

## **REVISITING QUALITY ASSURANCE FOR TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING (TVET) IN THE CARIBBEAN**

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Quality assurance for technical and vocational education and training (TVET) is currently quite a prominent area in the Caribbean because of the expansion of the global marketplace and the need to provide training of comparable standards to those obtained in the developed world. It is evident that quality assurance in TVET is not well understood by stakeholders in the region and as such there is need to revisit this critical aspect. This paper attempts to clarify the concept of quality assurance in TVET by discussing the various approaches employed for quality assurance of TVET. It presents examples of best practices in quality assurance of TVET, and attempts to discuss these practices in relation to approaches employed in the Caribbean. Additionally, the paper provides information on the indicators of quality of a TVET quality assurance system, and makes recommendations for implementing quality assurance measures in the TVET context for the Caribbean workforce.

### **Introduction/Background**

As global trends continue to define our existence and how we relate to others, the issue of quality and quality assurance has become of great importance. In recent times, quality assurance bodies have gained greater prominence because of the increased demand by stakeholders in all areas to access information about goods and services from which they wish to select. Assuring quality in education has, indeed, become a top priority for providers and is currently one of the most critical elements in the development of an education system. This mechanism has served to maintain professionalism, enhance stakeholder confidence, and enable personnel in the sector to adapt to the ever-changing global environment.

There are many examples internationally of a movement towards greater quality focus. In response to poor economic conditions and dissatisfaction with the lack of responsiveness of government-based systems, as well as the need to ensure quality, the Australian Quality Training Framework (ATQF), for example, was established in 2001 as a body for providing minimum quality standards for the registration of

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training organizations in Australia. Since 2007, this body has gone beyond its prescriptive minimum-standards view of quality to the introduction of additional criteria called the “excellence criteria” in a new concept called “continuous improvement or reflective practice,” which is outcomes-focused, nationally consistent, streamlined, and transparent (Agbola & Lambert, 2010).

In the United Kingdom, a first serious attempt to develop a nationwide qualifications framework was made in 1987 with the establishment of the National Vocational Qualifications (NVQ), which demanded the establishment of quality standards. The demand by industry for a much higher skilled workforce and the response by training providers to standards to meet international competition resulted in the establishment in 2008 of a new management paradigm called the Qualifications Credit Framework (QCF), which incorporated quality targets set against measurable performance indicators through the National Education and Training Targets (NETTs). This movement did not only raise the standards to meet international competition but also supported the government’s policy objective of increasing the number of young people achieving competency at specified levels of qualification (Hodkinson & Hodkinson, 1995).

Multilateral organizations such as the World Bank (WB), the United Nations Educational, Scientific and Cultural Organization (UNESCO), the International Labour Organization (ILO), and others have expressed interest in quality assurance. UNESCO, for example, in its 2012 Education for All Global Monitoring Report, which focused on youth and skills, emphasized the need to improve the quality of education. It claimed that the quality of education can be improved through leveraging private resources such as the William and Flora Hewlett Foundation and the Bill and Melinda Gates Foundation, which have since 2008 contributed to the development of the quality of education in several developing countries (UNESCO, 2012, p. 168).

The existence of quality assurance bodies such as the International Network for Quality Assurance Agencies in Higher Education (INQAAHE), which collects and disseminates information on current and developing theories and practices on the assessment, improvement, and maintenance of quality in education, provides uniformity of quality internationally. This body, in particular, promotes good practices, facilitates research into practices of quality management, provides advice and expertise in assisting with the development of new agencies, facilitates links between quality assurance bodies across borders, assists in determining standards of institutions worldwide, and alerts members to dubious accrediting practices and institutions.

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In light of the establishment of these quality assurance movements and the fact that the world is becoming more inclusive and interdependent, it is evident that revisiting quality assurance for technical and vocational education and training (TVET) in the Caribbean is a critical necessity in order to meet the demands of learners and the world's marketplace.

### **Quality and Quality Assurance**

The first proponents of quality emerged from the industrial and manufacturing sectors. Most important are contributions to the evolution of the quality movement by Walter Shewhart of Bell Laboratories in 1931; followed by W. Edwards Deming, a student of Shewart, who proposed a 14-point philosophy; Joseph Juran with steps for quality improvement; and Philip Crosby with 14 steps for quality management. Others such as Kauru Ishikawa and Genichi Taguchi also contributed to this movement in its early stages (Mishra, 2006).

The notion of quality can be viewed from various perspectives. On one hand, the British Standards Institution (BSI) has defined quality as “the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs” (1991, p. 1). Harvey and Green (1993), on the other hand, have identified five different approaches to defining quality in terms of *exceptional*, *consistency*, *fitness for purpose*, *value for money*, and *transformative*.

It is evident that these different approaches to defining quality might not yield a suitable universal definition since the concept of quality is amorphous and contextual, ranging from *standard* to *excellent*. It might therefore be instructive to draw on Garvin's (1988) group of five classifications of the various definitions of quality, as outlined by the Improvement Foundation (2011), to get a broader understanding of the concept:

1. Transcendent – quality can't be precisely defined, but we know it when we see it, or are aware of its absence when it is missing. This is not a particularly useful approach to quality if we hope to make an objective assessment of quality.
2. Product- (or attribute-) based differences in quality relate to differences in the quantity of some attributes. For example, the quality of a piece of jewellery may relate to the proportion of gold it contains, with 18 carat gold being better than nine carat gold.

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3. Manufacturing- (or process-) based – quality is measured by the degree to which a product or service conforms to its intended design or specification; quality arises from the process(es) used.
4. Value-based – quality is defined by price. A quality product or service is one that provides desired performance at an acceptable cost.
5. User (or customer) – quality is the capacity to satisfy needs, wants and desires of the user(s). A product or service that doesn't fulfil user needs is unlikely to find any users. This is a context dependent, contingent approach to quality. (Introduction)

The concept of quality, according to Garvin (1988, p. 12), therefore revolves around a few central ideas, which include:

- quality as *absolute*, in which it is given and considered the highest possible standard;
- quality as *relative*, in which the quality of a service or product can be described in relative terms or measured in terms of certain specifications;
- quality as *a process*, in which the product or service must undergo certain processes and conform to procedural requirements; and
- quality as *culture*, in which the organizational view of quality as a process of transformation is recognized.

Navaratnam and O'Connor (1993) agree that quality vocational education is important to industry because employers see a skilled workforce as fundamental to getting and maintaining a competitive advantage. They assert that:

industries want students who can understand their work, their product or their services, be creative and adaptable, and capable of becoming multi-skilled. Industries demand that vocational graduates possess vocational knowledge, skills and attitudes that are central to industrial innovation and practice. Industry needs relevant and high quality vocational education based on recent technological innovations. Quality of vocational education is important to both government and the general public. (p. 116)

The emphasis on quality in TVET has been focusing on measured achievement. Therefore, quality is being defined in terms of outcomes, the most important of which is qualifications. It is argued that any programme which leads to qualifications that are recognized and valued must have some quality components imbedded in it. It is also recognized

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that quality does not necessarily guarantee a good experience. The need to provide better quality is due, in part, to much greater demand from learners, a greater level of scrutiny from the public, and the need for justification for public expenditure from funding sources. This leads to the need to have quality assurance mechanisms to determine benchmarks and standards.

Coming to terms with the concept of quality appears to be quite simple when Harvey and Green's (1993) approaches towards the definition of quality, and Garvin's (1988) classification of the various definitions of quality are reviewed; however, quality assurance of TVET has proven to be quite a complex concept. Quality assurance is defined by Merriam-Webster (2012) as "the processes and procedures that systematically monitor different aspects of a service, process or facility to detect, correct and ensure that quality standards are being met." This definition is quite appropriate and supports UNESCO's (2007) definition of quality assurance as "a process of establishing stakeholder confidence that provision (input, process and outcomes) fulfils expectations or measures up to minimum requirements" (p. 16).

After much deliberation, Navaratnam and O'Connor (1993) concluded that:

quality assurance in vocational education may depend upon several essential and inseparable components. Because the quality of learning outcomes in technical and further education (TAFE) is multi-dimensional, an emphasis must be placed on all the components to produce the desired outcomes. (p. 117)

UNESCO promotes capacity building at the regional and national levels for quality assurance and accreditation mechanisms. In 2007, UNESCO and the World Bank established a partnership that launched the Global Initiative for Quality Assurance Capacity (GIQAC) to support the evolution of quality assurance in higher education in developing countries and countries-in-transition, by facilitating and advancing the efforts of their participating inter-regional and regional quality assurance networks. In that regard, GIQAC assists emerging and existing quality assurance systems by facilitating global and regional knowledge sharing of good practices, promoting communication among a diverse set of agencies and professionals, supporting the production of analyses and guidelines, and engendering plans for long-term network sustainability. This facility is available to assist in the development of quality assurance mechanisms for TVET.

### **Quality Assurance in TVET**

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*, 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. Institutions are expected to conduct a self-assessment each year and use the result to improve their internal quality for the following year. The self-assessment report is also used as a basis for compiling the annual report of the institution.

Navaratnam and O'Connor (1993) suggested that the application of quality assurance is critical to the future of vocational education because training must be geared to the needs of individual workplaces and the graduates who seek to work in them. They asserted that employers want quality graduates, and students expect that the skills and standards required by industry are provided to them by the training providers. In general, stakeholders want quality vocational programmes and they will not be prepared to accept lower standards of quality in course content, teaching processes, and resources.

UNESCO and ILO (2002) define TVET as “the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life” (p. 7). In relation to this definition, quality assurance of TVET must address three aspects: qualifications, courses, and providers. Educational quality should be consistent with the vision and mission of national education initiatives. To achieve quality in TVET, all stakeholders must be aware of, and understand and embrace the standards established.

The Lao Peoples' Democratic Republic (PDR) (2011) viewed quality assurance for education as:

the process of monitoring and assessment in line with defined requirements. The quality assurance system helps an institution gain confidence in its quality and gain an increase in public trust. Quality assurance may be undertaken by an external agency or through a TVET institution's own internal quality management system (QMS). Quality assurance – whether external or internal and irrespective of how quality is defined – requires established

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benchmarks against which qualifications, courses and providers can be assessed. (p. 1)

Quality assurance in TVET is an essential element in the development of this type of education both locally and internationally. Increasingly, the call for quality TVET is becoming more intense, as such delivery systems are more conscious about this element.

In Hong Kong, according to Lim (2009), the Vocational Training Council's (VTC) quality assurance system was introduced in a staged approach starting in 1998. The incremental approach had four components:

1. The Quality Policy, which sets out the institution's commitment to provide quality, and the principles and concepts (e.g., Total Quality Management) that underpin this.
2. A Quality Assurance Framework, which sets out the framework for implementing enabling management processes and the performance indicators to measure their effectiveness.
3. The Evaluation System, which measures the impact of the enabling management processes on the provision of quality learning and teaching.
4. The Internal Monitoring System, which tracks the institution's ability to implement improvement plans.

By recognizing these components' discrete units, strategic plans could be implemented to assure quality.

Lim (2009) further explains that:

the quality assurance system was introduced in two stages, starting with the Quality Policy in 1998, followed by the Quality Assurance Framework (QAF) which was introduced in 2000 and was modeled initially on the Malcolm Baldrige Education Criteria for Performance Excellence, using only the aspects that it felt ready to adopt. It was modified later to incorporate elements of the European Foundation Excellence Model (European Foundation for Quality Management 2009) and the Singapore Quality Award Framework (SPRING Singapore 2009), which resulted in the adoption of a Plan-Do-Check-Act quality cycle. (p. 187)

### **Principles of a TVET Quality Assurance System**

The general principles of a TVET quality assurance system are no different from that of a general quality assurance system, since the main objective is to improve quality and to build trust in the society. The quality assurance system starts with determining what the outcome should be. To accomplish this, the quality standards must first be established followed by assessments against the established standards.

Coates (2009) drew attention to TVET development, which in recent times has embraced *quality indicators* as opposed to *outcome measures* for determining success in performance. Quality indicators, according to Blom and Myers (2003), “are signs that are evidence of the presence or absence of particular qualities” (p. 14). Coates alluded to the many insights that have influenced the development of reliable and useful indicators for technical and vocational education and training. He provided a description of quality indicators that were developed to support the revised version of the AQTF. The quality indicators were developed to provide continuous improvements and external monitoring based on an evidence-based, outcomes focused approach, and were endorsed by the National Quality Council (NQC), a body responsible for quality assurance in Australia’s training system. It is anticipated that such practice will enhance the quality of training processes and outcomes. The three primary quality indicators introduced by Coates were learner engagement, employer satisfaction, and competency completion.

Based on research conducted by Pascarella and Terenzini (2005) and Kuh (2008), Coates (2009) concluded that “active engagement of learners in effective training practices plays a critical role in developing high quality outcomes” (p. 521). Learner engagement was therefore developed as a quality indicator with focus on key areas of training such as high quality skill, competency development, and the quality of the individual and organizational support. The *employer satisfaction* quality indicator emphasizes the importance of the employer’s opinion in determining quality, and focuses on learner/employee competency development, relevance of the learner competency to work and future training, and the overall quality of training and assessment. The *competency completion* quality indicator was developed to affirm the importance for quality management of understanding the outcomes being achieved by the registered training organizations (RTOs) (Coates, 2009).

Coates (2009) suggested that:

the data collected using these indicators could be used to gauge how well the RTOs are meeting their clients’ needs; inform data

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driven continuous improvement; provide proxy measures of education and training outcomes; provide evidence to regulatory agencies as part of their risk assessment; manage and enhance relationships with key learner and employer stakeholders; and identify areas for improvement in their training and assessment services. (p. 522)

An effective and successful TVET system is a crucial pillar for a successful economy. This perspective is shared by many sectors of the economy. To ensure success, MacDonald, Nink, and Duggan (2010) articulated six main principles to be considered: relevance to the labour market, access for trainees, quality of delivery, standardization, inclusion of soft skills, and secure and uninterrupted funding source. Quality is highlighted as an essential element in all successful TVET systems. MacDonald et al. (2010) agree that a high-quality TVET system can serve as the impetus to boost the value of the nation and its GDP in the global marketplace.

An effective education and training system for any country must be based on reliable labour market information, demand, and employer needs for that country, particularly in priority trades and occupational areas. Market-driven training requires collaboration and coordination with employers to determine the educational and training needs in order to satisfy unmet demand. This constitutes a dynamic process since demand and employer needs must keep pace with changes in technology and the availability of new skill sets. To this end, a responsive TVET system will include methods to gauge/survey employers to gather labour market information. This information will guide changes in the training of school graduates, employees in need of up-skilling, and students attending TVET colleges and similar training organizations.

Regarding access to quality TVET, it is imperative that enrolment processes for trainees be made simple and easy. Also, adequate provisions for transportation to and from TVET institutions should be put in place. TVET facilities should be established in close proximity to population centres so that adequate numbers of trainees are available for enrolment, and that strong retention and participation rates are achieved. Access, affordability, and proximity are therefore important considerations for placement of TVET infrastructure. This is of particular importance in the Caribbean because of challenges with getting from one location to another utilizing the public transportation system. It is also necessary for the training facilities to be placed near employers since staff members from key industries are sometimes called upon to participate in the training of students. These persons will ensure that

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training and equipment are up-to-date and relevant, thereby addressing employer needs. These attributes underpin graduate pathways to relevant and quality employment opportunities.

The quality of a TVET delivery system is essential to its success. It adds relevance to the trainees and their successful integration into the workforce. It is imperative that local industries play a part in the TVET system so that training is aligned with needs. Local industries are the key drivers of the TVET system. They work in collaboration with the operators of the country's TVET system and bring relevance to the curriculum. Linking training to certification requires a uniform framework based on:

1. competencies (including competency development frameworks);
2. standardization of competencies (as quality standards);
3. occupational standards (which define competencies and which describe good work practice) and National Occupational Standards (NOS);
4. the development of a National Qualifications Framework (NQF) as a result of NOS; and
5. certification of competencies (which brings competency-based training and competency-based assessment into a comprehensive national, regional, and international framework).

By aligning curriculum and training, a country will inevitably attract business partners and foreign investment, which will result in economic growth—currently posing a major challenge in the Caribbean. Also, the use of industry-recognized certification of workers promotes the concept of lifelong learning, since people with recognized certification will seek to maintain their skills in the techniques and methods of their trade or profession.

By adopting established TVET standards, training can be coordinated across the region so that all trainees receive similar training, thus making all trainees more marketable to employers no matter where they are within the country or region. Uniform standards also help countries adapt their systems to match global standards more closely, making the country and its workforce more globally competitive. India offers a good example of standardization in which TVET standards are not only established but enforced throughout the nation. Although some countries are inundated with many privately operated TVET institutions, the public TVET systems have adopted international standards and curricula to ensure quality and uniformity. With standardization, trainers are taught

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the same curricula, and similar teaching techniques are employed across a wide geographic area. This consistent and systemic training lends credibility to the courses offered. Employers will then know that the training received was of a certain standard and calibre.

The global economy's demands for soft skills such as timeliness, productivity, teamwork, and etiquette, among others, has been on the increase. In many countries, some soft skills will take time to be inculcated due to customs, culture, or other regional issues, and a movement towards global norms. In the Caribbean, this is of particular importance because of the perceived lackadaisical attitude that appears to be a characteristic feature of the people.

Secure and uninterrupted funding is imperative for a TVET system to be successful. There is need for a continuous funding stream to finance the demand for consumables and ongoing training for all stakeholders. Many TVET systems in developing nations are funded by multilateral and bilateral agencies such as USAID, World Bank, or the United Nations (UN). Although these organizations provide needed funding for TVET, the funds are typically not available over a long period of time but give developing nations the initial investment for these programmes. Public funding provided through tax arrangements such as the Human Employment and Resource Training (HEART) Trust/National Training Agency (NTA) 2% employers' tax in Jamaica is an example of a secure, uninterrupted, and sustainable funding mechanism through which TVET quality can be assured for the nation. Developing countries are well poised to train their citizens in industries that are appropriate to their country's needs, while avoiding many obstacles that developed countries have had to overcome, particularly as it relates to reliable funding of TVET.

#### **Establishing TVET Quality Standards**

The process of establishing quality standards in TVET involves the assessment of all stakeholders, including the institutions. Stakeholders such as, for example, the Technical and Vocational Education Unit (TVU) of Jamaica's Ministry of Education, the quality assurance body, the current students, the graduates, and organizations that employ graduates of the institutions are all concerned parties that must collectively work to determine the required standards. In so doing, the parties will accept ownership of the standards and will be more likely to adhere to such standards.

Formally, Quality Standard Components for TVET Institutions *has* been quite diversified across the world since the contextual realities in

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each domain are quite different. In order to produce an acceptable standard, an Inter-Agency Group on TVET (IAG-TVET) was established in 2009, with the aim of coordinating activities of the agencies active in the field of TVET, particularly in developing countries. This group comprised UNESCO; the Organisation for Economic Co-operation and Development (OECD); the World Bank (WB); the ILO; the European Commission (EC); the European Training Foundation (ETF); and the Asian Development Bank (ADB). In 2010, the IAG-TVET made recommendations on a set of TVET indicators that can support countries in assessing the efficiency and effectiveness of national TVET systems. This included four key interlocking components within a governance context: finance, access and participation, quality and innovation, and relevance in TVET, as set out in Table 1.

**Table 1: Interlocking Components for Monitoring and Evaluating TVET Performance**

**Governance context**

Governance considers the extent to which a TVET system, across all levels and in all the various sub-parts, is characterised by participation, transparency and accountability. Governance also raises questions concerning quality assurance and multiple voices, because new actors are assuming responsibility and taking part in decisions.

Governance structure is largely dependent on institutional arrangements and the respective roles of key stakeholders. Such considerations ultimately encourage questions about the roles that governance systems play in generating and steering the relevance, access and participation and quality/innovation components for delivery of specific models of TVET and within the available resources.

**Component 1: Finance**

TVET financing is largely determined by the rules and regulations whereby financial resources are collected, allocated, and managed. It largely depends on the economic situation and **available resources**, but also on the priority levels that decision makers of various types of TVET have with regard to relevance, equity and quality; and on the trade-offs stemming from those priorities. This component equally looks at capacity of the system to ensure that resources are equitable and efficiently allocated.

**Component 2: Access and participation**

This component considers the extent to which various types of TVET promote **equity and inclusion** and the implications on expanding learning opportunities for excluded groups. This is examined through the lens of *access* and *participation*. While this second component focuses on important social aims of TVET, it simultaneously has a strong relation to the relevance dimension as it prioritizes increasing the numbers of people with viable and effective opportunities to benefit from high quality TVET leading to labour market outcomes.

**Component 3: Quality**

This component addresses the policy options leading to a TVET system focused on the **teaching and learning process and its effectiveness**. It is a measure of the quality of any TVET programme, that it is effectively conducted and relevant in terms of meeting skill needs. Quality facilities and equipment, is also fundamental to the provision of quality TVET. Equally important, this component looks at the capacity of the systems to innovate and how teaching and learning process is a site of innovation itself, for example with rapid changes in the use of information and communication technologies. The component equally looks at the availability of a systematic approach to quality assurance in order to support practitioners and policy-makers in improving the quality of training provision, and also guide students in making choices.

**Component 4: Relevance**

This component considers the extent to which TVET is **responsive** to labour market needs and requirements. The related policy area to be considered here are *labour market links to TVET programmes* and *outcomes of the TVET programmes*. This component reflects the assumption that the primary and key role of TVET is to raise skills levels and to help matching skills needs at all levels in today's complex and changing labour markets. Relevance also entails the mechanisms and available capacity to understand transition from school and all types of TVET programmes to work as well as to capture labour market signals and to anticipate emerging skills needs and the extent to which this informs TVET provision.

*Source:* Inter-Agency Working Group on TVET Indicators (IAG-TVET), 2012, p. 7.

These components are paramount to TVET, not only in the Caribbean, but in all countries that rely on quality goods and services to stimulate their economic growth and development. In some jurisdictions, planners define quality standards using more precise elements, such as in the case of the Lao PDR (2011) where they identified 10 quality standards, grouped into three categories with 32 discrete indicators.

### **Quality Assurance of TVET in the Caribbean**

The TVET landscape has changed drastically during the last three decades in the Caribbean. Stakeholders have been, over the period, calling for better quality programmes and delivery systems to support these programmes. During this period the region has witnessed several TVET quality assurance best practices, which for the most part resulted from actions taken by several countries in the region followed by actions taken by CARICOM.

In 1990, a CARICOM regional TVET strategy was established to propel the development of TVET in the Caribbean region. This strategy provided a foundation for most countries in the region to reconsider their position on TVET and motivated them to invest significantly in their TVET system. Boodhai (n.d.) noted that National Training Agencies/TVET Councils were implemented as apex agencies to rationalize all training, and to ensure proper manpower development and centralized planning. He outlined several key milestones achieved by the region in TVET as:

- The development of a 5-level Regional Qualifications Framework representing the different levels of skill, autonomy and responsibility that correspond to levels of employment in the labour market (2003)
- The setting up of National TVET Apex Agencies namely the HEART Trust /NTA (Jamaica, 1991), the TVET Council (Barbados, 1998) and the National Training Agency (T&T, 1999)
- The setting up of the Caribbean Association of National Training Agencies (CANTA) as the implementation arm of the Regional Coordinating Mechanism for TVET (RCMTVET) (2003)
- The wide participation of Caribbean territories in major regional TVET workshops hosted by Trinidad & Tobago and Jamaica (2000-2008)
- The adoption of the CARICOM Process for Workforce Training, Assessment and Certification (2005) by the Council for Human and Social Development (COHSOD)
- The launch of a CANTA TVET Journal in conjunction with the ILO/CINTERFOR (2005)
- The agreement by COHSOD for the Caribbean Vocational Qualification (CVQ) to be used for the movement of artisans (2007)

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- The setting-up of regional processes for the development of Occupational Standards and the Quality Assurance of TVET Providers (2007/08)
- The regional approval of occupational standards (first in 2003 and again in 2008)
- The implementation of a project by the Organization of American States (OAS) has developed teachers and administrators within the secondary school system in the region. They were trained as Assessors of Competency Based Education and Training as part of a School-to-Work strategy
- The recent setting up of TVET Agencies and Competency Based Systems in countries such as Antigua & Barbuda, Bahamas, Belize, Grenada, St. Kitts & Nevis, St. Lucia and Guyana, most of which are in the formative stages
- The award of the Caribbean Vocational Qualifications (CVQs) by the Caribbean Examinations Council (CXC) in the Trinidad & Tobago Secondary School system to over 1,000 students (2007/08). (pp. 4–5)

These milestones are significant in the development and implementation of quality TVET in the Caribbean region; however there is need to analyse these outcomes in relation to the new strategies that are being promoted to determine what aspects can be replicated.

#### **Establishment of National Councils on TVET in the Caribbean**

The Caribbean region recognized the need for a high-quality TVET system and the importance of establishing standards for such a system. Accordingly, agencies were established to develop, implement, and monitor these standards. The establishment of National TVET Apex Agencies, namely, the HEART Trust NTA in Jamaica (1991); the TVET Council in Barbados (1998); the National Training Agency in Trinidad and Tobago (1999); and the National Training Agency in Antigua (2012), hastened the establishment of quality assurance mechanisms for TVET in the Caribbean. The quality movement started with the formation of the National Council on Technical and Vocational Education and Training (NCTVET) in Jamaica in 1992. This was followed by the establishment of national councils in Barbados and Trinidad and Tobago in 1998 and 1999 respectively.

The Trinidad and Tobago National Training Agency (NTA) (n.d.), in recognizing the importance of quality assurance in TVET, established a

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body to ensure that quality targets are achieved. The components of the body, as provided by Kuboni (2002), included:

- *Curriculum development*: to support the work of providers in designing new curriculum and making changes to existing ones
- *Instructional design*: to assist providers in articulating learner needs and designing systems to support varying categories of learners
- *Systems analysis*: to engage all stakeholders in a review and evaluation of current organisational structures with a view to effecting changes as required by changing educational goals
- *Technology support services*: to facilitate access to a well-integrated technological infrastructure to support a range of functions including teaching and learning, administration, student support services and publicity
- *Quality assurance and accreditation*: to set standards to govern the operations of all aspects of the TVET programme
- *Training*: to provide ongoing professional development activities for various categories of personnel
- *Project management*: to ensure the efficient co-ordination of the various elements of the work of the organisation
- *Research and evaluation*: to carry out continual analysis and evaluation of the operations to determine areas of strength and/or weakness in the system and as a forerunner to making recommendations for improvement (p. 103)

The NTA recognized that the assurance of quality in education, and more specifically in Technical Vocational Education and Training (TVET), is a process of establishing stakeholder confidence that the training being provided (input, process and outcomes) must fulfil expectations, or measure up to threshold minimum requirements of the regionally approved Occupational Standards. The NTA further recognized that quality assurance in TVET refers to a well-documented and administered system of assessment, and internal and external verification processes, which are essential in establishing and maintaining credibility in the TVET system.

There still remains quite a significant gap in quality assurance in the Caribbean, and a great deal of work remains to be done with respect to establishing quality assurance agencies throughout the Caribbean since only four agencies have been established to date. Additionally, those

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already established are primarily concerned about quality assurance of TVET in their jurisdictions. It is hoped that the establishment of the Caribbean Area Network of Training Agencies (CANTA) will fill this gap.

CANTA was established primarily as the coordinating body for quality assurance of TVET in the Caribbean. In its quality assurance system, CANTA (2009) suggested that NTAs should include quality enhancement, quality audits, and periodic surveillance audits as part of their responsibility, and ensure that adequate support for external verification visits is available. Quality audits are necessary to evaluate the suitability and sufficiency of systems, approaches, and practices implemented, as outlined in the centre approval submissions required by the NTA's criteria. Periodic surveillance audits are necessary to ensure that systems are maintained in accordance with approved "TVET centre criteria" and for approved TVET programmes. TVET centres are facilities designed for facilitating the delivery of TVET programmes.

CANTA's (2009) *Quality Assurance Criteria* include policy, management system, staffing, systems of instruction, systems of assessment, health and safety, and evaluation among other sub categories. These criteria were developed based on earlier works of the NCTVET in Jamaica, and adapted by the Caribbean Community (CARICOM) as the basis for providing a solid foundation to TVET organizations in the region. CANTA has since proposed a revised strategy for quality assurance of TVET. These criteria include instructions to guide TVET institutions towards achieving approval for TVET centre approval in the Caribbean.

In 2012, CANTA proposed a new strategy for assuring quality of TVET in CARICOM. This strategy incorporated eight key quality components: redefining TVET for workforce development and economic competitiveness; integrating TVET into general education; establishing a CARICOM training system; developing labour market intelligence; expanding public awareness; incorporating career guidance and counselling mechanisms; providing appropriate instructor training; and improving the infrastructure for training. A close investigation of these quality components proposed by CANTA (2012) will reveal that there is synchronicity between the 10 components of quality and the 32 TVET quality assurance indicators provided by Lao PDR (2011). It therefore appears that the proposal will prove adequate in providing a solid basis for evaluating the quality of TVET in the Caribbean. It is anticipated that these "quality components" will be adopted and employed across the Caribbean in the implementation of the CVQ across the region.

### **Quality Assurance of TVET in Jamaica**

An example of best practices in quality assurance in TVET in the Caribbean is the services provided by the NCTVET in Jamaica. The Council was established in 1992 to maintain the quality and integrity of the assessment and certification system for national and regional qualifications, and to assure quality in TVET for the country. The credibility of the organization was enhanced when it became a member of the Association of Commonwealth Examination and Accreditation Bodies (ACEAB), and an associate member of INQAAHE. The responsibilities of the NCTVET in Jamaica include maintaining access to an up-to-date listing and details of all available qualification plans for national and regional qualifications; auditing training centres for compliance using criteria that have been established for “Approved Centre Status”; and ensuring that all quality assurance procedures have been completed in Approved Centres before the issuing of certificates. In order to ensure continuous compliance, the NCTVET is responsible for conducting audits in Centres where queries or areas of risk to the authenticity of assessment are identified.

The NCTVET in Jamaica is also responsible for maintaining accurate records of the candidates’ achievements and certificates issued. The security of the records should be ensured in accordance with legal and statutory requirements. The Council is responsible for providing confirmation of qualifications or competencies gained, upon request. In carrying out this task, the Council is required to ensure that certificates and unit recognition for learner accomplishments are issued promptly. Another responsibility is providing training and maintaining a register of auditors/verifiers and assessors, and providing feedback to Approved Centres on candidates’ performance. The NCTVET in Jamaica developed the following process to assist training organizations to become “Accredited Training Organizations” (ATOs):

1. Complete and submit an Application for Accreditation form with the programme(s) for evaluation (or reaffirmation) to the Registrar of NCTVET.
2. Upon receipt, a Quality Assurance specialist from the NCTVET will visit the organization to conduct technical workshop.
3. At the point of readiness, the organization must complete and submit a policy and procedure manual and agree on evaluation dates.
4. The Quality Assurance unit of the NCTVET will schedule evaluation activities and the organization will be informed of all evaluation arrangements.

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5. A visiting team of professionals will conduct the accreditation evaluation exercise.
6. An evaluation team report will be prepared by the Quality Assurance Unit and submitted to the organization.
7. The organization must submit a written response to the evaluation team report to the Quality Assurance Unit.
8. The team report will be submitted to the Quality Assurance Committee of the Council for review and judgment on accreditation (Jamaica NCTVET, n.d.b).

This process for accessing centre approval is outlined in a self-explanatory flow diagram presented in Figure 1.

The process begins with a voluntary application from the institution, following which a verification process is conducted before approval is either granted or denied. If approval is granted, the institution is elevated to “approved centre status” for a three-year period during which time monitoring of the institution is conducted to ensure that standards are adhered to. The institution may lose this status if the standards are not maintained. If denied, the institution may appeal the decision or reapply after the necessary improvements are made or the deficiencies corrected.

The NCTVET established quality assurance criteria for six essential systems for TVET institutions in Jamaica: management and communication, client support, qualification of trainers and assessment personnel, assessment of facilities, and assessment of activities. The *Management and Communication Criterion* is considered extremely critical since it addresses all aspects of the training centre in the provision of NVQs and Caribbean Vocational Qualifications (CVQs). This criterion begins with the establishment of clearly communicated aims and objectives for offering the programmes that are supported by the board/senior management of the institution. It addresses the implementation of policies for fair and open access with respect to provision of training and assessment. It clearly stipulates the roles, responsibilities, and authorities of the parties involved in the training and assessment activities at the Centre, as well as associated sites. It also ensures that these roles and responsibilities are clearly defined and communicated to all parties.

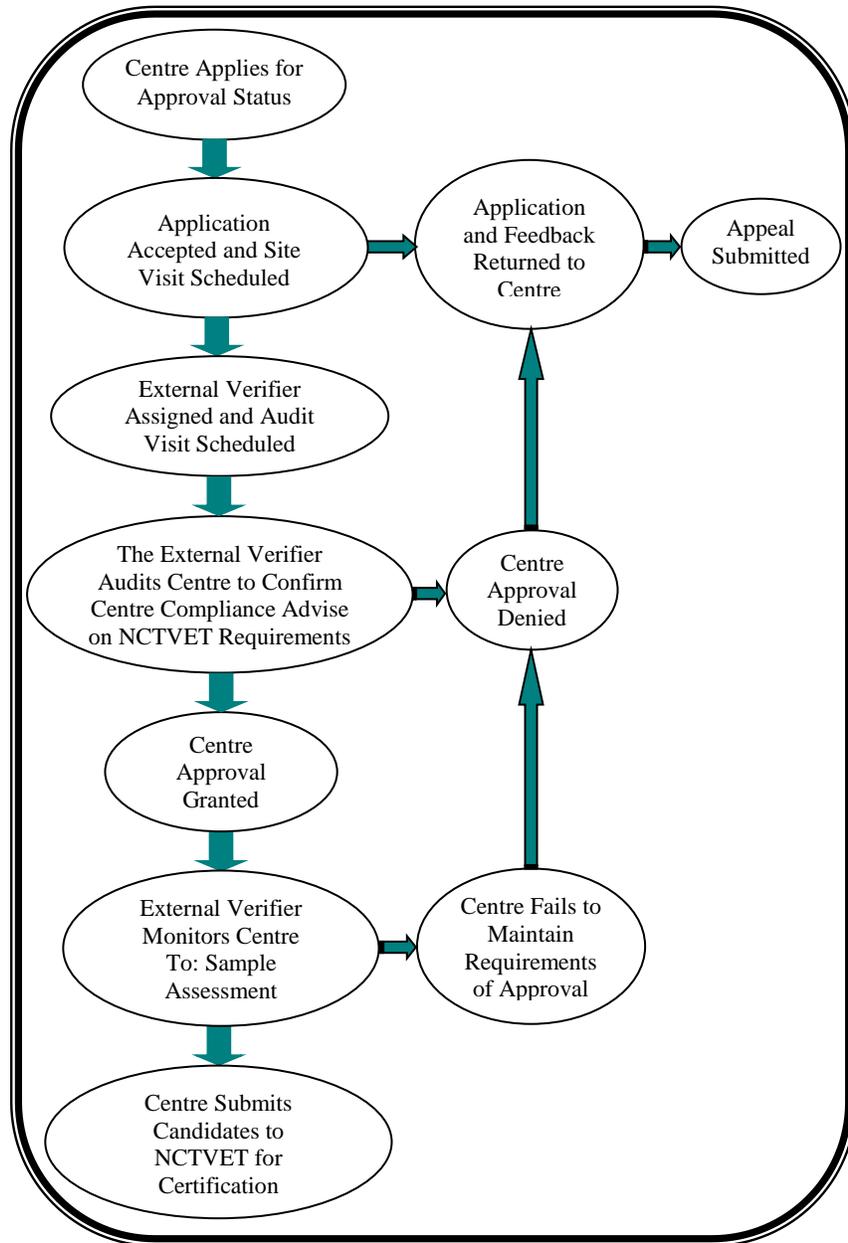


Figure 1. Centre Approval Process (Source: Jamaica NCTVET, n.d.a).

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A major element of this criterion is the establishment of communication links between the NCTVET and the related ATO. It is recommended that an individual is appointed as a Centre Liaison to maintain effective communication between the Centre and the NCTVET. This link will ensure that internal verification procedures are clearly documented and communicated to staff and that these are consistent with the NCTVET requirements, and that the records of internal verification and other assessment activities are maintained in keeping with NCTVET requirements. Additionally, this criterion will ensure that candidates' personal and achievements records are accurate and maintained securely, confidentially, and in keeping with established guidelines. The *Management and Communication Criterion* also requires that annual reports be submitted to NCTVET on time and in the required format. Reports should include the findings of internal and external verification and the corrective action implemented. Also included are the monitoring of candidates' achievements and how this information is used to inform future developmental activities and qualifications offerings.

The *Client Support Criterion* assures that information, and advice and guidance about NVQ and CVQ training and assessment procedures, practices, and requirements are provided to candidates and potential candidates. It stipulates that guidance should be provided on how unit or full certification can contribute to the career/personal development of trainees. It also stipulates that information, advice, and support should be provided to candidates exiting the NVQ/CVQ programmes in order to support continuation of learning/assessment/certification in vocational qualifications.

The *Qualification of Trainers and Assessment Personnel Criteria* are essential in the quality assurance process. These assure that the quality of facilitators, assessors, and internal verifiers are optimum, and that the Centre has access to trained facilitators, assessors, and verifiers who are not only trained in but also practise the Competency Based Education and Training (CBET) methodology in training and assessment for NVQ and CVQ programmes. It is required that facilitators are trained and certified in their skill area to at least one level above the level that they are required to teach.

The *Assessment of Facilities Criterion* assures that the institution complies with appropriate health and safety requirements. Additionally, the equipment and material used for the purpose of assessment must also comply with established health and safety requirements. The criterion also stipulates that the equipment and materials used for conducting assessment must be provided in sufficient quantities and that they must

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be in good working condition to facilitate access and fairness in assessment.

A criterion that requires that *assessment activities* are planned and communicated to candidates prior to the assessment exercise is of paramount importance. Assessment and internal verification activities must be conducted by qualified and technically competent staff. These activities should employ a wide range of assessment methods in the assessment of clients. The criterion requires that records of internal verification activities must be maintained to provide evidence for queries about assessment activities and decisions. Queries should be resolved and recorded in keeping with appeal procedures. Additionally, information provided to the NCTVET must be accurate, complete, and submitted on time. It is also a requirement for the institution to provide support for external verifiers assigned by NCTVET to conduct verification activities.

The criteria established and used by the NCTVET in Jamaica have served as a mechanism to improve the quality to TVET in general. All institutions involved in the delivery of TVET must seek to gain access to these criteria and use them as a guide in their developmental activities, thus engendering the overall development of this area.

#### **Accreditation by NCTVET in Jamaica**

During the period 1991–2013, the NCTVET in Jamaica has accredited numerous institutions in several categories across Jamaica. Table 2 provides the numbers of these institutions accredited to offer some programmes at various levels of qualifications in 2006 and 2008.

In 2006, of 36 accredited institutions, only 6 were accredited to offer Level 3 programmes and none accredited to offer Level 4 programmes. By 2008, the total number of accredited institutions increased to 38 and the number of accredited institutions for Level 3 and 4 programmes increased to 13 and 1 respectively.

In 2012, a total of 38 institutions were accredited by the NCTVET, Jamaica. Included were programmes at Levels 1–4 (see Table 3). Of this number, 23 were accredited to offer Level 3 programmes, whereas, 4 were accredited to offer Level 4 programmes. This represents a significant increase in the number of institutions accredited to offer advanced level programmes.

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**Table 2. NCTVET Accredited Institutions in Jamaica (2006 & 2008)**

Type of Institution	Total		Number Accredited						
			Level 1		Level 2		Level 3		Level 4
	2006	2008	2006	2008	2006	2008	2006	2008	2008
Vocational Training Centres	16	16	16	16	14	15	0	4	0
HEART Training Academies	7	8	7	7	7	8	3	3	0
Training Institutes (HEART)	3	1	3	1	1	1	0	0	0
Training Institutes (Private)	7	9	6	6	4	8	0	3	0
Tertiary Institution	3	3	2	2	2	2	3	3	1
<b>Total</b>	<b>36</b>	<b>37</b>	<b>34</b>	<b>32</b>	<b>28</b>	<b>34</b>	<b>6</b>	<b>13</b>	<b>1</b>

Source: Jamaica NCTVET, n.d.b

**Table 3. NCTVET Accredited Institutions in Jamaica in 2012**

Type of Institution	Total	Number Accredited			
		Level 1	Level 2	Level 3	Level 4
Vocational Training Centres	17	16	17	12	0
HEART Training Academies	6	6	6	4	2
Technical High Schools	2	2	0	0	0
Training Institutes (HEART)	3	3	3	2	0
Training Institutes (Private)	6	4	2	2	0
Tertiary Institution	4	2	3	3	2
<b>TOTAL</b>	<b>38</b>	<b>33</b>	<b>31</b>	<b>23</b>	<b>4</b>

Source: Jamaica NCTVET, n.d.b.

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Details about the programmes that the institutions are accredited to offer can be obtained from NCTVET in Jamaica. Additionally, information on all of the NCTVET accredited institutions can be obtained from the National Qualifications register's website ([www.nqrjamaica.org](http://www.nqrjamaica.org)). It is evident that the quality assurance services provided by the NCTVET in Jamaica have proven to be an essential mechanism in the development of TVET in that country, and has led the way for quality assurance mechanisms to be developed in the rest of the Caribbean.

The quality of TVET has been significantly improved in Jamaica as a result of the establishment of the NCTVET. Prior to its inception, there was no body or organization charged with the responsibility of establishing standards and evaluating training institutions/facilities against these standards. As evidenced in Tables 2 and 3, during the last six years, there has been a steady increase in the number of institutions accredited to deliver programmes at Levels 3 and 4. In 2006, 6 institutions were accredited to offer Level 3 programmes, whereas in 2008 and 2012 the number of institutions increased to 13 and 23 respectively. Likewise, the number of institutions accredited to offer Level 4 programmes increased from zero in 2006 to 4 in 2012.

### **Conclusion and Recommendations**

Quality assurance for TVET in the Caribbean is of utmost importance if the region is to synchronize with the global economy, which is demanding more from people across the world. Increasingly, more advanced and relevant training is becoming the expectation of stakeholders in the TVET system because of the trend of globalization. Additionally, it is well understood that an effective TVET system, as confirmed by MacDonald et al. (2010), is a crucial pillar of any successful economy. They claimed that "it can serve as the impetus to boost the value of the nation and its GDP in the global marketplace" (p. 10). It is therefore imperative that countries such as those in the Caribbean embrace appropriate quality assurance systems in the delivery of TVET.

Although the quality of TVET is primarily determined by the industry partners, the success of the system will be influenced by the availability of all stakeholder support, in particular government support, which will invariably provide a steady flow of funding, an essential component in the success and sustainability of the system. It is imperative that both the private and public sectors agree on strategies to fund quality assurance mechanisms for TVET. Government funding along with support from industry will guarantee access for trainees to the TVET system.

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MacDonald et al. (2010) argue that it is important for trainees to be able to enrol easily in training programmes.

TVET needs to respond to the labour market demands in a holistic manner; as such, quality is a key element in its response. Planners need to respond to demands from all sectors of the economy, both rural and urban, and in all socio-economic conditions. TVET quality assurance systems for the Caribbean should be configured to provide quality assurance for programmes delivered in the various contexts. It is therefore imperative that standards are developed using inputs from a wide cross-section of stakeholders.

It is evident that significant strides have been made in the establishment of a quality assurance mechanism for TVET in the Caribbean. There is need, however, to place more emphasis on the coordination of the efforts of the national agencies to ensure uniformity across the region in order to establish acceptable standards. It is also necessary to benchmark regional and national standards with those established internationally to facilitate ease of migration of trained persons. This is in response to trends of globalization and its impact on the local economies.

Establishing and maintaining a culture of quality is a vision to be embraced by TVET practitioners in the Caribbean. This is an imperative to building an effective and efficient TVET system. It is of particular importance that all stakeholders are aware of the processes involved and refrain from accepting performances that have not met the established standards.

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