

# An Integrated Quality Assurance System in Technical, Vocational Education and Training in Nepal

**Tanka Nath Sharma**

Kathmandu University School of Education

tanka.sharma90@gmail.com

## **Abstract**

A quality assurance system in TVET provides the framework and processes for the consistent delivery of graduates with valid skills and competencies needed in the labor market. It also includes constant review and improvement cycles so the institutions become more efficient and effective in meeting the changing demand of the labour market. Setting and monitoring improvement targets within the system, and then evaluating the quality benefits of those improvements, are key elements of the overall management of the TVET system and as such need to include a variety of relevant measures that are polled consistently according to defined schedules. In this way, quality assurance system in TVET ensures the effectiveness of system inputs (policy, management systems and processes, infrastructure, human resources, financial resources) to produce the desired outcomes that can be monitored and evaluated to examine if TVET institutions under evaluation responds to labor market, societal and individual needs; leads to nationally, or even internationally, recognized qualifications or credentials; provides access to decent jobs and sustainable employment; is attractive, inclusive and accessible, i.e. all citizens have access to TVET; and fosters capabilities that enable progression to further learning. In this paper, an integrated system of quality assurance is proposed to streamline Nepal's TVET and assure the quality of all institutions delivering TVET in Nepal.

## **1. Introduction**

Education and training are an essential means for economic and social transformation. These can provide people with useful knowledge and skills and prepare them to earn and overcome poverty. These enhance consciousness among the people and make them able to fight against ignorance and oppression, to maintain social harmony and peace, to reinstate human

rights, to live dignified life and ultimately contribute to nation building (Ministry of Education [MOE], 2012). There is no doubt that investing in human capital will generate returns (on investment) in several socio-economic respects: higher overall economic growth, increased productivity at the workplace, and expanded economic opportunities for the disadvantaged people.

Human capital development connected with national development strategies has proven to be effective in responding to poor economic growth and high unemployment and under-employment (Keating et al., 2012). Therefore, technical and vocational education and training (TEVT), and skills development currently are gaining ground in many developed and developing countries essentially in response to critically high levels of youth unemployment (Pavlova, 2014).

After implementation of new constitution, Technical and Vocational education and skills development was considered as a means of developing skilled productive workforce contributing to national prosperity. The current unemployment rate is 11.4 (MoF, 2019). Realizing the importance of TVET for employment, economic productivity, poverty reduction and social development, the government of Nepal is committed to expand TVET provisions in every Municipality (including rural municipalities). Expansion of provision alone cannot bring changes unless the national body responsible for TVET ensures quality of TVET institutions and programs produce expected results. Quality institutions and programs place priority on strengthening management capability, increasing the opportunities for staff training and standardized curriculum and resources, and providing these resources in a cost-effective way. Training, supervision, and resources need, flexibility in content, methods and delivery are important aspects effective TVET institutions and programs.

This flexibility allows for adaptation to a growing and possibly unstable labor market (ESCAP, 2013).

The purpose of this article is to guide TVET institutions and authority responsible for quality assurance of growing institutions to engage them in the process of quality improvement and assurance process through the development and implementation of an integrated quality assurance system in Nepal. For this purpose, the interconnected nature of quality management, quality improvement and quality assurance is examined and an integrated system of quality assurance of TVET is suggested.

## **2. Context and Need**

Poverty, unemployment, low levels of education and skills of the workforce are main development challenges of Nepal. In response to the development challenges Nepal has given more emphasis in the expansion of TVET provisions (MOEST, 2017; MOEST, 2019). The annual report of the Council for Technical Education and Vocational Training (CTEVT), the responsible body for the development of TVET in Nepal, revealed that there were 569 formal TVET institutions in 2017 where as the number has reached to 1042 in 2020. With the increasing realization that technical education and vocational training programs are of paramount importance in the social, educational, and economic scene, more and more emphasis is being placed in quality control. In addition, investment from government or from people in TEVT

is significantly higher. Utility and return of the investment would be higher if TEVT institution prepares students of superior quality capable enough to compete for the job in the labor market.

Expansion of TVET institutions alone is not solution to Nepal's development problem, but it will be instrumental if (a) all programs of study in each of the TVET institutions are soundly conducted as per curricular requirement; (b) the sum of money entrusted to TVET institutions being effectively and sensibly utilized; spent; (c) education and training being offered by TVET institutions satisfy the needs and requirements individual and society, (d) students receiving education and training as demanded by curricula and TVET institutions are delivering quality education, training and services to students; and (e) there is a system of ensuring the public that they are protected from unethical training practices. Only those TVET institutions can produce intended that meet the above quality criteria (Watters, 2015).

In an age of accountability, the quality of program offerings must be of paramount interest to all technical and vocational educators. In the present context of economic liberalization and open market system, importance of quality assurance of education and training is even greater. Only the graduates of those institutions that maintain the quality (with evidence quality offerings) and standard of training will have better chance of getting high wage employment. How best to address the question of quality and help institutions to improve through

a systematic process of evaluation is the major concern of TVET. It is evident that accreditation is a process that plays an important role in maintaining educational quality. Involvement of administration, staff, and students in identifying institutional strengths and weaknesses is a cornerstone of a sound accreditation system. An effective assurance system enhances shared responsibility, authority and accountability among the TVET institutions for improving the quality, relevancy and efficiency of programs being conducted by those institutions. In this article, an attempt has been made to provide general information about accreditation and to trace the steps of the basic accrediting process.

The image of TVET is the sum of collective attitudes, associations and feelings which influenced decisions concerning the investment in TVET. The image of TVET emerges out of a complex mixture of market value and attractiveness of vocational education and training (Clement, 2014). A positive image of TVET can only evolve if it ties in with a good quality of TVET, functioning labor markets and appropriate rates of return on a rational level, and positive projections into the future with respect to identity, images in our minds and cultural perception as well as behavioral patterns on an emotional level (Keating et al., 2012).

The time has come when national responsible body authorized for quality assurance takes a public stand for integrity of action. Such national organization must be able to ensure TVET quality requirements of all institutions

under it. In order to make TVET meaningful and useful to individual and society, a dynamic integrated TVET quality assurance system should be in place. Through such system, TVET institutions should be made responsible to offer quality education and training services to prepare competent and high performing workforce (MOEST, 2019). Only quality institutions and programs can prepare competent and competitive TVET graduates who can make country prosperous and improve their own living standards.

### **3. Concept of Quality and Quality Assurance**

Quality is a simple concept to incorporate into the technical and vocational education industry. Quality education refers to a system or product that has passed a certain set of criteria or principles. The standard approach in setting the criteria or principles for quality implies that quality can always be further improved. Quality thus implies the maintenance and improvement of standards with the assumption that ‘standards’ are objective and quality is a continuous change. Quality in education across the education system consists of the application of the principles of: Effective, Empowering, Equity, Sustainable, Appropriate, and Wellbeing & Safety (EEESAW) (Goel, & Hamman-Dina, 2017).

Quality assurance is a component of quality management and is “focused on providing confidence that quality requirements will be fulfilled” (AS/NZS, 2006, p. 9). In relation to training and educational services, ‘quality

assurance refers to planned and systematic processes that provide confidence in educational services provided by training providers under the remit of relevant authorities or bodies. It is a set of activities established by these relevant authorities or bodies to ensure that educational services satisfy customer requirements in a systematic, reliable fashion. However, quality assurance does not guarantee the quality of educational services it can only make them more likely (Bateman et al., 2009, as cited in Keating et al., 2012). An essential element of a quality assured TVET system is ensuring that the provision meets the skill and education needs of industry and individuals in changing national and globalized economies. To achieve quality of TVET outcomes there should be: a means by which the quality of providers of TVET and of the qualifications issued are assured.

The common areas of concern in relation to quality assurance of TVET qualifications were identified as: fragmentation of governance, the capacity to be able to shift to the learning outcomes approach, the low value placed on TVET and weak data systems (for data collection and for informing decisions for improvement of the TVET system).

Quality is perceived differently by different people. ISO 8402:1986 defined quality as all characteristics of an entity that bear on its ability to satisfy stated and implied needs. Similarly ISO 2000 viewed quality as the degree to which a set of inherent characteristics fulfils requirements. The

ultimate test in this evaluation process lies with the consumer. The customer's needs must be translated into measurable characteristics in a product or service (Jarvis, 2014). Once the specifications are developed, ways to measure and monitor the characteristics need to be found. This provides the basis for continuous improvement in the product or service. Some argue that the ultimate aim is to ensure that the customer will be satisfied to pay for the product or service. This should result in a reasonable profit for the producer or the service provider. The relationship with a customer is a lasting one. The reliability of a product plays an important role in developing this relationship. The services needed to satisfy customer's needs or achieve fitness for use.

Galvão (2014) described the perceptual differences in interpretation quality. Exceptional views perceive quality as something special. Others see quality as perfection in which outcomes are flawless. Similarly quality as fitness of purpose sees quality in terms of fulfilling a customer's requirements, needs or desires. Also some view quality as value of money is measured in terms of returns of investment where as other see it as transformation that occurs change from one state to another.

Another perspective on the concept is offered by Cheng (2001), who states that the worldwide education reforms have experienced three waves since the 1970s. Based on these three waves he proceeds to identify three paradigm shifts in quality improvement in education: (1) internal

quality assurance, which 'makes an effort to improve internal school performance, particularly the methods and processes of teaching and learning'; (2) interface quality assurance, which emphasizes 'organizational effectiveness, stakeholders' satisfaction and market competitiveness and makes an effort to ensure satisfaction and accountability to the internal and external stakeholder, and (3) future quality assurance, which is defined 'in terms of relevance to the new school functions in the new century as well as relevance to the new paradigm of education concerning contextualized multiple intelligences, globalization, localization and individualization'.

Galvão (2014) also proposed alignment theory which refer to interconnections of the organizational elements and its partner in order to make TVET more relevant and useful to the stakeholders (or costumers). Education and training sector has consistently borrowed concepts and methodologies from the quality movement of business sector and alignment theory is also borrowed concept TVET quality management from the business world. VET, QA and QI policy alignment may include dimensions such as (a) alignment of stakeholders' views on quality, (b) alignment of policies and procedures, (c) alignment of sector policies, (d) alignment of TVET around evidence-based decision making, and (e) Alignment with international QA and QI approaches. Such alignment offers wider recognition of the TVET quality, recognition of the qualifications and credentials offered by the

national TVET authority and strengthens the positive image of TVET institutions and programs.

The main function of the quality assurance in TVET through accreditation systems is to assure that minimum standards in delivery of TVET are respected. They rarely push forward dynamics towards continuous improvement of training quality in TVET provider organizations. It is difficult to combine these two functions: respect of minimum standards and continuous improvement of training quality. However, TVET quality assurance may be understood as the measures established to verify that processes and procedures are in place, which, when effective, ensure the quality and quality improvement of VET. Therefore, TVET quality assurance system should have interconnected TVET quality improvement and quality assurance components (Cedefop, 2011).

Evolving links between the VET sector and the employment system could help to put more emphasis on output and outcome criteria. Involvement of stakeholders is a key issue in efforts to orient the accreditation process and applied criteria more strongly towards the outcomes of training. A more systematic measurement of results and impacts of training is another approach to improve quality of TVET and employability of VET students. Within the education system the meaning of TVET quality can be quite different from that within the employment system. VET might be of the highest quality at a certain moment in time but a sudden

change in labor market needs can render its outputs, at least temporarily, worthless as regards employability. The aim of quality assurance in VET is to support processes and procedures that ensure five key features of good TVET. According to Watters (2015), 'Good TVET' (1) responds to changing labor market, societal and individual needs; (2) leads to nationally, or even internationally, recognized qualifications or credentials; (3) provides access to decent jobs and sustainable employment; (4) is attractive, inclusive and accessible, i.e. all citizens have access to TVET; and (5) fosters capabilities that enable progression to further learning.

Quality is conformance to requirements (Philip Crosby), quality is fitness for use (Juran, 1954), and good quality means a predictable degree of uniformity and dependability with a quality standard suited to the customer (Deming). Quality is the degree to which performance meets expectations. According to the American Society for Quality (ASQ), quality denotes an excellence in goods and services, especially to the degree they conform to requirements and satisfy customers (as cited in Chandrupatla, 2009). Chandrupatla further asserts that "reliability is the probability that a system or component can perform its intended function for a specified interval under stated conditions. Quality and reliability go hand in hand. The customer expects a product of good quality that performs reliably" (p. 2). Chandrupatla (2009) summarizes that "the underlying philosophy of all definitions is

the same – consistency of conformance and performance, and keeping the customer in mind” (p. 2).

Emergence of Total Quality Management (TQM) movement concept of quality as discussed above were surfaced and started to provide clearer picture of quality. Customer's satisfaction, maintenance of cost and promoting efficiency, concern for continuous quality improvement for everything the organization does, measurement of performance or results and empowerment of employees were the main themes received focus in relation to quality management. Juran and Crosby supported Deming's definition of quality as the means of meeting or exceeding customer's expectations (Rijal, 2004). From their work and work of other proponents of quality movement, the concept of quality can be summarized as follows:

- Quality is conformance to requirements,
- Quality is fitness for use
- Good quality means a predictable degree of uniformity and dependability with a quality standard suited to the customer. (Demings)
- Quality is the degree to which performance meets expectations
- Quality denotes an excellence in goods and services, especially to the degree they conform to requirements and satisfy customers. (ASQ)
- Reliability is the probability that a system or component can perform its intended function for a specified interval under stated conditions.

## **Quality Assurance Programs and Activities of CTEVT**

Practice of TVET Quality assurance is not new in Nepal. Quality assurance programs were further strengthened after formation of CTEVT. After reviewing Policies, Act, regulation on CTEVT and several publications of CTEVT such as CTEVT, profile, annual progress reports (eg CTEVT, 2017; CTEVT, 2020) and other related documents the following quality improvement and quality assurance activities of CTEVT were identified.

***Assessment of Needs and skills demands of the labor market:*** One of the important activity CTEVT carry out in a regular basis is assessing training needs and skills demands of the labor market prior to introducing new program or revising curriculum such studies are carried out. Information generated from the needs assessment and skills demands address the training needs of the employers and individuals. Programs developed on the basis of such information ensures usefulness and relevance of the newly introduced programs.

***Contextualized competency based curricula:*** CTEVT had the practice of developing contextualized competency based curricula involving occupational experts and relevant employers' representatives. Every TVET providers of formal TVET are required to use the same curricula. This requirement ensure the uniform training delivery and training outcome standards. Also learners are assessed within the same competency standards specified by the curricula.

Attempts are made to bring all non-formal vocational skills development program under the National Vocational Qualification system to offer equivalent qualification by assessing knowledge and skills learned through informal or non-formal means. Attempts are also being made to standardize the short-term vocational training curricula.

***Ensuring effective delivery of TVET programs:*** Periodic Monitoring and supervision of TVET institutions/programs not only contributes toward quality improvement but also in quality assurance. The team of experts deployed to monitor the TVET institutions check the quality input and quality process which ensure that teaching learning and assessment is happening as stated in the curricula.

***Inputs and infrastructure inspection prior to approval of TVET institution:*** Approval of new TVET institutions is awarded after careful inspection of input quality including infrastructure of proposed TVET institutions. Such inspection ensure potential quality delivery of programs. Infrastructure inspection is considered as part of the quality assurance of TVET.

***Centralized end of the program examination:*** All students of formal TVET programs such as Technician Diploma and Junior Technician level course should undergo end of the program examination to earn respective technical qualifications. The purpose of the end of the program examination is to ensure the quality of these programs and certify successful candidates and award nationally recognized qualifications. Certified

candidates are expected to demonstrate desirable competencies expected by the respective curriculum. National examination at the program exit level is the powerful means of quality assurance in TVET.

***Skills Testing and Certification:*** CTEVT also organizes skills testing service for those who learned skills from non-formal (training) and informal (experience) to examine the level of work proficiency. Successful candidates are awarded with recognized qualification only valid for work. Individuals having skills testing certificate are eligible to apply for jobs in public or private sector or receive training to advance their skills. NVQ system which is being developed is expected to award recognized qualification to promote transferability, permeability and mobility.

***Accreditation of TVET Institutions/Programs:*** CTEVT has Accreditation Division having main responsibility of quality assurance. This division is occupied with giving approval to open new TVET institutions/programs in the name of affiliation. But accreditation of TVET institutions and programs in real sense is not performed. This may be because of capacity gap or over occupied with substantial growing demands on the approval of new TVET institutions.

Before approval of new TVET institution or program CTEVT rigorously examine the potential quality of program offering of the institutions applied for approval. Inputs and infrastructure inspection against approved standards is carried out prior to approval of TVET institutions or programs. The



quality improvement and quality assurance practices of CTEVT can be summarized in the following table.

### Observed Gaps

Although there has been sufficient efforts of quality improvement and quality assurance in CTEVT, these programs are not carried out in an integrated and systematic manner. Fairness of the assessment is another area which has been questioned by the general public. To avoid such questions and improve the image of CTEVT strong, fair and integrated quality assurance system is needed.

Integration or interlink among the activities of quality improvement and quality assurance is missing. Quality improvement is strategic, planned scheme for quality improvement and periodic monitoring and review of the progress in quality improvement is needed. Existing monitoring has become more judgmental rather than as a tool for facilitation and support for quality improvement. In other words, monitoring is not being able to provide technical/professional support to technical training providers (TTPs), instructors or to the administrators.

**Table 1: Quality improvement and Quality assurance practices in CTEVT**

Quality Improvement	Quality Assurance
Training of curriculum development	Needs assessment and curriculum development as per need
Resourcing TVET Institutions:	Ensuring effective delivery of TVET programs as per curriculum through inspection or supervision
Provision for Quality Improvement Unit	Registering new institutions. Inputs and infrastructure inspection prior to approval of new TVET institution
Trainers' Training and professional support	Central end of the program examination, certification
Monitoring the performance of each Training providers with feedback for improvement	Skill Testing and certification, currently being upgraded into Vocational Qualification System
Leadership and Management conferences for quality improvement	Accreditation of TEVT institutions and programs
Structure and organization for quality improvement (TITI, Technical division, Polytechnic division, Training division)	Controller of Examination, Skill Testing Authority
Annual Principal's conference for quality improvement	Entrance examination and student selection

Performance of learners in the learning process is the heart of TVET quality which require engagement in the continuous improvement. Leaders, managers and instructional staff should be inspired, motivated and committed in continuous assessment and improvement which is an weak area of CTEVT.

Under federal structure, how and which level QA in TVET need to be addressed is unclear. There is no guiding document to help training/education providers to improve quality or periodic review/assessment of the status of overall quality of TVET institution is not available. Nor there is a regular monitoring of the TVET institutions. Capacity development of the personnel at central, provincial level and at the institutional level is ignored.

Reform in examination system shifting focus from content assessment to competency assessment system should be in place to assess the leaners' proficiency level which need to be improved in the current practices of examination. Similarly, regular interaction with industries/employers is needed and employers' engagement in curriculum design process, instructional process and testing and examination is a weak area which require improvement. Reform in industry/employers' involvement in the process of TVET development.

Apart from the above gaps TVET has experienced fall in quality on account of poor funding from government and other stakeholders in Nepal. Quality of TVET

is also affected by its inability to stimulate employability contrary of graduates to the widely held notion that specialized education empowers the citizens to be creative, innovative and productive thereby improving their employability.

### **Proposed an Integrated TVET Quality Assurance Model for Nepal**

A quality assurance system provides the framework and the processes for the consistent delivery of graduates with valid skills and competencies needed in the labor market. It is the assurance that right people with the right skills at the right time is arranged all the time. A quality assurance system also includes constant review and improvement cycles so the institutions become more efficient and effective in meeting the changing demand of the labour market. Setting and monitoring improvement targets within the system, and then evaluating the quality benefits of those improvements, are key elements of the overall management of the TVET system and as such need to include a variety of relevant measures that are polled consistently according to defined schedules. In this way, the effectiveness of system inputs (policy, management systems and processes, infrastructure, human resources, financial resources) to produce the desired outcomes that can be monitored and evaluated.

Quality Assurance is continuous, systematic and cyclical. As the cycle goes on, the provision of TVET institutions improves in quality. For the purpose of enriching quality

assurance system in CTEVT is to take a lead to implement the system nationwide, designing and implementing integrated system of quality assurance.

### **Stages in an Integrated Quality Assurance System**

The proposed integrated system of quality assurance consist of three inter-connected stages of quality management, quality improvement and quality assurance. Each of these stages will be discussed in the following section.

#### **a) Quality Management Stages**

Quality management can be defined as the organization of inputs and processes that make the quality assurance activities possible as part of managing of the TVET institution or center. On the level of the institute this implies that for QM team will be inspired to self-assess the quality against the national endorsed quality standards in a regular basis and engage in continuous improvement of TVET quality. The set of management activities and procedures that together determine the quality policy of a TVET provider or sector and its implementation. The main instruments of a quality management system are quality planning, implementation of the quality review and quality improvement. Each TVET institution will apply the following procedures to promote quality management of TVET institution.

The quality management team of each TVET institution make sure that minimum standards of inputs specified by CTEVT is met. Arrangement of quality instructors, facilities conducive to learning and instruction, workshop and lab facilities with needed equipment and materials, learning materials for students, instructional guides for teachers etc. are available. Quality management ensures that programs are being offered ensuring input qualities, process quality and output quality. Principle of Total Quality Management (TQM) claims that if the institution arranges quality inputs and ensure the quality process the output certainly would be of quality. Periodic review of performance, regular quality check and engaging everybody concerned in continuous improvement are some of the responsibilities of quality management team. Self-assessment of quality assurance stage can be connected with quality management process.

#### **b) Quality Improvement Stage**

Quality improvement stage is the continuation of quality management stage. Lapses observed in quality dimensions of TVET institution identified by quality management team will be the areas for improvement in quality improvement stage. Quality management team will also serve as quality improvement team. Continuous improvement of quality is the part of the quality assurance system. Quality improvement is a continuous process in which institutions regularly carryout self-

monitoring or self-assessment of quality using nationally endorsed quality standard. Weaknesses and defects are identified through periodic self-assessment and necessary correction or improvement is made.

Quality improvement in TVET is an ongoing process. Central level authority responsible for TVET quality, provincial and local government are expected to collaborate and work together to support TVET institutions in engaging them in continuous improvement of their quality of education and training. In addition, organizational leaders are expected to inspire entire members of the organization and stakeholders focusing into quality improvement initiative. Quality improvement is connected with the internal assessment of quality assurance procedure.

### **c) Quality Assurance Stage**

Quality assurance has become an increasingly important aspect of TVET planning and practice over the last two to three decades. The demand for TVET, coupled with the expansion and diversification of training systems, has dramatically increased the need to develop and implement more formal notions of quality assurance, along with associated procedures for quality assessment, monitoring, and improvement.

Quality assurance in TVET includes several activities, starting from the self-assessment of the institution and finishing with the use of the outputs of the assessment. First, input in the quality assurance process deals with planning QA, arranging necessary instrument

of audit, trained HR to carry out review of TVET institution and programs, qualified and competent quality assessors, necessary resources, assessment guidelines or manual. Then the assessors collect evidences required to support each assessment criteria.

### **Proposed Integrated Model of Quality Assurance of TVET in Nepal**

As discussed above, quality management, quality improvement and quality assurance processes are interconnected. Nepal will follow and integrated model of quality improvement and assurance and accreditation as shown in figure 4 which will include quality management, quality improvement and quality assurance as sub-system of quality assurance system.

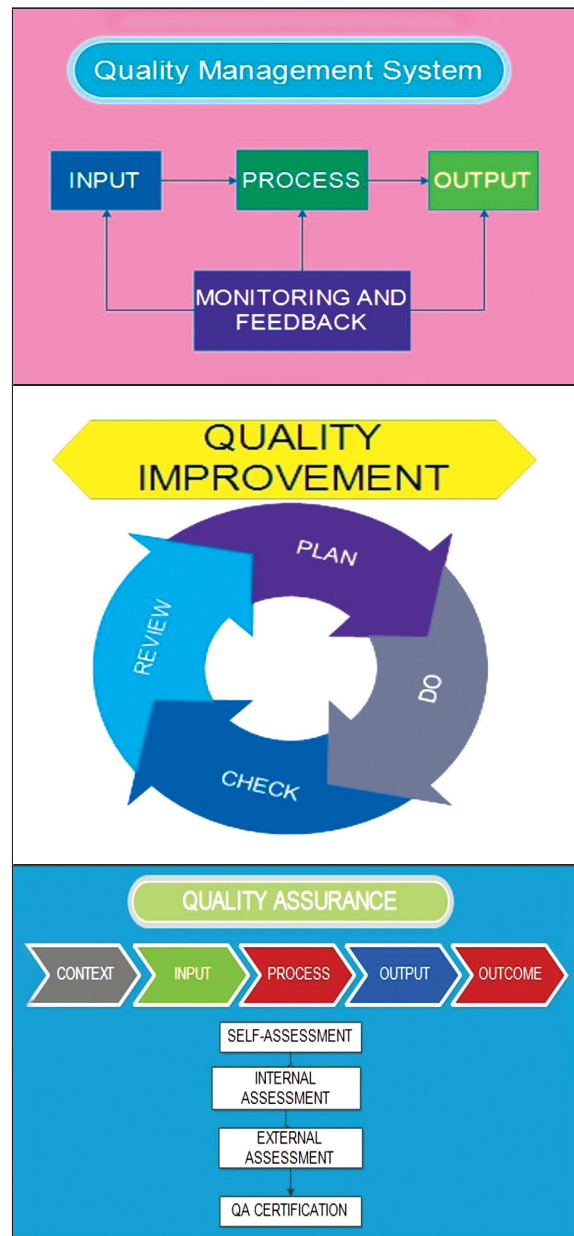
Newly approved TVET institution and institutions which are in operation will be inspired to be committed to quality management. TVET institutions under quality management will focus on arranging quality inputs to deliver quality process and check if desired outputs are produced. In the quality management process each institution will assess if quality standards and criteria are met and find out deficiency or lapses in the institutional quality. The observed shortcomings or deficiencies during self-evaluation of quality management of TVET will be the source of information for quality improvement stage.

At the quality improvement stage, observed shortcomings or deficiencies of TVET quality will be translated into quality

improvement objectives and corresponding improvement activities with resources. These activities are documented in yearly plan of action specifying improvement activities in each dimension of quality, quantity or quality of reform activity, target achievement, person responsible for each of the activity. These reform activities should be implemented and monitored progress in a quarterly basis. Any obstacles encountered during implementation of reform activities are reported to the leader and concerned manager for immediate corrective action.

The final stage of integrated quality assurance model is to check whether the TVET provider has achieved required quality standards by carrying out self-assessment of level of quality. The quality assurance team of the institution of the concerned TVET institution will conduct self-assessment using standard tools. The tool for self-assessment will be the same or similar to tools to be used in internal assessment and external verification. The purpose of the self- assessment is to examine if the TVET institution satisfy the minimum quality requirements given by the national authority responsible for TVET quality assurance. If the institution satisfies the minimum standard of TVET quality, they request the provincial level to carry out the internal quality assurance of the institution. Successful institutions in internal quality assurance request the central authority through provincial council to constitute an independent committee of experts for external verification of the internal assessment.

Fig. 1: Quality Assurance System



### Common Principles of Quality Assurance

- Quality assurance should be an integral part of the internal management of education and training institutions.
- Quality assurance should include regular evaluation of institutions, their programs

or their quality assurance systems by external monitoring bodies or agencies.

- External quality assessment and review bodies or agencies carrying out quality assurance and should be subject to periodic review.
- Quality assurance should include context, input, process and output dimensions, while giving emphasis to outputs and program outcomes.

### **Conclusions**

TVET quality is an utmost important factor in developing human resources in order to contribute to social and economic development. Human resources development demands monitoring and evaluating TVET provision regularly, with focus on implementing the legal framework, policies, guidelines and QA procedures in order to implement the TVET strategic plan and deliver quality services. High quality of education and training provision is a mandatory precondition for its attractiveness. TVET quality increases transparency, mutual trust, the mobility of workers, trainees and graduates, and lifelong learning provisions.

Quality is not ultimately assured by occasional external comparative reviews of institutions no matter how helpful these may be. Assurance of quality can be assisted by a mixture of both external and internal reviews that are focussed on the continuous achievement of the quality goals. But the consistent assurance of quality also results

through a culture of quality within the institution where the staffs and students are motivated to not only review the performance of the system but are also motivated to find ways of improving performance. Institutions where functional quality management system is ongoing and instructors, students, administration collectively engage in quality improvement quality assurance is sustained for ever.

Commitment to quality of all the members of TVET system is an essential prerequisite of QA process. Such commitments should come from leaders and managers of TVET institution, QA authority at the central level is expected to raise awareness of TVET quality and inspire all TVET institutions to have strong commitment to quality improvement and quality assurance. After raising awareness of quality TVET management and inspiring all concerned to quality improvement and assurance, capacity development of each institution and personnels engaged in quality improvement and QA is needed. It is the responsibility of concerned authority of QA to develop guidelines and manuals to support TVET institutions to engage in quality improvement and participate accreditation of their institutions. All TVET institutions successfully completing the process of accreditation and accredited by Quality Assurance Board of CTEVT will receive accreditation certificate. Quality Assurance Certification contributes to reliability and

trustworthiness of the TVET institution with social image that the institution offers TVET programs and services of superior quality. The accreditation certificate should be renewed by carrying out Quality assessment or accreditation in every 5 years to ensure that TVET institutions are maintaining minimum requirements of quality.

## References

- Cheng, Y. C. (2001). *Education reforms in Hong Kong: Challenges, strategies, & international implications*. The Office of the National Education Commission.
- Clement, U. (2014) *Improving the image of technical and vocational education and training*. GIZ. [https://www.dcdualvet.org/wp-content/uploads/2014\\_GIZ\\_Improving-the-Image-of-Technical-and-Vocational-Education-and-Training\\_A-synthesis.pdf](https://www.dcdualvet.org/wp-content/uploads/2014_GIZ_Improving-the-Image-of-Technical-and-Vocational-Education-and-Training_A-synthesis.pdf)
- Council for Technical Education and Vocational Training. (2017). *CTEVT profile*.
- Council for Technical Education and Vocational Training. (2020). *Annual progress review*.
- Cedefop. (2015). *Ensuring the quality of certification in vocational education and training* (Research Paper No. 51). Publications Office of the European Union.
- Chandrupatla, T. R. (2009). *Quality and reliability in engineering*. Cambridge University Press. [https://assets.cambridge.221/excerpt/9780521515221\\_excerpt.pdf](https://assets.cambridge.221/excerpt/9780521515221_excerpt.pdf)
- Watters, E.. (2015). *Promoting quality assurance in vocational education and training. The ETF approach* (ETF working paper). European Training Foundation. [https://www.etf.europa.eu/sites/default/files/m/77049AC22B5B2E9C125820B006AF647\\_Promoting%20QA%20in%20VET.pdf](https://www.etf.europa.eu/sites/default/files/m/77049AC22B5B2E9C125820B006AF647_Promoting%20QA%20in%20VET.pdf)
- Galvão, M. E. (2014). Making the case for vocational education and training improvement: Issues and challenges in ETF. In A. Editor (Ed.), *Quality assurance in vocational education and training: Collection of articles* European Training Foundation.
- Goel, V., & Hamman-Dina, R. (2017). *Universal standards for quality in education: To enable the delivery of Sustainable Development Goals 2030*. Commonwealth Secretariat.
- Keating, J., Gillis, S., Dyson, C., Burke, G., & Coles, M. (2012). *Concept Paper EAST ASIA SUMMIT Vocational Education and Training Quality Assurance Framework*.
- Ministry of Finance. (2019). *Economic survey of Nepal*.

- Hamminck, K. (2017). *Quality assurance and quality management in TVET: Policy and guidelines*.
- Jarvis, D. S. L. (2014). Regulating higher education: Quality assurance and neo-liberal managerialism in higher education—A critical introduction. *Policy and Society*, 33(3), 155-166. <https://doi.org/10.1016/j.polsoc.2014.09.005>
- NICHE/TZA (n.d.). *Quality in technical education: Handbook quality assurance technical institutions in Tanzania*.
- National Commission for Further and Higher Education. (n.d.). *Implementation of Quality Assurance in Vocational education and training Institutions*.
- Pavlova, M. (2014). TVET as an important factor in country's economic development. *Springerplus*, 3(1), K3. <https://doi.org/10.1186/2193-1801-3-S1-K3>
- UNITAR. (2017). *Quality Assurance Framework*. Geneva, Switzerland
- UNESCO. (2017). *Guidelines for the quality assurance of TVET qualifications in the Asia-Pacific Region*.
- Bateman, A., & Coles, M. (2017). *Towards quality assurance of technical and vocational education and training*. UNESCO. <https://unesdoc.unesco.org/ark:/48223/pf0000259282>