHAPTER 2: LITERATURE REVIEW

Introduction:

There are enough qualification and occupation related curriculum, learning continuum, literature and documents available in home and abroad both in physical and online platform but competency standard related documents or in-depth research activities specially CS related affecting factors are not found directly anywhere. So, in most cases the related factors and their influences are extract from different other documents in the review of literature part. Some of the scholarly documents related to occupation, classification of occupation, qualification frameworks, occupational standard, quality assurance system, CS development process, training delivery strategies, assessment system, guideline and criteria were reviewed and refers in this stage. The reviewed documents were indirectly helpful for defining and interpreting the factors.

Reviewed Literatures:

International Standard classification of Occupation (ISCO) is the base of qualification framework 'ISCO provides a system for classifying and aggregation occupational information obtain by means of statistical census and surveys, as well as form administrative records' (ILO, 2012). 'State qualifications frameworks are classification systems for qualifications which are categorized according to a hierarchy of levels with numbers that vary from country to another according to national needs and international requirements' (Zoubi et al,2019).

On the other hand, "define a competency framework is a means by which organizations communicate which behaviours are required, valued, recognized and rewarded with respect to specific occupational roles" (European Commission, 2008). "A Qualifications Framework is an instrument for the development, classification and recognition of skills, knowledge and competencies along a continuum of agreed levels" (Tuck,2007). Furthermore, NSQAS defines quality as fitness for purpose and meeting client needs. Again" qualification means a formal outcome of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards" (European Commission, 2008).

(Brackman et.al,2008) explain that "associated with qualifications frameworks, competency-based training, and outcomes-based learning are terms such as 'competency standards', 'occupational

standards', 'achievement standards' and 'unit standards. "Competency is the ability to apply knowledge and skills to produce a required outcome" (Trinder, 2008). Although" levels through descriptors that are sometimes written on the basis of learning inputs and sometimes written on the basis of learning outcomes" (Coles,2007). 'The framework used for the design and construction of ISCO-8 is based on two main concepts: the concept of job and the concept of skill. In ISCO-08 define job a set of tasks and duties performed, or meant to be performed, by one person, including for an employer or in self-employment. The concept of occupation is a set of jobs whose main tasks and duties are characterized by a high degree of similarity'(ILO,2012). 'Measurement of competency comprises individual units of competency, which cover a broad area of work that can logically stand-alone. They are detailed documents that specify the functions performed by an enterprise or industry at certain levels or 'units', and are written in a special format that can be used to assess/determine outcomes' (Trinder,2008).

Bangladesh Technical Education Board (BTEB) is implementing National Technical Vocational Qualification Framework since 2012 using competency-based training and assessment system. Like other successful implementing nations, BTEB in Bangladesh also using competency standard as a national regulation for training and assessment. After reviewing the CS of BTEB and other countries, it is found that competency standard consists several components and factors. The components are the contents and the evidence guide. The contents in the form of unit of competency (UoC), elements of competency under the UoC and performance criteria(PC) including range variable and condition / qualifier in the PC. the evidence guide consists of critical aspect of competency, underpinning knowledge and skills, required attitude, resource implication, assessment methods and the context of assessment. The affecting factors are industry relevancy, duration of the course, occupational level, training delivery system, credit system, evidence guide for assessment & assessment and certification. 'Competency Standards are nationally-recognized, industry-agreed definitions of competency. They define competency in three parts; the knowledge, skills and attitudes workers need to possess (performance), which conditions it is to be done under (conditions) and how well it is to be done (industry standards)' (ILO,2012). 'The main aim of national competency standards is to identify the nature of the work performed in correctional services and the standards required by workers to be deemed competent' (Australia National Training Authority, 1998). This provides the basis for the design of training and detailed

specifications for workplace assessment. It also provides the basis for national industry qualifications.

Review of previous studies provide that competency standard entails with Unit of Competency (UoC), Element of Competency (EoC), Performance Criteria (PC), Range of Variables and Evidence Guide. 'A unit of competency is the specification of knowledge and skill, and the application of that knowledge and skill, to the standard of performance expected in the workplace. A unit of competency is the smallest unit that can be assessed and recognized' (Health Information Management Association of Australia, 2020). 'Element of competency includes the competencies required to be acquired by a person in his /her occupational environment. Therefore, it refers to an action, a behavior or a result that a worker needs to demonstrate and, thus, it is a task that is carried out by one individual. The Element of competency includes the description of a task that should be carried out by workers / trainees in their occupational environment' (Moustafa Wehba, 2009). 'Elements are all the tasks required to perform the major function described in the unit' (Australia National Training Authority, 1998). 'Performance criteria are the expression of what is to be measured and why' (Gharajedaghi, 2012). 'Performance criteria are the answer to the question "how do we know that the task has been performed to the standard required?" Performance criteria are always expressed as an outcome - or what we would expect to see or know results from the task being performed. Performance criteria have to be assessable and it must be possible to have evidence that this outcome has occurred' (Australia National Training Authority, 1998). After reviewing competency standard of different countries it is clear that BTEB use condition or qualifier in developing performance criteria. A competency standard also consists range of variable 'describe the range of variables provides the different settings or contexts or requirements in which the major function will or may be performed. Some of these will be compulsory and will use words such as will, should or must. Assessment must cover all these conditions. Some of these will be optional and will use words such as might, may or could' (Australia National Training Authority, 1998).

One of the major factors of a competency standard is its development process. 'There are many methods available for competency standard development and the choice of method is strongly influence the type of competency standards' (Gonczi et al, 1990, Section 6). There are several steps in developing competency standard, Training Need Analysis (TNA) most of the time conducted by ISC. BTEB mainly develop competency standard using DACUM process and task

analysis through TSC. ‘DACUM is an acronym for Developing A Curriculum. DACUM as used widely today is a unique, innovative, and very effective method of job, and/or occupational analysis. It is also very effective for conducting process and functional analyses’ (Norton, 1997). ‘DACUM is based on three principals including: 1) Expert workers can describe and define their job/occupation more accurately than anyone else. 2) An effective way to define a job/occupation is to precisely describe the tasks that expert workers perform. 3) All tasks, in order to be performed correctly demand the use of certain knowledge, skills, tools, and positive worker behaviors” (Norton, 1997). ‘A DACUM committee is composed of 8-12 expert workers in a specific job position from a directly related industry, business, and/or organization. These experts are outstanding in their particular occupations, so they do not need advance preparation for these meetings” (Nickbeen et.al, 2017).

”There are many methods available for competency standard development and the choice of method is strongly influence the type of competency standards” (Gonczi et al, 1990, Section 6). BTEB followed mix mode of DACUM process and functional analysis methods usually within 2 or 3 steps through TSC and SCDC workshop.

Duration of the course is a very crucial and influencing factors related to competency standard, duration means the length of the specific course. After reviewing the related CS of BTEB as well as competency standard and documents of other countries, it is found that course duration or nominal hours vary from course to course base on amount of course contents and industry needs, it may be fixed and flexible. BTEB used fixed course duration for every occupation but it found that other country used need based flexible course duration. “According to The Australian National Training Authority (2003), defines flexibility for learners as anticipating and responding to their ever-changing needs and expectations, thus expanding their choice in what, when, where, and how they learn” (Willems, 2005). According to Brande’s” Flexible learning is enabling learners to learn when they want (frequency, timing, duration), how they want (modes of learning), and what they want (that is learners can define what constitutes learning to them) “(Brande’s, 1994).In a qualification framework levels are mainly present difficulty of learning and learning domains.” The structure of qualification frameworks generally includes levels of complexity of learning outcomes, expressed as level descriptors. Domains are used within qualifications frameworks to describe areas of learning. The domains for the level descriptors vary across qualification frameworks. The aspects of learning that are included in the domains (for each level) reflect each

country's education and training qualifications and system" (Bateman & Coles 2012). From review several countries competency standard it is found that initial level or starting level of occupation vary from occupation to occupation as well as country to country.

Different countries use different training learning method for delivery the training program like Competency Based Training (CBT), Competency Based Education (CBE), Outcome Based Education (OBE), problem based, project based and performance based. In Bangladesh CBT&A learning method used in NTVQF system." CBT methodology deviates from the traditional approach to education and training, placing a heavy emphasis on what a person can do in the workplace after the completion of the training program. Progression of learners within a CBT program is not time-bound; instead it depends on the person's ability to demonstrate the necessary competence for the job. CBT focuses on assisting learners to develop and demonstrate competent performance as required by the industry-approved competency standards. It aims to prepare the individual for employment or become more productive in the workplace" (ILO,2012). Delivery method like lecture, demonstration, self - pace learning of competency standard is also influencing the implementation of NTVQF.

According to 'Each course is assigned a certain credit. When the student passes that course, he earns the credits which are based on that course. If a student passes a single course in a semester, he does not have to repeat that course later. The students can earn credits according to his pace' (Biswas, 2018). Credit system mainly used in higher education, reason of its benefit. This system can also be used in implementation process, it is found that number of countries use credit system rather nominal hours.

Presentation of evidence guide varies from country to country. Evidence guide is consisting of critical aspect, underpinning knowledge, underpinning skills, required attitude, resource implication, method and context of assessment. This factor also influences the implementation process of competency standard." The evidence guide provides advice on assessment and must be read together with the performance criteria, required skills and knowledge and range statement" (National Skills Quality Assurance System, 2011). According to the implementation manual NTVQF, 2014 critical aspect present what evidence is necessary for successful performance, underpinning knowledge present the knowledge that is essential for the outcome of the competency underpinning skills present a list of the skills required to achieve the competency. In implementation manual required attitude describe as a list of essential attitudes that must be

monitor during the assessment process, resource implications provide the list of resources needed for the work activity defined in the unit of competency, methods of assessment provide the guide on when and the way of collecting evidence, context of assessment explain the process of conducting assessment and provides guidance. Assessment and certification process is considering as another factors. certification is explaining as" process of issuing a certificate, diploma or title formally attesting that a set of learning outcomes (knowledge, skills and competences) acquired by an individual have been assessed and validated by a competent body against a predefined standard" (Cedefop, 2015). This certification process different from country to country base on national situation., like unit base, level wise certification.

For implementing national qualification framework competency standard work as a means, it provides the guidelines and detail specification for training which set by relevant industry. 'Competency Standards are nationally-recognized, industry-agreed definitions of competency.' (ILO,2012). 'The main aim of national competency standards is to identify the nature of the work performed in correctional services and the standards required by workers to be deemed competent' (Australia National Training Authority, 1998). It also counts as the basis of national industry qualifications.

Bangladesh Technical Education Board works as the developing and implementing authority of National Qualifications Framework since 2012 and the process of developing Competency Standard (CS) by the respective ISCs, Couse Accreditation Document (CAD) and Competency Based Curriculum (CBC) by the BTEB in a very structured and methodological manner, defined in National Skills Quality Assurance System (NSQAS) is summarized in stages as –

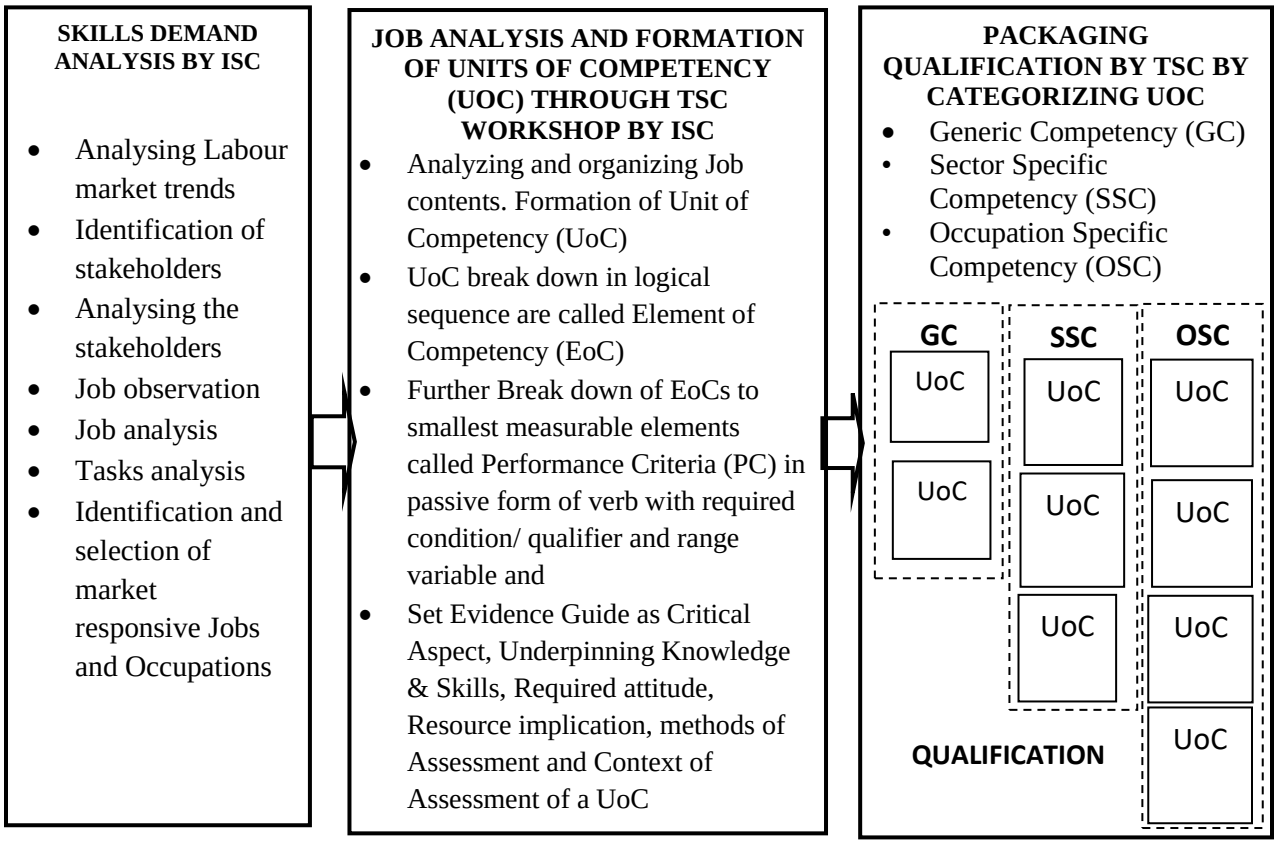
1. Demand Analysis by Industry Skills Council (ISC) and Selection of Priority Occupations:

Skills standards are defined by industry. Industry sectors will establish Industry Skills to define the skills needs for the industry sector. The definition of skills need must be based on systematic and detailed analysis of current industry skills and future skill demand. The ISC must gather information related to the availability or shortages of skills within local and international labour markets. Information must also be collected relating to changes in workplace operations, job specifications, changes in technologies and product lines. This first step in achieving this goal is for industry to develop clear descriptions of the skills and knowledge required to perform different tasks in the workplace. Such information provides the basis for defining the occupational needs and selection of priority occupations in a particular sector.

2. Job Analysis, Formation of UoC and Qualification Package:

The conduct of skills analysis and the development of the competency statements is best managed by people with the skills to analyze the jobs as competencies. The ISC will be required to demonstrate that it has established Technical Sub-Committee(s) (TSC) to conduct the job / task analysis. As a result of detailed analysis of jobs and job tasks and skills the TSC develops the statement of competencies that must be achieved by individuals in order to be recognized as skilled workers, prepares the set of competencies and develops a table of the titles of Units of Competency, which are the basic organizing unit for learning and assessment programs. The Units of competency, or competency standards, set the performance criteria that will be assessed in training institutions who issue nationally recognized qualifications. The TSC should also show how the individual Units of Competency would be clustered into qualifications. The whole process is summarized and illustrated in figure 2.1.

Figure 2.1: CS Development and UoC Packaging Process by ISC under the guidance of BTEB



Source: NSQAS, Manual 2: Accreditation of Qualifications and Units of Competency on NTVQF

3. Reviewing and validating draft qualification package through SCDC

In addition to the TSC, BTEB establishes a Standards and Curriculum Committee (SCDC) for reviewing the Units of Competency. The draft package of the proposed national qualification and the units of competency that make up the qualification are presented to the SCDC for review and recommendation through workshop. After the SCDC revision, BTEB submits the final draft to the validation workshop among stakeholders for further insights and accommodate the inputs in final version of the package.

4. Preparing Course Accreditation Documents for the Qualification Package

After the validation workshop the package of qualification and units of competency the BTEB assign a specialist, expert in Competency Based Training and Assessment (CBT&A) to draft guidelines for the learning and assessment programs that lead to the NTVQF qualifications and units of competency. The course accreditation documents comprise - infrastructure and human resource requirements, physical resources like machine, tools and equipment, entry requirements of the trainee and prerequisite qualification, selection criteria of the trainee, delivery methods, approach and strategies, assessment criteria & requirements, assessment strategies, work placement and probable position / designation after certification, student-trainer ratio, requirements of support staff and learning resources. The expert(s) finalize the Course Accreditation Guidelines called Course Accreditation Document (CAD) incorporating all the mentioned elements.

5. Approval of Qualification Package in BTEB Board Meeting

The SCDC reviewed and validated final draft NTVQF Qualification and Course Accreditation documents (Guidelines) are finalized by BTEB specialist and the final version then submits to the BTEB Board meeting for approval. Finally, BTEB Board may approves the registration of the Qualification package and Course Guidelines or seek further information or clarification before considering the approval or Not approve and recommend revision and resubmission or Not approve.

The whole review illustrated that different countries use different competency standard having common features and format but each country has some unique and innovative technique and approaches based on their own country context.

CHAPTER 3: METHODOLOGY

Both quantitative and qualitative methods are used for the study. Desk review and comparative analysis of secondary data and use of survey questionnaire for collecting primary data were the main technique of data collection. Qualitative data are extracted from key informant using qualitative questions by asking and clarifying the issues. Triangulation of analyzed data are made for remedial solutions of the problem found in primary survey.

Some of the experts involved in NTVQF system since its start of implementation and currently contributing for developing competency standard also included as process expert in the study. So, for collecting primary data, only the related process experts, selected master trainers and the most senior level assessors, having clear understanding on CS as well as on qualification framework are the targeted population for this research. The respondents are selected very carefully mostly from Dhaka city so that they can be easily accessed. Rest of respondents also accessible due to their well ability to correspondent using ICT tools. For determining the sample size **Slovin's Formula** (n) = (N / (1+Ne^2)) with initially with 5% margin of error is used but after filtering and cleaning data it become 10% margin of error where total population was 94 and finally sample size become 66. Both stratified as well as purposive sampling method are used in the study. The data source, population size, corresponding sample size, criteria for selecting respondents and sampling methods are shown in following Matrix.

Table 3.1: Sampling method matrix

Data Source	Popul-ation size	Initial Sample Size	Sample size after data cleaning	Research Design and criteria for selecting respondents	Sampling method
Process expert	12	11	11	List of professional CS developer active in Bangladesh	Purposive stratified sampling method
Trainer	19	16	16	List of Trainer having CBT&A methodology level 5 certificate either from TESDA or AQF of Australia and also have NTVQF skills certificate from BTEB	
Assessors	63	57	39	Assessors having NTVQF skills certificate up to level 4 and SOA certificate for assessment.	
Total	94	84	66	Sample size determined from Slovin's Formula with 5% but uses 10% margin of error after filtering / cleaning data	

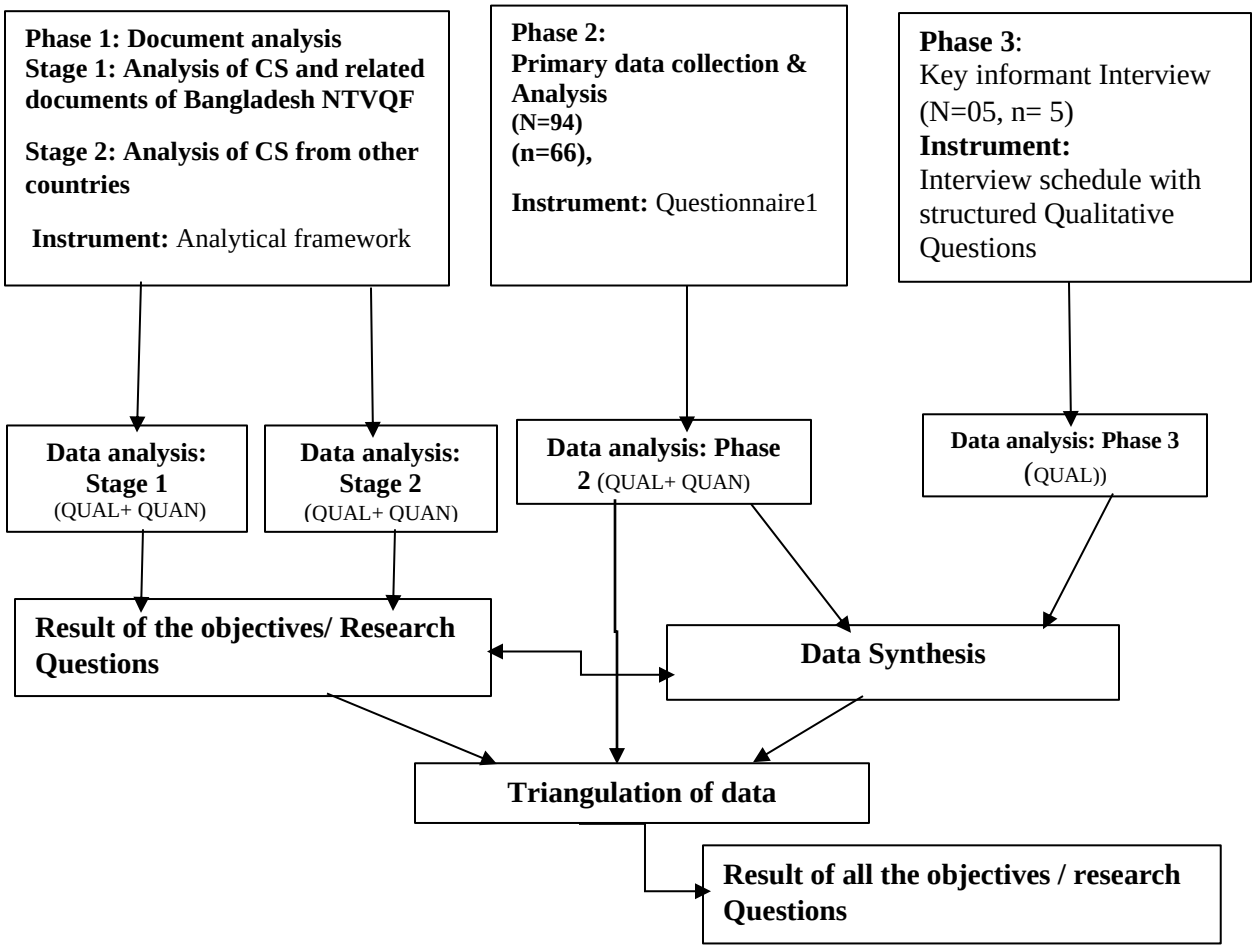
Implementation managers and policy maker	05	Reputed CBT&A CS Development Process Experts also having experience of NTVQF implementation as a principal now working in NSDA-2 , CS Development Consultant of KOICA-1, Deputy Director (Course Accreditation) of BTEB-1 and Director of NTVQF division of BTEB -1	Purposive sampling

Table 3.2: Research Matrix

Research Questions	Key Issues	Indicators	Data Type	Data Source	Data collection tools
RQ1. What are the factors related to competency standard affect NTVQF implementation in Bangladesh?	Quality of CS	1.Industry relevance, 2. Quality of UoC, EoC, PC, condition / qualifier, range variable, 3. Quality of evidence guides 4. Quality of CAD	primary	-CS development process experts -Master Trainers and Trainers -Assessors	Questionnaire
	Duration and level of the Course	1.Same duration for all occupations and levels, 2. Occupation and level Independent duration 3. Use of Nominal hours 4. Use of Notional hour 5. Starting level of the occupation 6. Number of levels in an occupation	Secondary Primary	-Literature review of related documents -CS of BTEB and similar CS of other best practice countries -all Respondents	Occupation wise Comparison matrix
	Unintended affecting factors	1.Substandard position of occupational level 2.Existence of job class in QF, 3. Pre-requisite Qualification 4. Practice of Level Based training and assessment only 5. Use of Nominal hours / Notional hours 8. Absence of Credit system and waiving credit from training to academia and academia to training			
RQ2. What are the consequences of the CS related affecting factors	Consequence of the affecting factors	1. Unwillingness towards training under QF 2. Reduction of trainee enrollment 3. Demotivation of further training under QF	Primary	-Process Expert -Trainers and Training managers -Assessors	Questionnaire

in popularization, Implementation and expansion of NTVQF implementation in Bangladesh		4. Training quality 5. Effectiveness of implementation 6. Trainee Enrollment 7. Popularization and expansion of NTVQF			
RQ3. How can get rid of and be accommodated these affecting factors to ensure wider expansion of NTVQF in Bangladesh	Improvement of the quality of CS Interevent the affecting factors Accommodate related Lesson Learn from other countries Contextualize the solutions in country perspectives Flexibility to adapt and accommodate the Change requirements Take the pain of hurdle and complexity of Implementation for ensuring quality of graduates	1.Improving quality of CS 2. Setting occupational level in appropriate job class 3. Setting flexible minimal /nominal hours for a specific UoC / occupational level / Occupational courses 4.Incorporating missing 5. Introducing affordable and easy assessment provision for short duration training and certification	Primary	-CS development expert, -Trainers and Master Trainers -Assessors -Implementation Managers and related policy makers (Related to NTVQF implementation and planning)	Questionnaire KII questions

Conceptual Framework of the Research (Design)



Data Collection and Data Analysis Procedure:

Semi structure questionnaire for general respondents and qualitative questions for Key Informants are used as the tools for collecting primary data. Documents of Secondary data is collected physically from archives of BTEB and TVEC of Sri Lanka. Documents of other countries like Australia, Philippine and India are collected by searching Google and Google Scholars. Some related documents are access through Scopus. Both desk and desktop review are made for literature review as well as analysis of secondary data. Hard copy of questionnaire and Google form are used for collecting primary data.

Data entry and data analysis are made using spreadsheet. Spreadsheet analysis and word processing software also used to create graph/ chart and writing the report.

CHAPTER 4: DATA ANALYSIS

4.1 Analysis of secondary data

Secondary data analysis is made based on the competency standard and other related documents like curriculum, course accreditation documents, quality assurance manuals and implementation guideline of different countries in the globe but extensive comparative analysis of the secondary data of Bangladesh, Philippine, Sri Lanka, Australia and India. Documents of secondary data is collected physically from archives of BTEB and TVEC of Sri Lanka. Documents of other countries like Australia, Philippine and India are collected by searching Google and Google Scholars. Some related documents are access through Scopus. Both desk and desktop review are made for literature review as well as analysis of secondary data.

The analyzed factors and corresponding data of Philippine, Sri Lanka, Australia, India and Bangladesh are shown in the table 4.1. The factors are analyzed incorporating two aspects-directly related quality factors and indirect proxy factors. Directly related factors are existence of the major quality components in CS, industry relevance and quality of contents. From the comparison it is found that most of the identified factors are available in Bangladesh CS except missing of the credit system. The overall quality is satisfactory and comparatively similar to other countries under study.

Table 4.1: Comparative Analysis of the NCS / NOC (Direct Quality Factors)

Factors	Philippine	Sri Lanka	Australia	India	Bangladesh
PRESENCE OF Standard Code	No	Yes	No	No	No
Unit Code	Yes	Yes	Yes	Yes	Yes
Credit system	No	Yes	Yes	Yes	No
Unit Descriptor	Yes	Yes	No	Yes	Yes
EoC	Yes	Yes	Yes	Yes	Yes
PC / AC	Yes	Yes	Yes	Yes	Yes
Form of actions verb in PC	Passive	Passive	Active	Active	Passive
Condition/ Qualifier in PC	Yes	Yes	Yes	Yes	Yes
Range Variable	Yes	Yes	No	No	Yes
Critical Aspect	Yes	Yes	-	-	Yes
Underpinning Knowledge	Yes	Yes	Yes	Yes	Yes
Underpinning Skills	Yes	Yes	Yes	Yes	Yes
Required Attitude	Yes	No	No	Yes	Yes
Recourse Implication	Yes	Yes	No		Yes

Factors	Philippine	Sri Lanka	Australia	India	Bangladesh
Assessment Methods	Yes	Yes	Yes	No	Yes
Context of Assessment	Yes	Yes	Yes	Yes	Yes
CS Development Methodology	Mix of DACUM and Functional Analysis	DACUM	Mix of DACUM and Functional Analysis	Mix of DACUM and Functional Analysis	Mix of DACUM and Functional Analysis
Development Stage in NSQAS / Practice	4/4	4/4	4/4	5/5	4/3
Organized by	Central Authority (TESDA)	Central and Local Authority (TVEC)	Local Authority (State and Territory Government Training Departments)	Provincial Authority	Central Authority (BTEB)
Committees	-	National Industrial Training Advisory Committee (NITAC)	Industry Reference Committees (IRCs)	-	TSC and SCDC
Industry Involvement through	Industry Working Group	NITAC	Industry Association	Sector Skills Council	Industry Skill Council
Drafted by	TESDA Local Office	National Apprentice and Industrial Training Authority (NAITA)	Industry Association	Sector Skills Council	ISC Guided by BTEB
Approval authority / Endorse By	Central Authority	Central Authority	ASQA - Australian Skills Quality Authority	National Skills Development Commission NSDC)	Central Authority (BTEB)
Sufficiency, urgently and authenticity of the contents	Moderate	Moderate	High	Moderate	Moderate
Version change	within 01 to 03 years	within 02 to 3 years	Any time on demand from stakeholder and expelled previous version	Yearly where next modification date is mentioned in current Version	On demand and very frequently for IT and RMG sector but not routine practice.

Source: Physically collected CS of BTEB and TVEC of Sri Lanka and Online Search for the CS of Philippine, Australia and India

The indirect or proxy factors usually available in course accreditation guideline are compared and analyzed in the following tables. The identified selected factors like number of national qualification levels, number of occupational / skills level, starting level of an occupation, total number of levels in an occupation, duration of the courses and entry qualifications are compared and analyzed. Table 4.2 illustrated the comparative data for graphic design occupation of ICT sector. The table shows that total number of NQF level of Bangladesh, Sri-Lanka, Philippine, Australia are 10, 12, 8 and 10 respectively where India yet not developed any NQF. Again, number of NTVQF / VQF / NSQF levels of the above-mentioned country are 06, 07, 05 and 06 respectively and for India their number of NSQF level is 10.

Table :4.2 Comparison for the occupational course Graphic Design for ICT sector

Sl. No.	Country	No. of NQF levels	No. Of NTVQF / NSQF levels	Starting Levels	No. of Levels	Duration of the Course	Entry Qualification
1	Bangladesh	10	06	02	3	360/270+160/216	Grade 10
2	Sri-Lanka	12	07	04	1	720 hours	Grade 11
3	Philippine	8	05	03	1	501 Hours	Grade 10
4	Australia	10	06	04	1	0.5 years (6 months)	Grade 12
6	India	-	10	04	1	430 hours	Grade 10

Source: Physically collected CS of BTEB and TVEC of Sri Lanka and Online Search for the CS of Philippine, Australia and India

The starting level of graphic design occupation under ICT sector in Sri Lanka, Philippine, Australia and India are 04, 03,04 and 04 whereas it is 02 in Bangladesh and since 2020, it was in level 01.

Table :4.3 Comparison for the occupational course IT Support /Computer Hardware Technician / Computer Network Technician for ICT sector

Sl. No.	Country	No. of NQF levels	No. Of NTVQF / NSQF/ Occupational levels	Starting Levels	No. of Levels	Duration of the Course (Hours)	Entry Qualification
1	Bangladesh	10	06	1	5	(360+160)+(270x4+160x4) hours	Grade 8
2	Sri-Lanka	12	07	4	1	Not Mentioned	O level
3	Philippine	8	05	2	1	320 hours	Grade-10
4	Australia	10	06	3,4	2	18+18 Weeks	Grade-10
5	India		10	5	1	80 hours	grade-12

Source: Physically collected CS of BTEB and TVEC of Sri Lanka and Online Search for the CS of Philippine, Australia and India

The table 4.3 shows the combative scenario of the statistics for IT support / similar occupations in Philippine, Sri Lanka, Australia, India and Bangladesh. After reviewing and analyzing the statistics of the competency standard, it is found that the occupation IT support comprises a single level except in Australia it is 2 whereas in Bangladesh it is 5. From this comparative data, it is clear that the occupations of Bangladesh NTVQF system is suffering with too many levels of occupations which actually not realistic and feasible to implement.

Table 4.4 shows that in Bangladesh starting level of the occupation electrical installation and maintenance / electrician is in level 1, but other country start it from level 3 only in Philippine starting level is level 2 and in India from level 5. After reviewing the other country competency standard, it is found that for the occupation IT support or similar course has only one level except in Australia it is 2 whereas in Bangladesh it is maximum 5. there are 4 level of competency.

Table :4.4 Comparison for the occupational course Electrical Installation and Maintenance / Electrician for Construction Sector

Sl. No.	**Country**	**No. of NQF levels**	**No. Of NTVQF / NSQF/ Occupational levels**	**Starting Levels**	**No. of Levels**	**Duration of the Course (Hours)**	**Entry Qualification**
1	Bangladesh	10	06	1	4	360 hours (total 1810 hour)	8 grade
2	Sri-Lanka	12	07	3, 4	2	Not Mentioned	O level
3	Philippine	8	05	2	1	260 to 402 hours	10 grade
4	Australia	10	6	3,4	2	1 year +1 year	10 grade
6	India	-	10	5	1	2184 contact hours	10 grade

Source: Physically collected CS of BTEB and TVEC of Sri Lanka and Online Search for the CS of Philippine, Australia and India

Table 4. 5 represent a comparison among occupation plumbing. It shows that starting level and number of level of the occupation plumbing vary from country to country, in Bangladesh it starts from level –1 and has 4 level of competency. Starting level in Philippine, Australia and India

respectively 1, 3 and 2 and it also found that like Bangladesh other country has multiple level of competency.

Table :4.5 Comparison for the Occupational Course Plumbing of Construction sector

Sl. No.	Country	No. of NQF levels	No. Of NTVQF / NSQF/ Occupational levels	Starting Levels	No. of Levels	Duration of the Course (Hours)	Entry Qualifi-cation
1	Bangladesh	10	06	1	4	360 hours (total 1810 hour)	8 grade
2	Sri-Lanka	12	07	3	2	Not Mentioned	O level
3	Philippine	8	05	1	3	168 hours (618 hours)	9 grade
4	Australia	10	6	3	2	3 +1.5 year	12 grade
6	India	-	10	2	6	232 hours	5 pass + 6 month

Source: Physically collected CS of BTEB and TVEC of Sri Lanka and Online Search for the CS of Philippine, Australia and India

Table 4.6 shows that in Bangladesh and Philippine, level of the welding occupation started from 1 and in India, Australia and Sri Lanka, it started from level 2 and it is also visible that all the countries under study have multiple levels in this specialized occupation.

Table :4.6 Comparison for the occupational course : Welding for Transport sector

Sl. No.	Country	No. of NQF levels	No. Of NTVQF / NSQF/ Occu. levels	Starting Levels	No. of Levels	Duration of the Course (Hours)	Entry Qualifi-cation
1	Bangladesh	10	06	1	4	360 hours	8 grade
2	Sri-Lanka	12	07	2	3	Not mentioned	General Literacy & Numeracy
3	Philippine	8	05	1	4, 3,2 & 2	716+ 684+468+ 325	9 grade
4	Australia	10	6	2	3	6 months to 1.5 years	O level
6	India	-	10	2	3	256 +320+400	8 grade

Source: Physically collected CS of BTEB and TVEC of Sri Lanka and Online Search for the CS of Philippine, Australia and India

Table 4. 7 represent that in occupation SMO and dressmaking starting level of in Bangladesh and Philippine is Level 2 and in India is level 4 and only Bangladesh has multiple level in this occupation.

Table :4.7 Comparison for the occupational course Sewing Machine Operation for RMG and textile sector

Sl. No.	**Country**	**No. of NQF levels**	**No. Of NTVQF / NSQF/ Occupational levels**	**Starting Levels**	**No. of Levels**	**Duration of the Course (Hours)**	**Entry Qualifi-cation**
1	Bangladesh	10	06	2	3	360	8 grade
2	Sri-Lanka	12	07	-	-	-	-
3	Philippine	8	05	2	1	275	10 grade
4	Australia	10	6	-	-	-	-
6	India	-	10	4	1	270	Class V

Source: Physically collected CS of BTEB and TVEC of Sri Lanka and Online Search for the CS of Philippine, Australia and India

There are large number of CS related factors which influence the implementation process of NTVQF. From the above discussion it is identified that CS quality, duration of the course, starting level are influencing factor. Quality of CS in Bangladesh is acceptable to the user in the context of industry relevancy. Development process of CS are also acceptable but duration of the training, leveling of the standard are need to be adjusted.

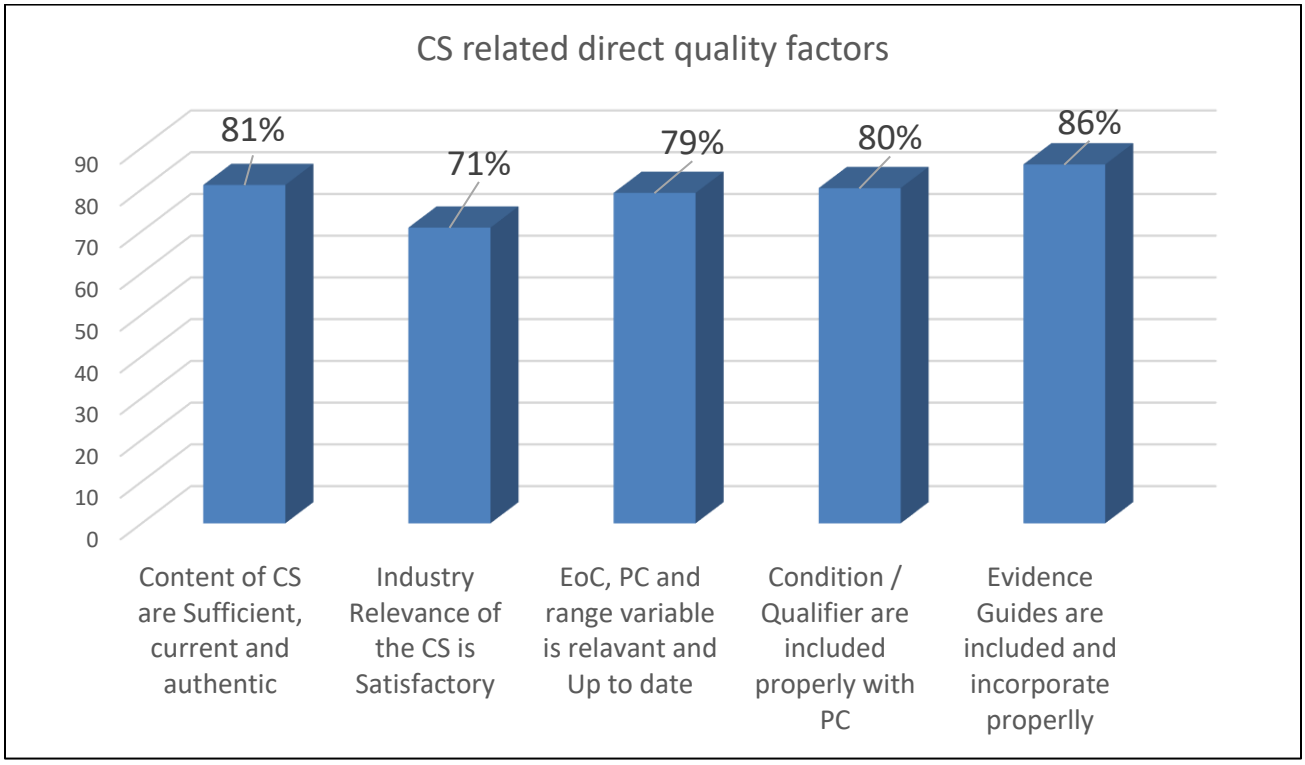
From the above comparative analysis, it is clear that existence of pre-determined same training durations (360 hours) for all occupations is not under practiced in the CS of those countries. The fixed and same duration training course for all level of all occupations concept is not found elsewhere in the globe except Bangladesh. Even in some countries duration of training course is not mentioned in CS of central authority but determined by the training institute and before or after enrollment, the training institute determine the duration of the training by taken pre-requisite level test of the candidate according to the requirement of particular group of trainees. Australia and Sri Lanka have the training and certification provision for a unit or under packaging in a cluster of units, made them more feasible and flexible for bringing all type of training stakeholders under qualification framework (QF). From the comparative analysis it is also found that almost all

successful QF implementing nations set their occupations within one or two levels comprising complete job roles whereas it is found maximum five level in Bangladesh. The initial level of the occupations in the countries under study started in different levels of qualification framework considering the complexity and higher order hands on as well as cognitive skills but for Bangladesh in most cases, initial levels of the occupations weighted with a lot of higher order hands on as well as cognitive skills, many of those are not suitable for the initial level. The pre-requisite academic qualifications for entering in QF in most of those countries are minimum O levels / grade 10 whereas in most cases it is grade 8 in Bangladesh without any feasibility and maturity of the trainee for entering and receiving occupational training.

4.2 Analysis of Primary data:

The primary data collected through semi structured questionnaires are analyzed in this section where the opinion of CS development process experts, the certified master trainers and the certified senior assessors of different occupations are addressed and accommodated. After analyzing the collected data, it is found that regarding the quality factors of the CS, among the respondents in this study 81% agreed or strongly agreed that quality of CS in Bangladesh is sufficient, current and authentic. 71% agreed that the CS are satisfactory, acceptable and easily interpretable to the user in the context of industry relevancy, sufficiency, currently and authenticity. 79 % respondents agreed that the UoC, EOC, PC, Range Variable are relevant and up to date and 80% respondents strongly agreed that condition/ qualifiers is included properly in PC and 86% respondents strongly support that evidence guides as critical aspect of the competency, underpinning knowledge and skills, required attitude, resource implication, method of assessment and context of assessment are included and incorporated properly in CS.

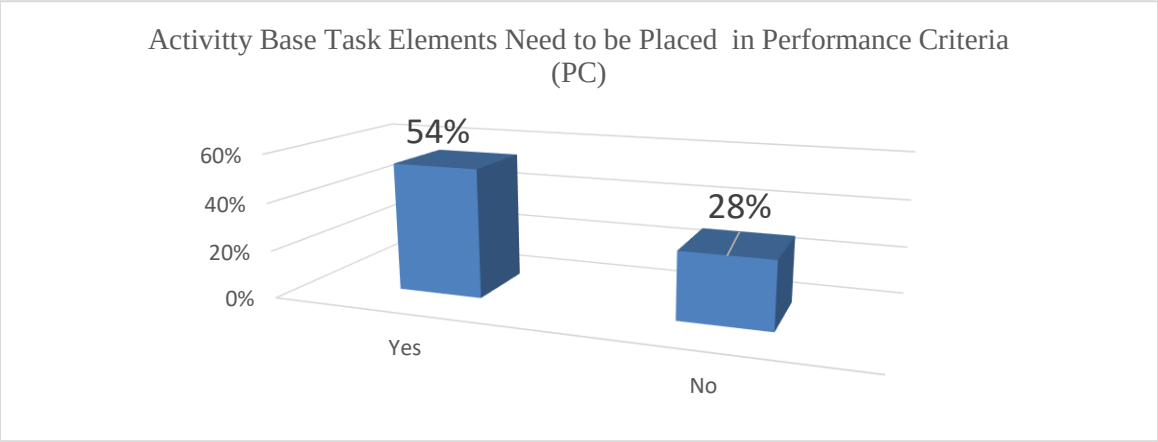
Figure:4.1 Quality of competency standard



Source: CS quality related primary data collected through questionnaire

Regarding the questions about the position of the starting NTVQF level only 32% respondents supported that starting level of his / her own occupations is justified and similarly only 46% respondents uttered that unit level is placed properly. In response to the question whether only activity base task elements need to be placed in performance criteria (PC) 54% respondents suggested that both performance-based hands on and cognitive skills need to be placed in PC and related cognitive knowledge of those skills should be included in underpinning knowledge.

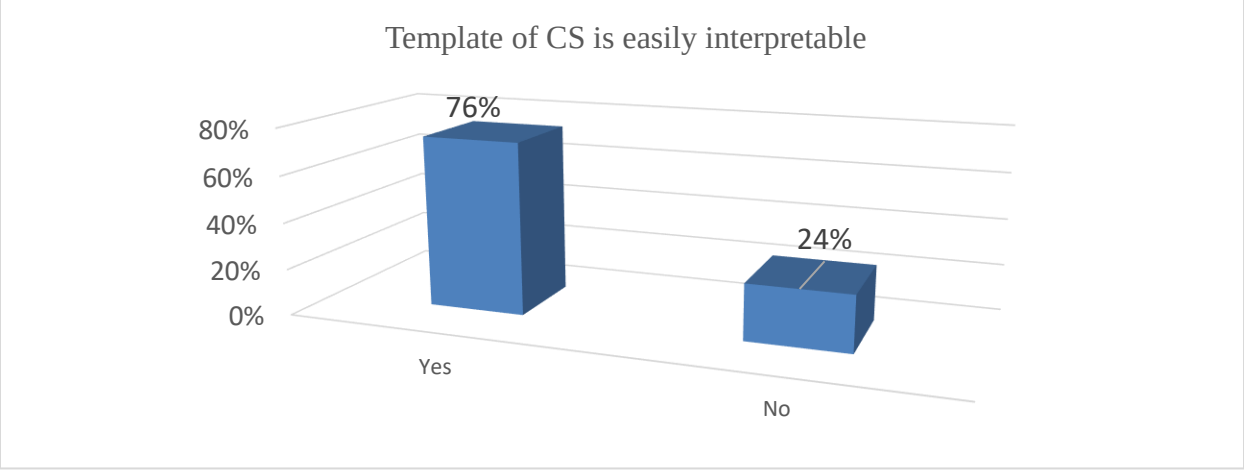
Figure 4.2: Placement of activity-based task elements in performance criteria



Source: Collection of primary data through questionnaire

28% disagree with this opinion whereas 18% respondents did not give any opinion regarding this particular question

Figure 4.3 Interpretability of the template of CS

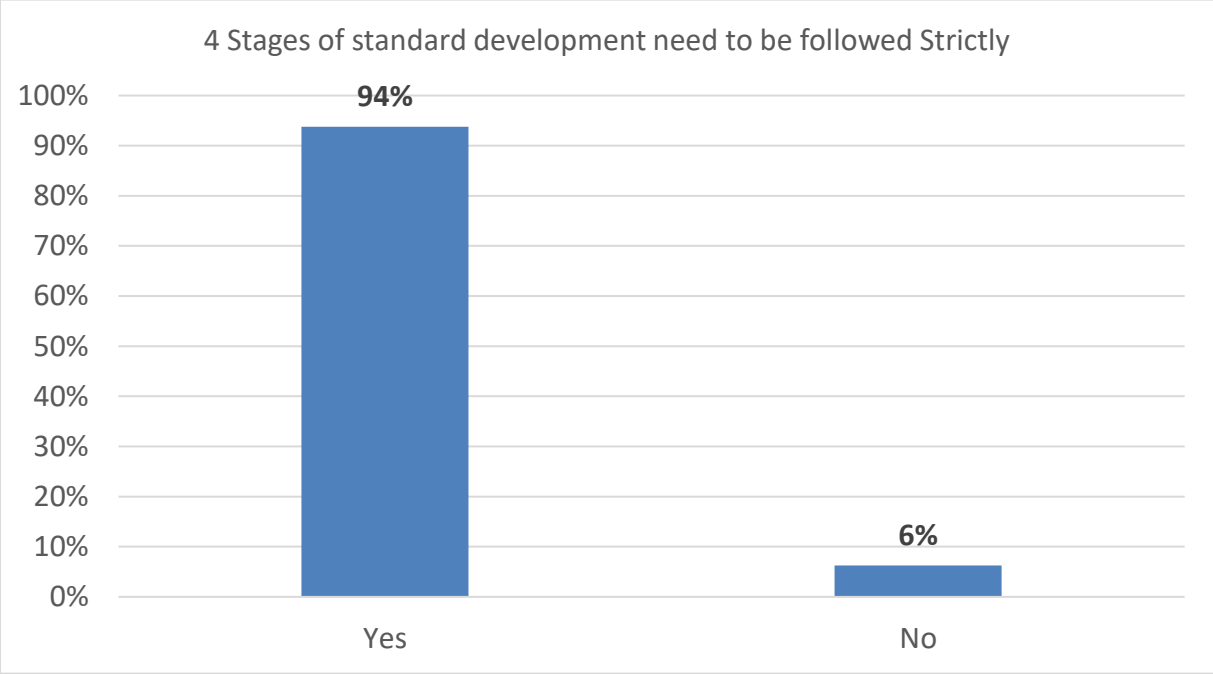


Source: Collection of primary data through questionnaire

In response on the question about the interpretability of the template of the CS, 76% respondents agreed that template / format of competency standard is easily understandable which is shown in Figure 4.3. 24% respondents said that templet is difficult to interpret by them.

Regarding the question about the steps in CS development process, 94% respondents agreed that all the 4 steps- Need analysis of the occupation, Task analysis & drafting CS and CAD by TSC workshop, Validation of the draft CS and CAD by the stakeholders and finalizing CS and CAD by SCDC workshop for approval need to be strictly followed, practiced and maintained during the preparation of CS.

Figure 4.4: Agreed stages of standard development process

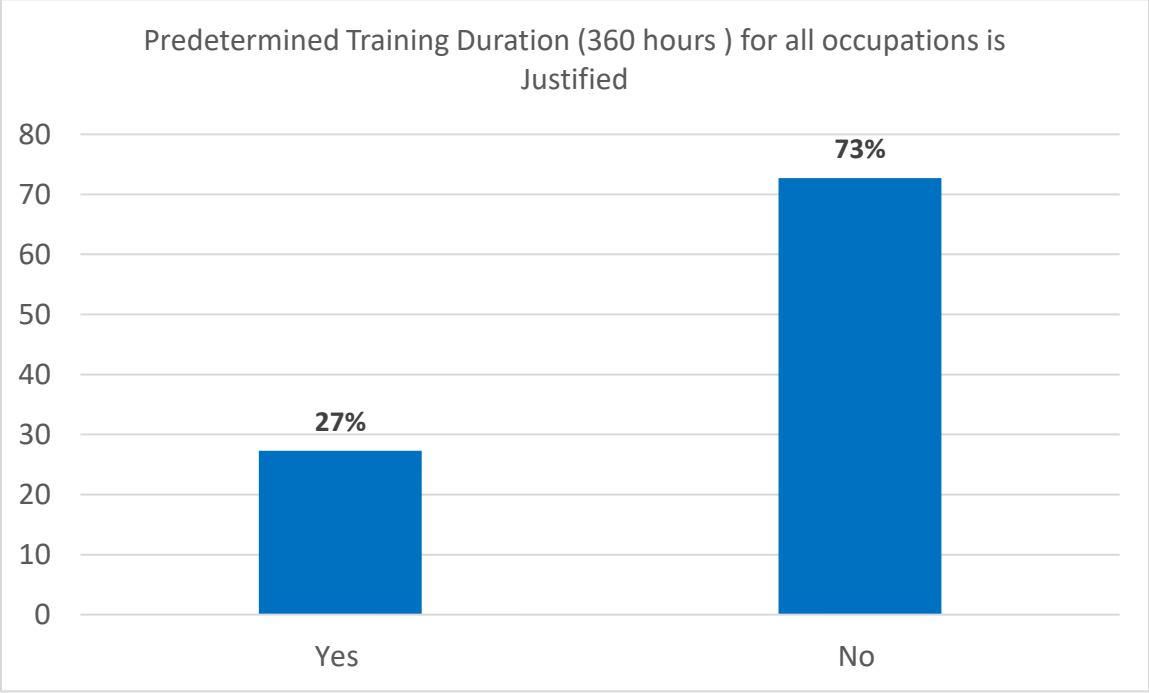


Source: Collection of primary data through questionnaire

In response to the question on the necessity of developing competency-based curriculum based on competency standard, same as previous response, 94% agreed that this is a very essential requirement for better understanding by the teachers and the students. Figure 4.6 illustrated the reflection of the respondents regarding requirements of CBC.

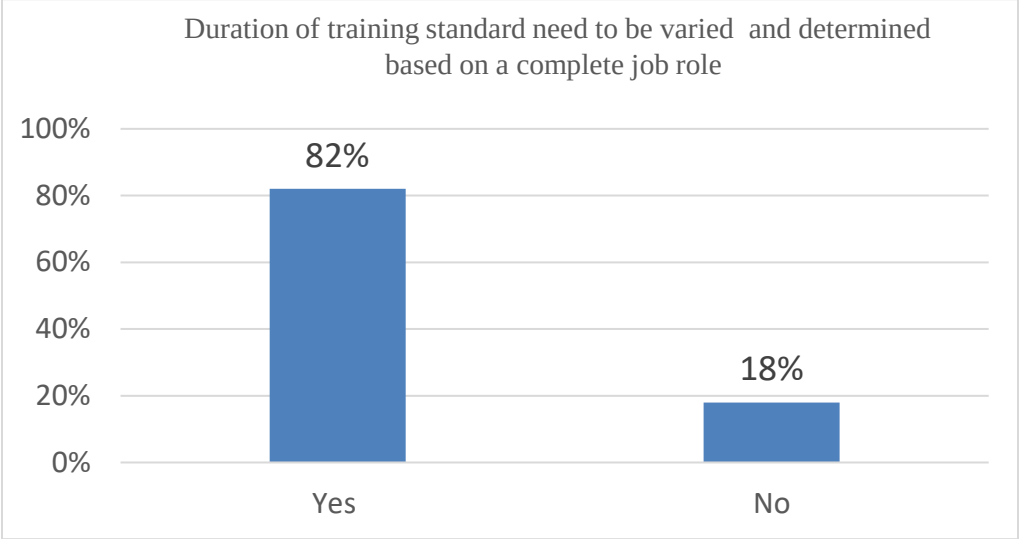
The most discussed issues in this research is the question asked to the respondents that whether the pre-determined fixed and same training duration (360 / 270 hours) for all occupations, an unique type of practice in Bangladesh NTVQF system is justified or not. 73% respondents disagreed with such type of approach and 82% of them suggested that duration of training standard should be determined based on a complete job role and must be varied from occupation to occupation and level to level. They also mentioned that training duration need to be determined as per requirements of the trainee considering the trainee's pre-requisite qualification and skills level, a trainee has during the enrollment in the training program. The responses are illustrated in figure 4.5 and 4.6

Figure- 4.5: Responses regarding the question on predetermine fixed training duration in Bangladesh



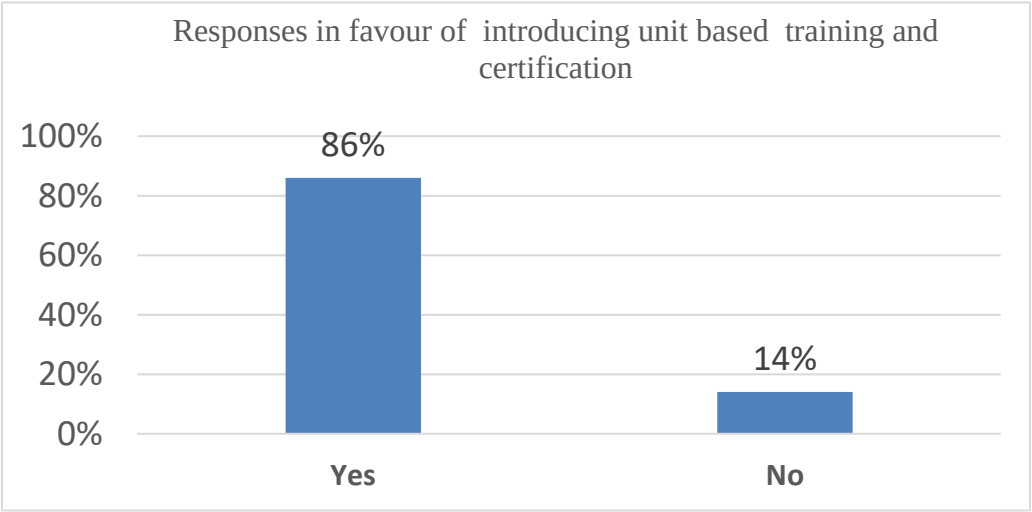
Source: Collection of primary data through questionnaire

Figure 4.6 Suggestion of the respondents regarding duration of training standard



Source: Collection of primary data through questionnaire

Figure 4.7 Proposal for introducing unit-based training and certification

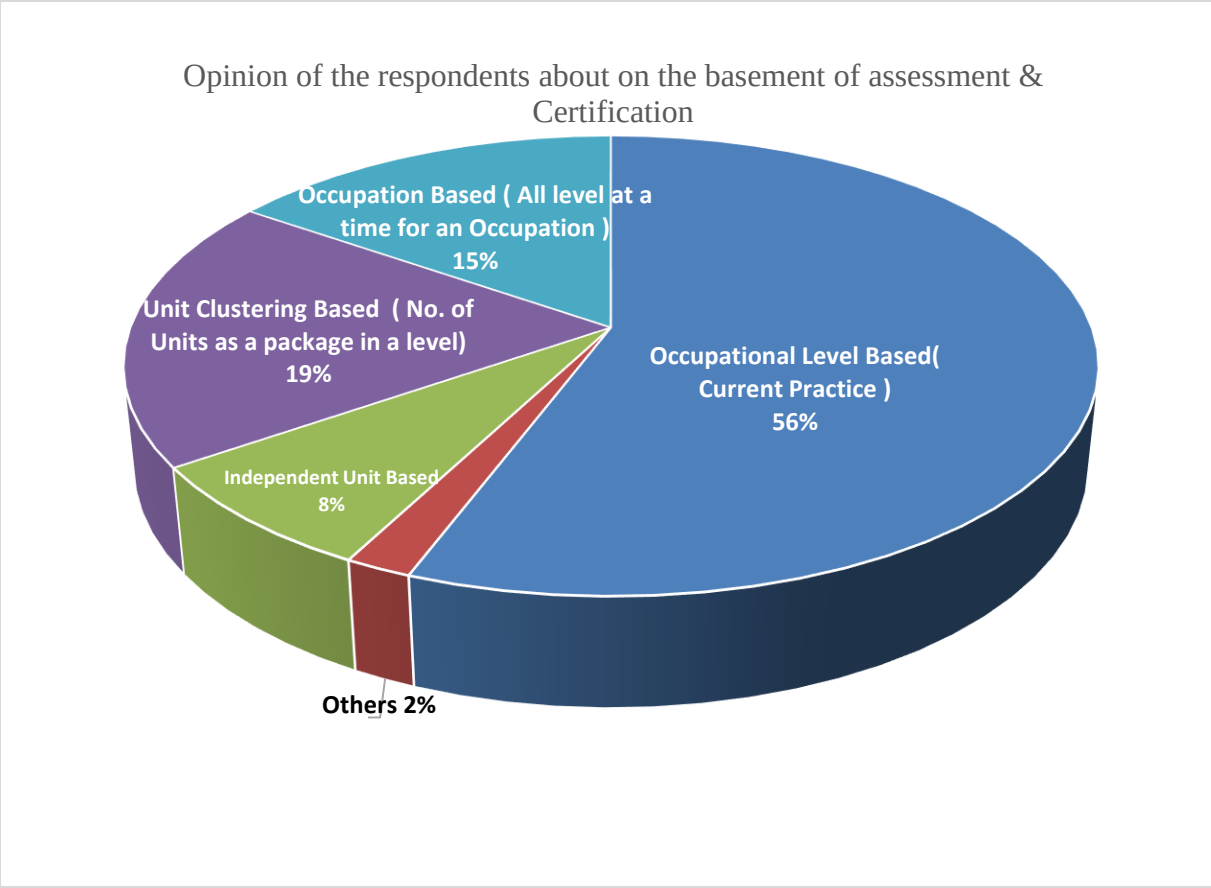


Source: Collection of primary data through questionnaire

Figure 4.7 shows that 86% of the respondent agreed with the researchers' proposal of introducing unit-based training and certification. Moreover figure 4.8 demonstrated the overall responses regarding the modality of assessment and certification where 56% of the respondents suggested to continue the current practice of level based assessment and certification with provision of unit based assessment and certification, 15% respondent suggested for occupation based assessment and certification (all levels' assessment and certification at a time after the end of full

occupational course, 19% suggested for unit clustering or packaging type of assessment and certification, only 8% respondents suggested independent unit base assessment and certification which was 86% in the previous response but they agreed to introduce several options in assessment and certification for popularization of NTVQF.

Figure 4.8 Base of Assessment and Certification



Source: Collection of primary data through questionnaire

4.3 Analysis the responses of KII:

05 key informants are interviewed regarding the issues and findings of the research. All the key informants were involved in introducing NTVQF system in Bangladesh. They are engaged in the activities since 2012, having long experience on planning, designing, developing and implementation of the NTVQF in Bangladesh. Still they are working in designing and developing competency standard and other qualification framework related activities in the national level organization, mostly in professional and higher-level position but have great contribution as well as influence in NTVQF policy formulation. Their expert opinions are taken through individual pre-appointed set interview.

The Key Informants mostly agreed with the views, opinion and suggestion of the respondents but add some other suggestions and mentioned the challenges of popularization, expansion and overall implementation in Bangladesh. They show their views expressing the potentiality of introducing NTVQF system in Bangladesh and said that for preliminary maturity of such type of education and training system takes average 25 year in a country. So, Implementation of NTVQF and its' progress come in a stage but not satisfactory as much as they expected due to number of unexpected influencing factors.

Beside the CS related factors the key informants given emphasis and seek attention to find the other influencing and affecting factors specially the strategic and policy decision constraints like- parallel existence and domination of traditional training system, lack of coordination among the skills development bodies / authorities, contradictory malpractice of TVET and skills authority in skills development certification, duplication of the works by different individual organization, trend and tendency of not coming under the qualification framework, lack of certified trainers and accessors, discrete and uncoordinated skills development program by the ministries , directorates and other NGOs and private organization. The other opinions are summarized and illustrated below.

- Regarding the quality factors like industry relevancy, sufficiency, currently and authenticity of CS, the KI also moderately agree that CS quality is acceptable but said that too many steps as performance criteria under the elements of competency of a unit of competency make the

standard distorted which might be done in Competency Based Curriculum, should not be in competency standard.

- The KI agreed with the identified CS related factors and said that concept of 360 hours training course for each and every occupations is the main obstacle for expanding NTVQF in Bangladesh. They strongly agreed that only level-based training provision instead of the flexible options of unit-based training as well as certification, substandard positioning of the occupational levels, too many levels in a single occupation, setting higher order complex, inappropriate and unjustified competency units in very initial levels, existence of nomenclature of the job class in qualification framework and in some cases substandard pre requisite qualification are the major CS related influencing and affecting factors in Bangladesh NTVQF system.
- The KIs mentioned that the identified affecting factors creating unwillingness towards training under qualification framework, reducing trainee enrollment, losing interest and in some cases making inability for receiving training and further training in upper levels, ultimately creating proxy obstacle in expansion of training and education under qualification framework as well as developing quality human resource in Bangladesh.

- The KIs suggested some way of salvation from the affecting factors, like initial level of qualification always not be set / started from level-1 rather in different appropriate level(s) They agreed with the respondents that initial level must be determined (i) according to the criteria defined in level descriptor of the qualification framework along with considering other parameters like (ii) pre-requisite educational / skills qualification of the trainee for entering to the course, (iii) designated position & job status of the graduate after certification and (iv) considering the tentative salary / wages expected to get, for the designated position / job role after graduation.

- They also suggested for avoiding substandard positioning of the occupational levels. They said that nomenclatures of the jobs usually do not mentioned in any qualification framework and it is not found in any QF of other countries. the substandard name of the job class mentioned in qualification framework misinterpret the position of the trainee and the candidates loose

interest to enroll in such type of training programme. The KI suggested for eliminating the name of job class from the qualification structure.

- Regarding the most affecting factors, course duration and contact hours, the respondents strongly agreed that duration of occupational standard should not be common and fixed for all occupations as practiced only in Bangladesh (360 hours) and should be varied from occupation to occupation and level to level as per industry requirements for a complete job role in various considerable context.

- They said that notional hour is more justified than nominal hour (current practice). Regarding the necessity of credit system, the KI said that it is a missing factor in our CS and highly recommended for introducing unit-based credit which will be helpful for waiving the credit during the swap of students / trainee from training to education or education to training.

CHAPTER 5: FINDINGS OF THE STUDY

5.1 Identification of CS related Affecting Factors

Though a number of CS related direct influencing factors exist but not affecting too much in implementing but some proxy factors initially set by the consultation and in direction of foreign experts, still some of those under practicing, critically affecting the popularization, implementation and expansion of NTVQF in Bangladesh. Regarding the quality aspect of the CS, the respondents agreed that industry relevance is more or less satisfactory, contents of CS is sufficient, current and authentic. Similarly, the components of a CS like unit of competency, elements of competency, performance criteria range variables, conditions/qualifier and evidence guide of the CS are also quite good and acceptable but disagree with the existing predetermined same course duration for all occupational levels, the strategies followed for training delivery and assessment and other levels related factors, practicing in Bangladesh NTVQF system. The fixed and same duration (360 hours) training course for each and every occupation, level-based training instead of the provision of unit-based training as well as certification, substandard positioning of the levels, too many levels in a single occupation, setting higher order complex, inappropriate and unjustified competency units in very initial levels, existence of nomenclature of the job class in qualification framework and in some cases substandard pre requisite qualification are the major CS related influencing and affecting factors in Bangladesh NTVQF system.

Based on the triangulation of the analyzed primary, secondary and KII data as well as considering the additional related suggestion of the key informants, The CS related affecting factors are identified as

- **Same Duration Courses for all Occupation:** 360 / 270 hours fixed duration training course for each and every occupation is one of the main affecting factors in implementation of NTVQF in Bangladesh. This is a unique approach maintain only in Bangladesh which directly affect the popularization and expansion. The stakeholders those are running customize short term courses feel discourages to come under this long time course duration under qualification framework and the consequence of this factor ultimately create constraint in implementing NTVQF in Bangladesh. Another problem is that in most cases the process experts usually lengthens or

shortens the original required duration for maintaining its pre-determined (360 / 270 hours) fixed duration for a level.

- **Only Level Based (Single option) Training, Assessment and Certification Provision:** Only level-based training provision instead of the flexible options of unit-based / full course training and certification provision is another big constraints of the expansion NTVQF system in Bangladesh.
- **Substandard Leveling of the Courses in Job Class:** Some training courses like, IT support, computer operation, even in initial stages graphic design occupation were placed in level -1 in job class of NTVQF system and treated as Basic worker which undermined the candidates and demotivated them to train and certify as a Basic Worker. This substandard position of the graduates in job class keep the out of NTVQF system.
- **Excess of Levels in a single Occupation:** From the secondary analysis of the courses in different countries, it is found that a single occupation comprises all the job roles required to work in a designated position and level of that occupation usually not be exceed maximum two levels. But in Bangladesh the occupations, for example the IT support are divided in maximum 5 levels, which is invalid and not justified at all. It is observed that the contents of computer operation, Computer Assembler, ICT officer, Hardware Technician, Network Supporter, Network Engineer etc. are accommodated in a single occupation namely IT support and extended it up to level 5. This too many levels in a single occupation is another constraint for expanding NTVQF system in Bangladesh.
- **Burden of higher order Skills and Competencies in Level 1:** Bangladesh NTVQF system initial level (Level 1) suffering from extra burden of skills and competencies. For example, RAC, Welding, EIM, plumbing etc. occupations started in level 1 with a huge number of higher order hands on as well as cognitive skills and competences. This extra burden is a harm for a trainee. Setting higher order complex, inappropriate and unjustified competency units in very initial levels frustrated the trainee and ultimately slow down the implementation of NTVQF.
- **Existence of Nomenclature in Job Class:** Existence of the job class in qualification framework is not found in any countries except Bangladesh where Job class like Basic Worker, Basic Skill worker, semi skill worker, skill worker, Highly Skill Worker and Mid-Level

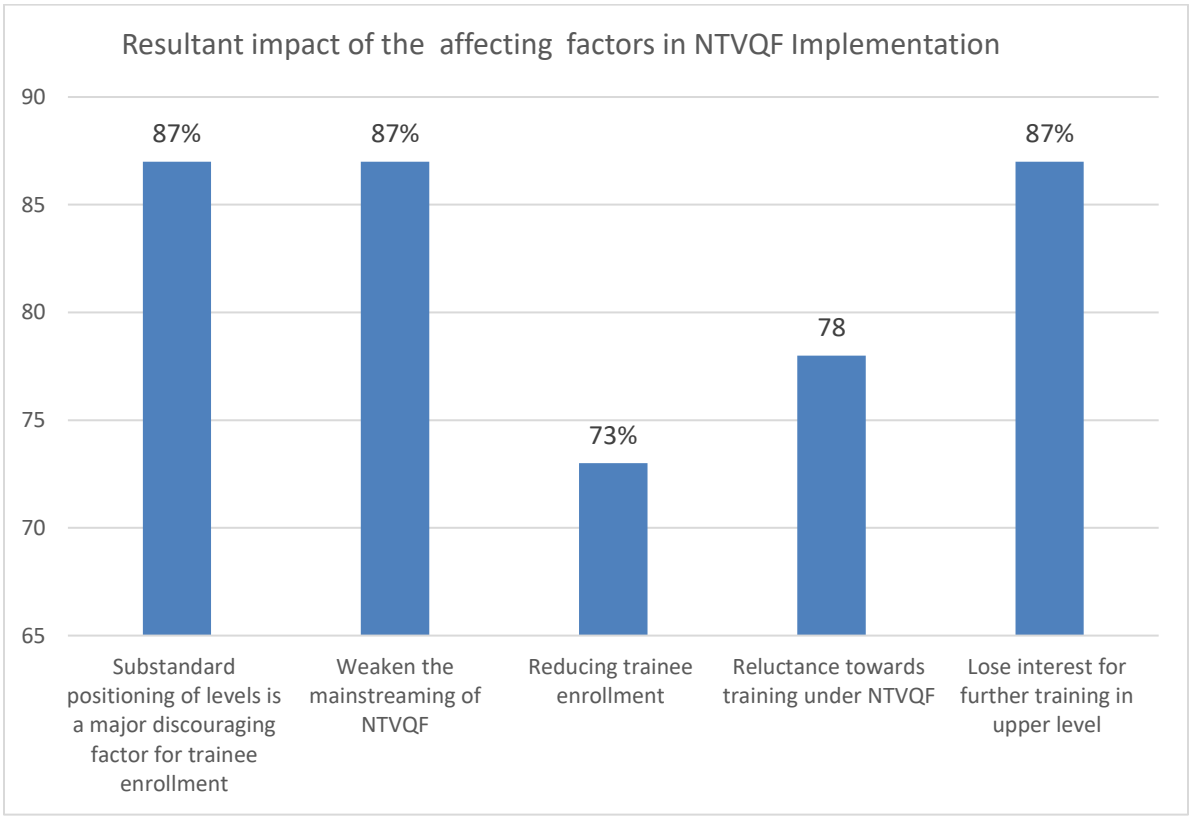
Managers are mentioned as the nomenclature of Job. This substandard naming of Job class discourages the higher educated youth to enroll in training under qualification framework

- **Inappropriate Pre-Requisite Qualification:** Substandard pre-requisite qualifications (Class VIII) for some sophisticated occupation is also an influencing and affecting factors against the expansion and implementation of NTVQF system in Bangladesh.

5.2 Consequences of the Affecting factors

The findings related to the consequences of the identified affecting factors are prioritize as discourages of trainee enrollment due to substandard positioning of the levels weaken the mainstreaming of NTVQF, lose interest for further training in upper level of qualification framework, make reluctance towards training under NTVQF and reducing trainee enrollment in NTVQF system, and

Figure 5.1 Consequences of the CS related affecting factors in NTVQF Implementation



Source: Collected and analyzed primary data through questionnaire

in Figure 5.1 shows that 87% of the respondents agreed that due to substandard positioning of level, the trainees do not fell interested to enroll in training under NTVQF system, similarly same percentage of respondents believe that the factors weaken the mainstreaming of NTVQF as well as lose their interest of further training after achieving first certificate. On the other hand, 78% respondents believe that the affecting factors make reluctance towards training and 73% of them said that it reduces the trainee enrollment under qualification framework. These factors creating unwillingness towards training make obstacle in expansion of training under qualification framework. Ultimely nation deprive from the quality graduates and competent human resource in Bangladesh.

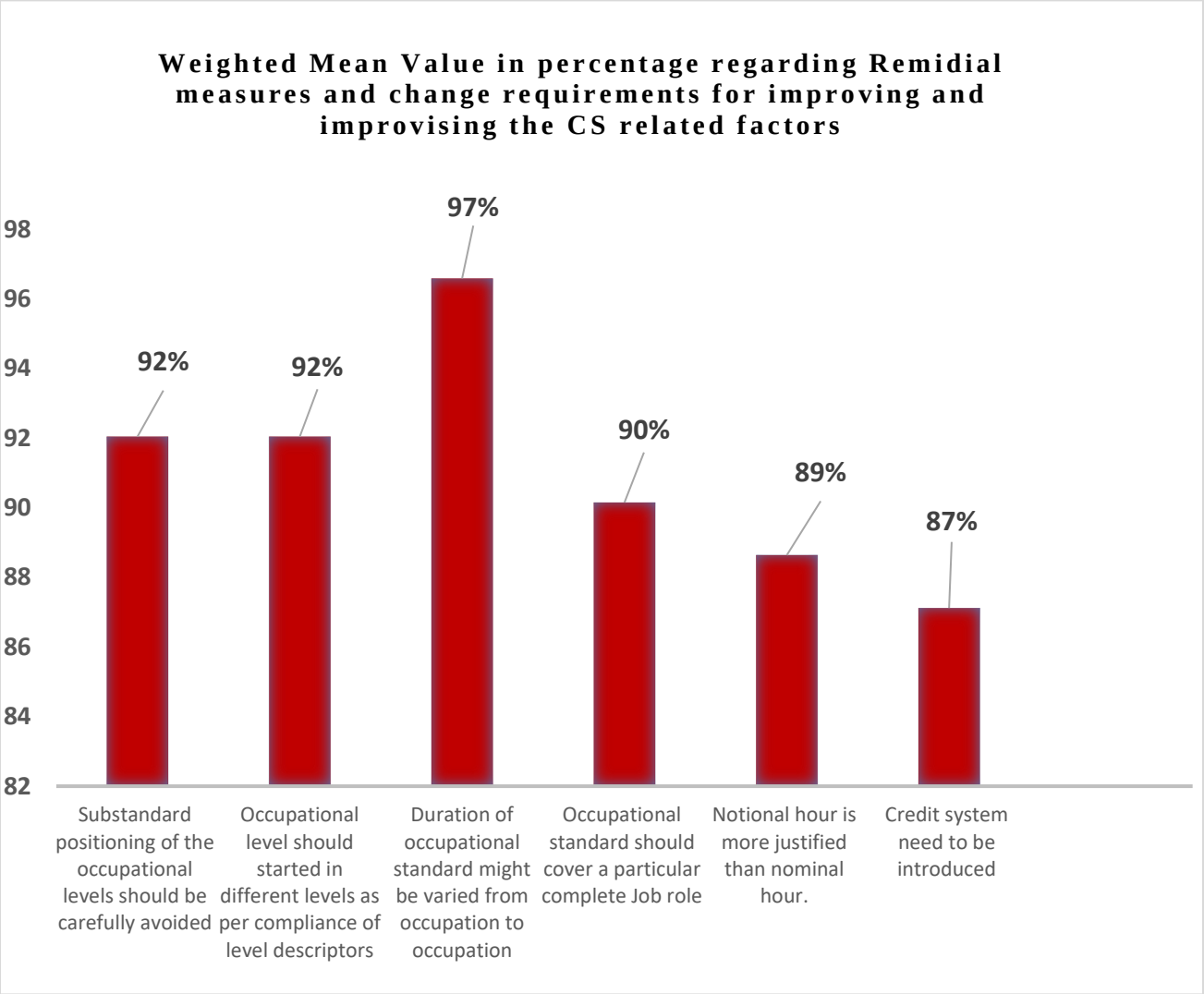
5.3 Remedial Measures and Change Requirements:

To popularize the competency-based training and assessment, increase the enrollment, wider expansion of NTVQF system up to mainstream education and to bring all short term, midterm and long duration training provision under national qualification framework, some major adjustment and innovation need to be introduced and adopted by the implementing authority as well as directives need to be given by the government. Some strategic decision and change requirements as a reform agenda should be addressed as agreed by the respondents shown in figure 5.2. Regarding the question about the salvation of the problem and change requirements almost all respondents strongly agreed with the following remedial measures for improving and improvising the CS and other related factors. Highest 97% respondents said that occupational training duration should not be similar and fixed for all occupations. Duration of occupational standard might be varied from occupation to occupation according to the industry requirement.

92% respondents agreed that occupational levels should not be always started in level-1, rather may be started in different levels as per compliance of level descriptor, substandard positioning of the occupational levels should be carefully avoided and levels must be determined following the guideline of the level descriptor. 90% respondents' view is that occupational standard should cover a particular complete Job role, so that the graduates can work independently for a particular designated position. 89% respondents said that notional hour is more justified than nominal hour in an unit of competency of an occupational standard and 87% suggested to introduce credit system for each unit of competency of an occupational standard so that the graduates able to

utilize/enjoy or transfer the achieved credit in his / her further training and education as credit waiver when required.

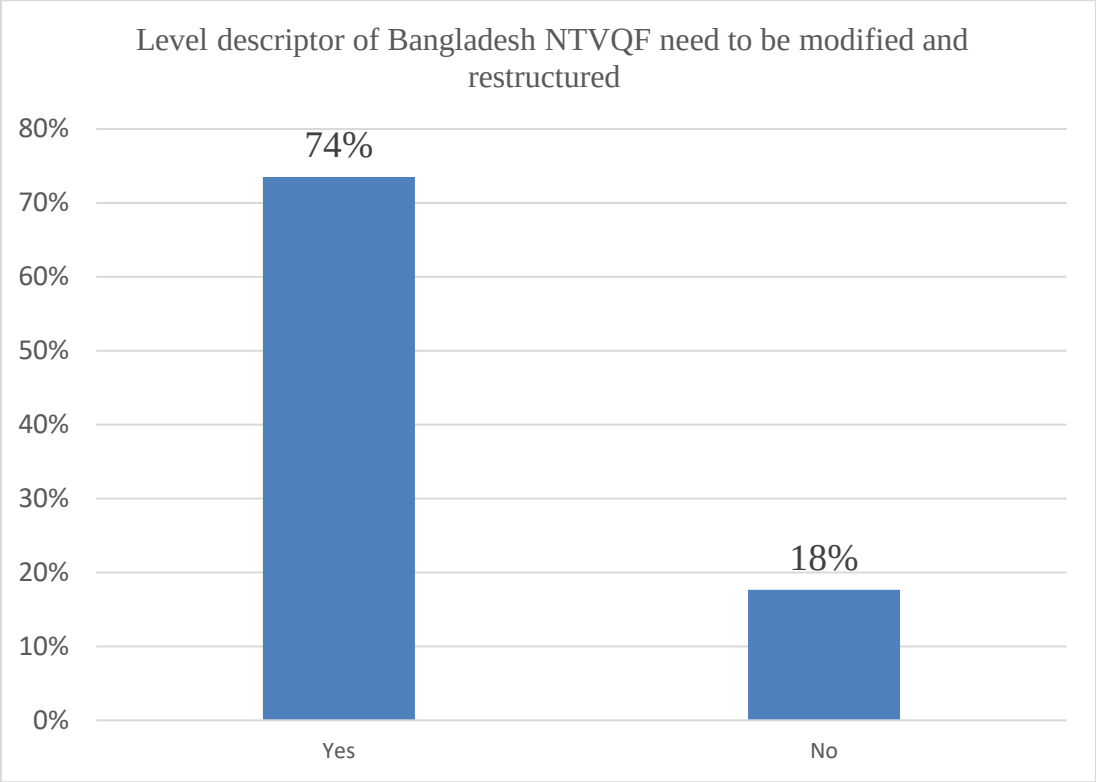
Figure 5.2 Remedial Measures for improving and improvising CS related direct and proxy factors.



Source: Analyzed primary data collected through questionnaire

74% respondents suggested that the existing level descriptor of NTVQF need to be modified and restructured considering the national context and the job class should be eliminating from the framework structure so that the training candidate / graduates never fell himself or his/ her certificate is substandard by the definition of the job class.

Figure 5.3: Level descriptor of NTVQF need to be modified



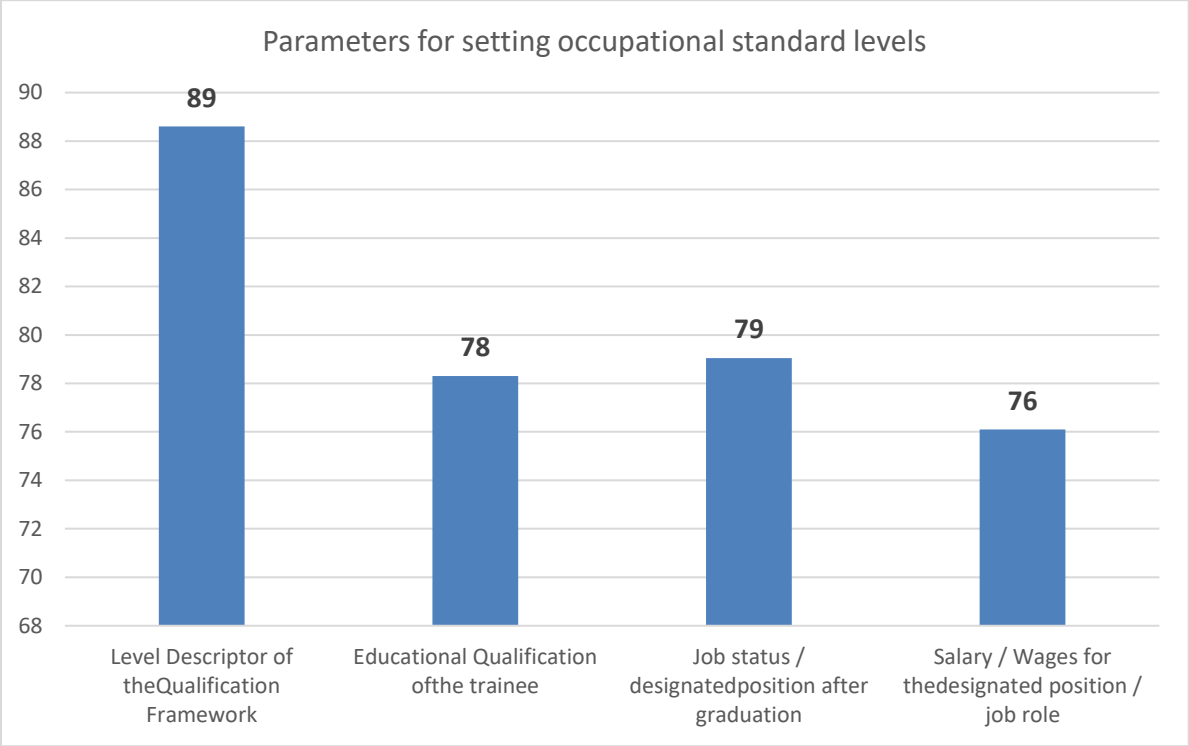
Source: Collected and analyzed primary data through questionnaire

Regarding the question on prioritizing the parameters need to be considered for setting levels of occupational standard, the respondents sequenced and prioritized the four parameters by rating as shown below in %.

1. Level Descriptor of the Qualification Framework (89 %)
2. Job status / designated position after graduation (79%)
3. Pre-requisite Educational / Skills Qualification of the trainee (78 %)
4. Salary / Wages for the designated position / job role (76%)

They also suggested to consider all the parameter combined during the setting of levels prioritizing as they mentioned but always considering the context of the nation.

Figure 5.4: Parameter for setting occupational standard



Source: Analyzed primary data collected by the questionnaires

CHAPTER 6: DISCUSSION AND CONCLUSION OF THE STUDY

Discussion:

Bangladesh economy get the attention of world and now we are in the journey of being a developed nation according to the vision of 2041, following the SDG and incorporating the five years plans. For being a developed nation, Bangladesh has to compete with other developing and developed countries. Moreover, Bangladesh is now going through the golden opportunity of demographic dividend and trying to enjoy as well as targeted to being a developed nation by 2041. For taking the opportunity of demographic dividend facilities, we have no alternatives, rather than skill up and reskilling the existing working age population and creating skill classified workforce. For sustaining in local and global job market and compete with the workforce of other countries we must create and search for high income job opportunity both in local and international market. Due to the rapid change of technology, trends of job market is also changing so fast that without adoption with twenty first century skills and competences, it is quite difficult to enter or sustain in the new world of works. Like other developed countries Bangladesh need to develop industry responsive flexible workforces. Competency based training and education could help us to create this type of workforces. Quality type of competency standard and related policies, methodology, techniques and innovative strategies in context of nation, based on national qualification framework only can ensure this targeted achievement. In this potential enabling environment, the NTVQF / BNQF implementing agenda facing a number of unwanted general constraints like parallel existence and domination of traditional training system, lack of coordination among the skills development bodies / authorities, contradictory malpractice of TVET and skills authority in skills development certification, duplication of the works by different individual organization, trend and tendency of not coming under the qualification framework, lack of certified trainers and assessors, discrete and uncoordinated skills development program by the ministries, directorates, other NGOs and private organization, no incentives provision for the NTVQF certified graduates and put out the NTVQF certified graduates from recruitment rules or processes, lack of campaign or dissemination program about the potentiality of NTVQF certifications, lack of strong commitment of the stakeholders as well as the policy maker regarding elimination of the issues distress the skills development agendas.

After extensive analysis of secondary data and information, opinion and observation of the respondents through primary data and incorporating the suggestion of key informants, it is found that substandard leveling of the occupations are anguishing the candidate / trainee towards enrollment in NTVQF system. on the other hand, too many number of levels in a single occupation is a burden for expanding NTVQF. The duration of the course (Occupational Standard) in Sri-Lanka, Philippine, Australia and India are different from other countries -like 720 hours, 501 Hours, 6 Months and 430 hours respectively varied from country to country considering the context and prerequisite educational qualification. Here the duration of the training courses are occupation and level independent. The duration of the course varied from occupation to occupation or level to level but not fixed as like the academic program. In Bangladesh the duration for the first level of the occupation is 360 hours not only for this occupational standard but fixed for all standards of all occupations in all sectors. This is a major issue in Bangladesh and need to be resolved according to the experiences of other countries. Regarding the entry qualification for the occupations, it is found that minimum academic qualification is grade 10 in all other countries except 11 in Sri Lanka and 12 in Australia. Australia and Sri Lanka have the training and certification provision for a unit or under packaging in a cluster of units, made them more feasible to bring the very short, short and long duration training stakeholders under qualification framework (QF). From the comparative analysis it is also found that almost all successful QF implementing nations set their occupations within one or two levels comprising complete job roles whereas it is found maximum five levels in Bangladesh. The initial level of the occupations in the countries under study started in different levels of qualification framework considering the complexity and higher order hands on as well as cognitive skills but for Bangladesh in most cases, initial levels of the occupations weighted with a lot of higher order hands on as well as cognitive skills, many of those are not suitable for the initial level. The pre-requisite academic qualifications for entering in QF in most of the countries are minimum O levels / grade 10 whereas in most cases it is grade 8 in Bangladesh without any maturity and feasibility of the trainee for entering and receiving occupational training.

Conclusion

This piece of research work is an important instrument where the affecting CS related factors and some by product other national level acute influencing factors are addressed and identified. The finding included number of issues and challenges which need to be considered during the revision and new development of the CS. Some reformation in implementation guideline and manuals need to be accomplished immediately like initial level of qualification always not be set / started from level-1 rather in different appropriate level(s) according to the criteria defined in level descriptor of the qualification framework, avoiding substandard positioning of the occupational levels and eliminating the name of job class from the qualification structure also very important suggestion. The most affecting factors in this research is the course duration and contact hours. From the practical experience of implementation since 2012 and lesson learned from other countries, we should rethink the related issue and way forward to mitigated the problems.

Based on the research findings- the identified CS related affective factors, consequences of the affective factors and remedial measures need to be considered for further actions and researches as mentioned below.

1) All training duration should be occupation independent with the provision of level independency when required and should have the flexibility to customize the duration based on level test / gap analysis result determined by the instructor / authority of the training institutes.
2) Fixed duration training (360 / 270 hours), common for all occupations, in practice only in Bangladesh need to be expelled. The duration might be varied from occupation to occupation and level to level as per industry requirements comprising complete job role as practiced by the other successful implementing countries like Australia, Philippine and Sri Lanka.
3) Too many levels in an occupation is one of the main constraints of popularization and expansion of NTVQF system. Multiple entry and multiple access in different levels for a single occupation is not feasible in the context of Bangladesh. Moreover, this is not in practice in other countries also. So an occupational standard should cover all the related job role and might be completed within a single level, is the best option for implementing qualification framework as practiced in Singapore and if not possible, number of levels need to be limited within highest three as practiced in Sri Lanka, Philippine, Australia and India.

4) Unit Based Training and Assessment need to be introduced in Bangladesh so that the institute as well as candidate take the opportunity of flexibility to arrange / conduct as well as enroll in very short, short and long term training provision as per demand of the industry as well as requirements of individual institutes, the development partners, the donor and the candidate himself.
5) Al least 4 steps methodology of CS development need to be strictly followed / supervised by the consent authority so that the industry relevance, currency, sufficiency and the authenticity are ensured.
6) An ADDIE cycle must be completed for accreditation of an occupational / competency standard. Initial board approval of the course may be considered as temporary approval. After completing one full cycle of implementation the course might be consented as final approval and accreditation.
7) CS Revision interval need to be reduced and done very frequently within one year or within six months when real time change requirement demand is requested and version control need to be introduced in CS by mentioning the date of next revision and producing next version.
8) Occupation code and unit-based credit need to be added in the format of existing CS in Bangladesh
9) CS in Bangladesh NTVQF system is overburdened with too many steps of task elements which should be exist actually in Competency Based Curriculum (CBC). So, to maintain the international practice and complying the writing philosophy of CS contents, the steps under an element of competency need to be limited within 5 and if required further breakdown of the PC need to be done in CBC.
10) CBC development needs to be mandatory for Bangladesh NTVQF system for better understanding by the teachers and the students.
11) The occupational levels of some very popular occupations developed initially since 2012 to 2017 (Graphic Design, IT Support, Computer Operation, Electrical Installation and Maintenance, Dress making and Tailoring, Plumbing, cooking etc.) need to be revised as well as uplifted in appropriate level immediately.

Concluding Remarks and Requirements for Further Study:

The outcome of this research added some new dimension for practitioner in improving and improvising the quality of existing competency standard. The indirect identified factors and related policy decision, guideline & criteria and strategies already addressed in the research will be a great contribution and be helpful for producing market responsive CS. Ultimately nation can get productive work ready flexible NTVQF graduates, which may lead immediate employment of the graduates in the local and global job market. The research findings as the identified affecting factors, their consequences and remedial submissions, the respective authority / organization and the policy makers may take initiatives and activates immediately through an action plan for wider expansion of qualification framework (NTVQF/ BNQF) in Bangladesh.

Beside those CS related affective factors, several number of anti-expansion issues like parallel existence and domination of traditional training system, lack of coordination among the skills development bodies / authorities, contradictory malpractice of skills authorities in skills development certification, duplication of the works by different individual organization, trend and tendency of not coming under the qualification framework, lack of certified trainers and assessors, discrete and uncoordinated skills development program by the ministries , directorates , NGOs and private organization, no incentives provision for the NTVQF certified graduates or put out the NTVQF certified graduates from recruitment rules or processes, lack of campaign or dissemination program about the potentiality of NTVQF certifications, lack of strong commitment of the stakeholders as well as the policy maker regarding elimination of the issues are identified as byproduct in the study, frequently uttered by the respondents during data collection and KII need to be analyzed through further research and the findings of this in-depth analysis might be taken in actions for proper exploration, expansion and popularization of NTVQF / BNQF in Bangladesh.

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Appendix 1:

Tool A: Questionnaire for Research

An Evaluation Study

on

"Factors related to competency standard that affecting the expansion and proper implementation of NTVQF in Bangladesh"

Context of the research works:

কম্পিটেন্সি স্ট্যান্ডার্ড সম্পর্কিত কিছু ফ্যাক্টর যোগ্যতা কাঠামোর আওতায় প্রশিক্ষণার্থী এনরোলমেন্টকে প্রভাবিত করে , ধারনা করা হয় যে বাংলাদেশের এনটিভিকিউএফ এর ফ্রেমওয়ার্কে লেভেল ডেসক্রিপ্টরের জব ক্লাশের নাম, কম্পিটেন্সি স্ট্যান্ডার্ডগুলোর নির্ধারিত অকুপেশনাল লেভেল, লেভেল ভিত্তিক ট্রেনিং ও অ্যাসেসমেন্টের পদ্ধতিসহ নানাবিধ কারনে প্রশিক্ষণার্থীদের মনোযোগ আকর্ষণ বা আগ্রহী করে তুলতে পারছে না। এমতাবস্থায় সচরাচর এই সিস্টেমে একবার কেউ সনদায়নের পর উচ্চতর লেভেলে প্রশিক্ষণ ও সনদায়নের আগ্রহ হারিয়ে ফেলে, এবং দক্ষতা উন্নয়ন কার্যক্রম মন্থর হয়ে যায় । গবেষণার সুপারিশের ভিত্তিতে অত্যন্ত গুরুত্বপূর্ণ এই বিষয়গুলি সমাধান করা প্রয়োজন। উক্ত ইস্যুগুলো চিহ্নিত করে তা সমাধানের উপায় নির্ধারনই এই গবেষণার মুল লক্ষ্য ।

Some of the CS related factors distressing the enrollment of trainee, mislay the interest of further training in upper levels, reduces the interest to come under Qualification Framework and ultimately de-accelerate the skills development activities. These very important issues need to be addressed for mitigating based on research recommendation.

Research Purpose:

এই গবেষণার মূল উদ্দেশ্য হচ্ছে বাংলাদেশে এনটিভিকিউএফ এর এনরোলমেন্ট, সম্প্রসারণ এবং বাস্তবায়নকে কম্পিটেন্সি স্ট্যান্ডার্ড সম্পর্কিত ফেক্টরগুলো কীভাবে প্রভাবিত করে তা খুঁজে বের করা।

The main purpose of the study is to find how the Competency Standard (CS) related factors affecting the enrollment, expansion and implementation of NTVQF in Bangladesh.

Research Questions:

এই গবেষণার মূল উদ্দেশ্যের ভিত্তিতে নিম্নবর্ণিত প্রশ্নগুলি গবেষণার জন্য সুনির্দিষ্ট করা হয়েছে:

১. বাংলাদেশে এনটিভিকিউএফ বাস্তবায়নে কম্পিটেন্সি স্ট্যান্ডার্ডাজেশন এবং তা বাস্তবায়নে প্রতিবন্ধকতা ও প্রভাবকসমুহ কী কী ?

২. কম্পিটেন্সি স্ট্যান্ডার্ড সম্পর্কিত ফেক্টরগুলি কীভাবে এনটিভিকিউএফ বাস্তবায়ন, জনপ্রিয়করণ এবং সম্প্রসারণকে প্রভাবিত করছে ? এবং

৩.বাংলাদেশে এনটিভিকিউএফ-এর ব্যাপক সম্প্রসারণ নিশ্চিত করার জন্য কীভাবে এই প্রতিবন্ধক কারণগুলি থেকে পরিত্রাণ পাওয়া যেতে পারে?

Based on the main purpose of the study the research questions are specified as:

1. What are the competency standardization and practicing factors affect NTVQF implementation in Bangladesh?
2. How these CS related factors are affecting popularization and expansion of NTVQF implementation in Bangladesh
3. How can get rid of and be accommodated these affecting factors to ensure wider expansion of NTVQF in Bangladesh

Confidentiality of personalized data:

(This study information will be used for research purpose only. The personalized data will be kept as confidential.)

(Please provide information and put tick marks (√) in appropriate places)

Respondents- Process Expert, Trainers and Assessors

A. General information of the respondents

Please provide personal information or select / response to appropriate items / options

1. Name of the respondent :

2. Designation :

3. Name of the Organization/ Workplace :

4.1 Please select the sector under which you have certified

- ☐ Agro Food Processing
- ☐ IT / ICT
- ☐ Construction
- ☐ Informal Economy
- ☐ Transport
- ☐ Light Engineering
- ☐ Leather and Leather Goods
- ☐ Tourism and Hospitality
- ☐ Furniture
- ☐ Ceramic
- ☐ Pharmaceuticals
- ☐ RMG & Textiles

4.2 Please mention your occupation name in which you have certified

- ☐ NSC Level -1
- ☐ NSC Level -2
- ☐ NSC Level -3
- ☐ NSC Level- 4
- ☐ NSC Level 5
- ☐ NSC Level-6

4.4 Select CBT&A methodology (Pedagogy) qualification you have certified / trained

- ☐ Assessor Level -4 (SOA - BTEB)
- ☐ Trainer, Level - 4 (BTEB)
- ☐ Master Trainer, Level - 5 (TESDA/Skills Development Project- SDP)
- ☐ Master Trainer, Level - 5 (AQF / TVET Reform Project)
- ☐ Trainer Level 4 (AQF)

4.5 Other CBT&A Methodology Qualification (If Any)

B. Questions

5. আপনার অকুপেশনের কম্পিটেন্সী স্ট্যান্ডার্ড সম্পর্কিত নিম্ন বর্ণিত বিবৃতিগুলো প্রশিক্ষণ ও সনদায়ন তথা এনটিভিকিউএফ বাস্তবায়নে কতটুকু সঠিক তা ৪, ৩, ২, ১ স্কেলে রেনকিং করুন।

Please rank the competency standard related statement those affecting the implementation of your occupation, ***(STRONGLY AGREE -4, AGREE - 3, NOT AGREE - 2 STRONGLY DISAGREE -1),***
The respondents are requested to respond considering his/ her own *occupational* standard.

CS related factors of your occupation affecting the implementation of NTVQF in Bangladesh	4	3	2	1
1) Contents of CS are sufficient, current and authentic				
2) Industry Relevance of the CS is satisfactory				
3) Duration of the course (360 hours for first level / 270 hours for next levels) is justified.				
4) Nominal hours of UoCs are acceptable				

5) Starting occupational level of the course is not justified				
6) Unit levels are all right and placed properly				
7) EoC, PC, Range variable relevant and up to date				
8) Conditions / qualifiers are included properly with PC				
9) Evidence guides (critical aspect, knowledge, skills, attitude, resources implication, assessment method and context of assessment) are included and incorporated properly in CS				
10) Quality of CS affecting the implementation of NTVQF				
Others (if any,please specify)				
11)				
12)				

6. Do you think that only activity based task elements need to be placed in Performance Criteria (PC) ?

Yes ☐ No ☐

if not please justify your opinion by clarification where change is required

6.1 Any other suggestions regarding question no. 6

7. Do you think that the template/ format of CS for NTVQF is easily interpretable (Easy to understand)?

Yes ☐ No ☐

if No, please justify your opinion by clarifying where change is required.

8. Do you think the 4 steps (i) Need Analysis (ii) Task Analysis & course design by TSC workshop, (iii) Validation workshop with stakeholders and (iv)Finalizing CS by SCDC workshop) need to be strictly practiced within the process of standard development?

Yes ☐ No ☐

Any Other suggestion regarding question no. 8

9. Do you think that Competency Based Curriculum (CBC) is better and easily interpretable to the teachers and students?

Yes ☐ No ☐

Any Other Suggestion regarding question no. 9

10. একাডেমিক প্রোগ্রাম যেমন এসএসসি, এইচএসসি, ডিপ্লোমা ও ডিগ্রি প্রোগ্রামের সকল কোর্সের জন্য একটি নিদিষ্ট সময়কাল (duration) থাকলেও ট্রেনিং প্রোগ্রামের সময়কাল (duration) থাকে উন্মুক্ত যা কোর্স টু কোর্স ভিন্ন হয়ে থাকে। কিন্তু বাংলাদেশে এনটিভিকিউএফ এর আওতায় পরিচালিত ট্রেনিং কোর্সের সময়কালও একাডেমিক প্রোগ্রামের মত পূর্ব নির্ধারিত যা প্রথম লেভেলের জন্য ৩৬০ ঘন্টা এবং পরবর্তি প্রতিটি লেভেলের জন্য ২৭০ ঘন্টা । আপনি কি মনে করেন যে, অকুপেশনসমুহের প্রশিক্ষণ সময়কাল এরুপ সময়কাল দ্বারা পূর্ব নির্ধারন একটি সঠিক পন্থা ?

Do you think that the pre-determined training duration of occupations under NTVQF 360 hours for first level and 270 hours for subsequent levels is a right approach?

Yes ☐ No ☐

Any Other Suggestion regarding question no. 10

11.আপনি কি মনে করেন যে, একটি অকুপেশনের কোন একটি লেভেলের প্রশিক্ষল সময়কাল পূর্ব নির্ধারিত যেমন ৩৬০ ঘন্টার ভিত্তিতে নয় বরং কোন একটি পেশার একটি লেভেলের কোন নিদিষ্ট পদে সঠিকভাবে কাজ করার পারদর্শিতা অর্জনের জন্য প্রয়োজনীয় সময়কালের ভিত্তিতে নির্ধারন করা বাঞ্ছনীয় ? (যা হতে পারে ৪০ ঘন্টা , ১০০ ঘন্টা , ৫ মাস বা ১ বছর বা অন্য যে কোন সময়কাল)

Do you think that the duration of training standard need to be varied and determined based on a complete job role completion such as the hours/weeks/ months/ years needed.(For example 40 hours / 100 hours / 5 months / 01 year, 01 and years etc)

Yes ☐ No ☐

Any Other Suggestion regarding question no. 11

12.আপনি কি মনে করেন যে লেভেল বেজড সনদায়নের পাশাপাশি ইউনিট / ক্লাস্টার ইউনিট প্যাকেজিং সনদায়ন চালু করা প্রয়োজন?

Do you think that beside the level-based certification under NTVQF, BTEB should introduce Unit based certification which will be more popular, flexible and justified for the candidates?

Yes ☐ No ☐

12.1 বাংলাদেশ প্রেক্ষাপটে নিম্নের কোন পদ্ধতির চুড়ান্ত অ্যাসেসমেন্ট ও সনদায়নকে আপনি সবচেয়ে বেশী প্রাধান্য দিবেন ?

Which Assessment & Certification method you like to given preference in Bangladesh Context?

- ☐ Occupation Based (All level at a time for an Occupation)
- ☐ Occupational Level Based (Current Practice)
- ☐ Unit Clustering Based (No. of Units as a package in a level))
- ☐ Independent Unit Based

13.আপনার অকুপেশনটি কোন লেভেলে শুরু হয়েছে ? What is the current starting level of your occupation?

Level 1	Level 2	Level 3	Level 4	Level 5	Level 6

13.1 আপনার অকুপেশনের শুরুর লেভেল নিচের কোনটি হওয়া উচিত? What should be the starting level of your occupation?

Level 1	Level 2	Level 3	Level 4	Level 5	Level 6

14. কম্পিটেন্সী স্ট্যান্ডার্ড এর কারনে এনটিভিকিউএফ বাস্তবায়ন ও সম্প্রসারনে চিহ্নিত প্রতিবন্ধকতাগুলো দয়া করে রেন্কিং করুন।

Please rank the consequences of affecting factors in trainee enrollment as well as popularization and expansion of NTVQF in Bangladesh. Use tick marks (√) in appropriate statement ***(STRONGLY AGREE -4, AGREE - 3, NOT AGREE – 2, STRONGLY DISAGREE -1)***

Consequences of affecting factors in trainee enrollment, popularization and expansion of NTVQF	4	3	2	1
1. Substandard positioning of the levels is a major discouraging factor for trainee enrollment (অকুপেশনাল স্ট্যান্ডার্ড এর লেভেল অপেক্ষাকৃত নিচের স্তরে সেট করার কারনে উচ্চ শিক্ষিত যুবকরা এই ধরনের কোর্সে আসতে উৎসাহ পায় না				
2. Weaken the mainstreaming of NTVQF(এনটিভিকিউএফকে মূলধারায় নিয়ে যাওয়ার কাজটি দুর্বলতর ও বিলম্বিত হয়)				
3. Reducing trainee enrollment in NTVQF system (এনটিভিকিউএফ সিস্টেমে প্রশিক্ষণার্থী ভর্তি হ্রাস পায়)				
4. Reluctance towards training under NTVQF (এনটিভিকিউএফ আওতায় প্রশিক্ষণ নিতে অনীহা তৈরি হয়)				
5. Lose interest for further training in upper level of qualification Framework (যোগ্যতা কাঠামোর উচ্চতর স্তরে একটি লেভেলে সনদায়নের পর আরো উচ্চতর লেভেলে প্রশিক্ষণের জন্য আগ্রহ হারান)				
Others (if any,please specify)				

15. যোগ্যতা কাঠামো(এনটিভিকিউএফ) বাস্তবায়ন ও সম্প্রসারণে কম্পিটেন্সী স্ট্যান্ডার্ড ও অ্যাসেসমেন্ট সম্পর্কিত প্রতিবন্ধকতাসমুহ দুর করার জন্য প্রতিকারমূলক ব্যবস্থা / সুপারিশসমুহকে রেনকিং করুন।

Please rank the appropriate statement regarding the remedial measures and change requirements for improving and improvising the CS and expanding the implementation of qualification framework **(STONGLY AGREE -4, AGREE - 3, NOT AGREE - 2, STRONGLY DISAGREE -1)**

Remedial measures and change requirements for improving and improvising the CS and expanding the implementation of QF	4	3	2	1
1. All occupational levels should not be started in level-1. Occupational level need to be started in different levels as per compliance of level descriptors				
2. Occupational Training duration should not be similar and fixed for all occupations. Duration of occupational standard might be varied from occupation to occupation according to the industry requirement,				

3. Occupational standard should cover a particular complete Job role, so that the graduates can work independently for a particular designated position.				
4. *Notional hour is more justified than nominal hour in a Unit of Competency of an occupational standard				
5. Credit system need to be introduced for each Unit of Competency of an occupational standard				
6. Substandard positioning of the occupational levels should be carefully avoided and must be set following the guideline of the level descriptor				
Others (if any,please specify)				
7.				
8.				

***Notional Hour**- Face to Face Contact Hours + Other Hours a student / trainee enrolled in the course within the duration of the course
***Nominal Hour**- Face to Face Contact Hour only

16.What are the missing components/ factors not included in the CS of Bangladesh NTVQF system? (if any)

17. বাংলাদেশ কারিগরি শিক্ষা বোর্ড কারিগরি ও বৃত্তিমুলক শিক্ষার সকল একাডেমিক কোর্সগুলোকে এনটিভিকিউএফ / বিএনকিউএফ এর সাথে অ্যালাইন করে নতুন কারিকুলাম প্রণয়ন করছে যেন প্রত্যেক শিক্ষার্থীরা প্রয়োজনমত তার একাডেমিক কোর্সের সাথে সম্পর্কিত অকুপেশনে দক্ষতা লেভেলে সনদ অর্জন করতে পারে । এমতাবস্থায় আপনি কি মনে করেন যে অকুপেশনাল স্ট্যান্ডার্ডে ক্রেডিট সিস্টেম যুক্ত করা প্রয়োজন যেন একজন শিক্ষার্থী তার উচ্চতর স্তরের একাডেমিক / ট্রেনিং কোর্সে এই অর্জিত ক্রেডিট ওয়েইভার পেতে পারে.

Do you think that the credit system needs to be introduced in the occupational standard of Bangladesh NTVQF system?

Yes ☐ No ☐

Any Other suggestion related to question 17

considering the national context?

Yes ☐ No ☐

Any Other suggestion related to question 18

19.এনটিভিকিউএফ সিস্টেমে কম্পিটেন্সী স্ট্যান্ডার্ড এর লেভেল সেট করার ক্ষেত্রে নিম্নবর্ণিত বিবেচ্য বিষয়গুলোকে গুরুত্ব অনুসারে ৪,৩,২ এবং ১ দ্বারা অগ্রাধিকারভুক্ত করুন।

What might be the parameters need to be considered for setting levels of occupational standard? Prioritize the parameters by numbering from highest to lowest (4, 3, 2, 1)

Level Descriptor of the Qualification Framework	Pre-requisite Educational / Skills Qualification of the trainee	Job status / designated position after graduation	Salary / Wages for the designated position / job role	Others (if any)

20. Please provide your valuable suggestions related to improving and improvising the CS of Bangladesh NTVQF

Signature of the Respondent with Date

Signature of the Data Collector with Date