

NATIONAL VOCATIONAL QUALIFICATIONS FRAMEWORK OF SRI LANKA – EXPERIENCE OF ESTABLISHMENT AND OPERATION

Dr. T.A. Piyasiri

Director General

Tertiary and Vocational Education Commission, Ministry of Vocational and Technical Training

dg@tvec.gov.lk

I. HISTORICAL DEVELOPMENT

As evident in the surviving monuments and artifacts, and the extended irrigation network, ancient Sri Lanka had a skill base of a very high level. This would have continued through the medieval period too, even though the technology may have been lost over the course of time.

In modern times, a significant event in this area was the establishment of the first technical school in Maradana in 1893. Over the past 40 years, institutions engaged in Technical and Vocational Education and Training have grown in number and complexity. In large part, the expansion of institutional training and the proliferation of programmes reflect the concern of successive governments to build up a skilled work base, provide employment and alleviate poverty. Different institutions and training modalities have been introduced by the state, and through bilateral and multilateral projects.

Despite its expansion over the years, institutional training is yet to become the dominant and industry-preferred mode of skills acquisition. As studies reveal that a large majority of the population acquire skills through working in industry, as well as through the formal apprenticeship schemes and informal apprenticeship arrangements.

II. INSTITUTIONAL FRAMEWORK OF CURRENT TVET SYSTEM

Technical and Vocational Education and Training (TVET) is undertaken by a wide array of

institutions in the state and non-state sectors. Almost all leading public sector TVET institutions, whose primary function is training, operate under the Ministry of Vocational and Technical Training. In addition, many other Ministries and Provincial Councils, through the Departments and Corporations under their purview, undertake training as an associate function. Although institutional arrangements under ministries have been changed from time to time, Sri Lanka now has a well established institutional structure.

A. TERTIARY AND VOCATIONAL EDUCATION COMMISSION (TVEC)

Part I of the Tertiary and Vocational Education (TVE) Act No. 20 of 1990, established the Tertiary and Vocational Education Commission, with a mandate to formulate policy, plan and coordinate, establish qualification systems and regulate the TEVT sector for relevance and quality of training. This Act was revised by amendment Act No. 50 of 1999 with the provision of additional powers to the Commission for funding and research.

B. UNIVERSITY OF VOCATIONAL TECHNOLOGY (UNIVOTEC)

University of Vocational Technology, established under Act No. 31 of 2008 is primarily for the conduct of undergraduate courses leading to NVQ Level 7 equivalent qualifications and post

graduate qualifications. The university also performs the functions of teacher training and curriculum development activity for the TEVT sector. The Univotec has replaced the National Institute of Technical Education of Sri Lanka (NITESL).

C. PUBLIC SECTOR TRAINING PROVIDERS WITH PRIMARY RESPONSIBILITY IN TVET

- **Department of Technical Education and Training (DTET)** with a network of 38 Technical Colleges with annual enrolment of about 20,000 trainees. Further, nine technical colleges (one in each province) have been upgraded to conduct diploma level courses.
- **National Apprentices and Industrial Training Authority (NAITA)** established by Part II of TVE Act No. 20 of 1990, has an island wide network of inspectorate to conduct apprenticeship programmes with annual recruitment capacity of about 20,000 apprentices while operating three national level institutes. NAITA is the successor to National Apprentices Board (NAB).
- **Vocational Training Authority of Sri Lanka (VTA)** with a network of approximately 240 training centres with annual enrollment of about 20,000 students. Established by Act No. 12 of 1995, the Vocational Training Authority has a special focus on training youth in rural areas.
- **National Youth Services Council (NYSC)**, established in 1970 under the National Youth Services Council Act, undertakes the training of youth in rural areas as a subsidiary function.
- **Sri Lanka Institute of Advanced Technological Education (SLIATE)** established by Act No. 29 of 1995, provides training towards Higher National Diploma and Diploma Level Qualifications and operates under the Ministry of Higher Education.

D. NON-STATE SECTOR TRAINING PROVIDERS

There are a large number of TVET institutions operating on a fee-levying basis. However, the majority of them are in the IT sector. In addition, there is a widespread network of non-fee levying institutions supported by national and international charities.

III. NATIONAL VOCATIONAL QUALIFICATIONS FRAMEWORK OF SRILANKA (NVQSL)

The NVQSL provides the opportunity for sustainable, strategic solutions for national training needs as well as for the employment mismatch for both the formal and the non-formal sectors. The NVQSL will easily be able to achieve international recognition for qualifications, skills and knowledge of Sri Lankans in an increasingly globalised and competitive world. This will enhance the mobility of Sri Lankan workers nationally & internationally. The internationally benchmarked policies and processes adopted by the Tertiary and Vocational Education Commission (TVEC) shall enhance credibility to credentials awarded in Sri Lanka.

The expectations sought from the establishment of a National Vocational Qualifications Framework relate to increasing the relevance and quality of Technical and Vocational Education and Training (TVET), specifically there shall be:

- *Unified qualification framework which is recognized nationally and understood internationally;*
- *Development of progressive qualifications for career advancement;*
- *Greater alignment to national goals;*
- *Strengthened linkages with industry, commerce and other external stakeholders;*
- *Increased responsiveness to industry competency needs;*
- *Convenient & flexible access for potential trainees;*
- *More proactive education and training strategies;*
- *Improved international linkages and recognition;*
- *Collaboration and rationalisation among the training agencies;*
- *Enhanced quality, relevance, performance, effectiveness, efficiency and transparency; and*
- *An education and training culture of responsiveness and excellence.*

Developing the NVQSL shall ensure that all current and newly emerging technical and vocational education and training (TVET)

activities are well coordinated. Competency-Based Training (CBT) curricula and appropriate teaching, learning and assessment materials shall be available in the framework, together with requirements for registration and accreditation for training providers and courses respectively. The whole system shall be underpinned on acquisition of competencies with an emphasis on quality. The TVEC is the authority for the implementation of NVQSL and the active participation of all the training agencies is vital for the effective implementation of the National Vocational Qualifications of Sri Lanka.

IV. OVERVIEW OF THE QUALIFICATION SYSTEM

The National Vocational Qualifications Framework makes provision for a nationally consistent, technical and vocational education and training in Sri Lanka relevant to economic and social development and is of an international standard. The National Vocational Qualifications of Sri Lanka are based on national competency standards identified by the industry stakeholders. The competency standards include relevant technical and employability competencies. The system awards qualifications at seven levels as given in Table 1.

LEVEL NO.	QUALIFICATION	GENERALIZED DESCRIPTION
Level 1	National Certificate	Level 1 recognizes the acquisitions of entry level competencies
Level 2 Level 3 Level 4	National Certificate	Levels 2, 3, and 4 recognize increasing levels of competencies. Level 4 qualification provides for full craftsmanship/workmanship.
Level 5 Level 6	National Diploma	Levels 5 and 6 recognize the increasing level of competencies of technicians including supervision and process management.
Level 7 Level 8	Bachelors Degree	Level 7 recognizes the vocational/technological competencies at Bachelors Degree level

Table 1. *Seven Levels of Qualifications*

Certification of 1 – 6 levels shall be carried out by institutions whose courses are accredited by the TVEC. Certification at level 7 shall be carried out by the Univotec. They are nationally recognized and attest the achievement of a national standard determined by industry. Competency standard units can be acquired individually or progressively and lead towards a full award. The NVQSL encourages flexible acquisition of competencies both on and off the job and also recognizes prior learning-policies and processes. These are established to allow knowledge and skills acquired informally to be assessed, and competencies recognized towards national vocational qualifications.

A broad framework has been developed integrating technical/vocational and higher education and further levels may be added. The framework allows for an interface with secondary education and provides a progression for technical and vocational education qualified personnel to proceed to higher education. Industry and professional bodies participating in the development of the national competency standards are therefore in a position to plan for a smooth progression of qualifications from craft to technician to higher education.

Quality assurance is fundamental to all aspects of the NVQSL; it includes the determination of the national competency standards, training delivery to learners on and off the job, the assessment of competencies of candidates and the award of qualifications. Technical and vocational qualifications which comply with the national quality requirements are formally recognised through the National Vocational Qualifications of Sri Lanka. The framework is based on national competency standards which form the criteria for accreditation of courses.

V. NATIONAL COMPETENCY STANDARDS

Competency is the application of knowledge and skills relative to an industry standard of performance. The concept of competency focuses on what is expected of an employee in the workplace, rather than on the learning process, and embodies the ability to transfer and apply skills and knowledge to different situations and environments. Therefore in Competency-based training (CBT) emphasis is placed on what a person can do in the workplace as a result of completing a program of training.

Competency standards are industry-determined specifications of performance that set out the skills, knowledge and attitudes required to operate effectively in a specific industry or

profession. Competency standards are made up of units of competency, which are themselves made up of elements of competency, together with performance criteria, a range of variables, and an evidence guide. Competency standards are an endorsed component of a training package. The units of the competency standards are individually assigned to a level and vocational qualifications are also assigned levels.

The factors to be considered in the assignment of levels for the units of competency standards are as follows:

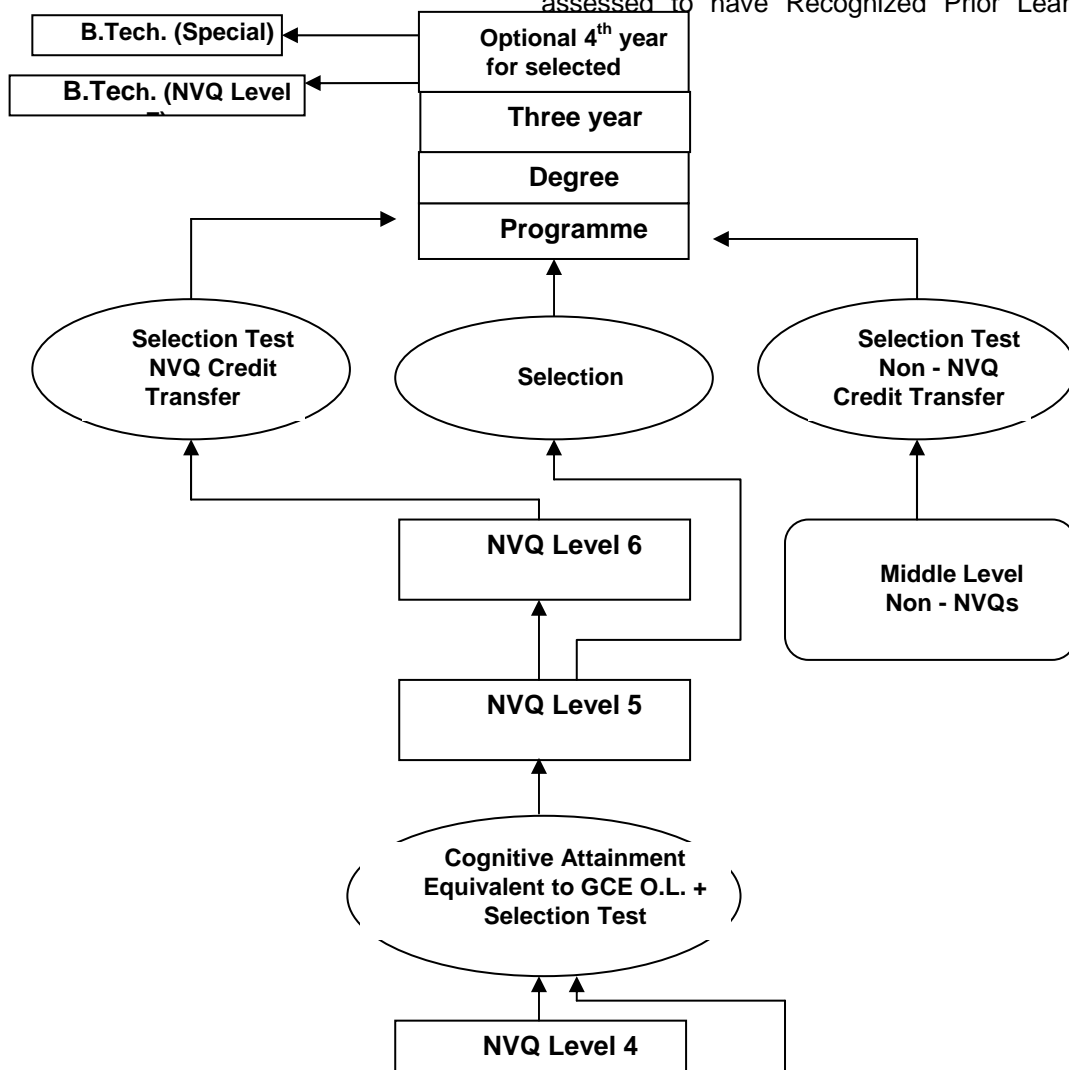
- Process that a qualification holder will carry out
- Learning demand
- Responsibility

NVQSL has used the level descriptors of the New Zealand Qualification framework as the basis for the development of its level descriptors.

Figure 1: Qualification Upgrading Pathways

VI. QUALIFICATIONS UPGRADING PATHWAYS

The NVQSL is developed to assist trainees to join and leave the system at different stages with qualifications at different levels. The qualifications at different levels have been identified to suit employment requirements of the industry. Vertical mobility upwards through the system is straightforward as seamless progression is facilitated. Lateral entry into the system is possible at certain levels for those who have work experience in an appropriate field and assessed to have Recognized Prior Learning



supervisory and/or process management competencies. These involve an increased percentage of knowledge component compared to competencies at lower levels. It is therefore necessary to ensure those entering NVQ level 5 programmes already have the necessary hands on skills to embark on a level 5 programme. The entry qualification to the Level 5 Diploma program is therefore fixed at NVQ Level 3 or Level 4 in a relevant occupation. The list of relevant occupations for each level 5 diploma is notified when applications are called for these programmes. There is also a path of lateral entry for students with non NVQ qualifications mapped by the TVEC and assessed for their practical experience as well as for those who have work experience in an appropriate field and assessed to have Recognized Prior Learning (RPL) equivalent to NVQ level 3 or 4.

Candidates selected for entry to a NVQ level 5 programmes may possess different skill and knowledge backgrounds. Even those coming through the NVQ system itself will have qualifications from different occupations. In order to ensure that all those selected to undergo a level 5 programme have the minimum skills and knowledge needed at entry, they will initially go through a Bridging program. If there is a skill gap in a particular student that will be identified at the academic counselling session and the student is directed for necessary "Gap-Filling" programs. The "Foundation Studies" program is intended to provide the necessary mathematics, science and English knowledge and computer literacy needed to embark on a level 5 programmes.

NVQ level 5 and 6 competency standards comprise of units of competency and each unit of competency is assigned a credit value. A trainee will be eligible to receive the NVQ level 5 qualifications once he/she earns the required number of credits specified in the relevant competency standard. A level 5 qualification allows direct entry to the NVQ level 6 training programme in the same technology area with the credits earned towards the NVQ level 5 qualifications counted towards the NVQ level 6 qualifications.

A. NQF Levels 1- 4

Qualifications at levels 1 – 4 allows for a trainee to upgrade competencies starting from unskilled stage to reach full or master craftsman stage through the acquisition of competencies specified at each level. These competencies are incorporated into the units of competencies which are packaged appropriately to form the National Competency Standards. The trainee maintains a Record of Achievement of the units of competency that he/she has successfully completed and once all the units comprising a particular level has been successfully completed he/she is eligible to receive the National Certificate in the relevant occupation at the applicable level. Thus a trainee is able to upgrade his/her qualification level in a particular occupation through gradual acquisition of competencies as per the National Competency Standards.

B. NQF Levels 5 and 6

NVQ level 5 and 6 diploma programs allow a student to leave the system at the end of Level 5 with a National Diploma of NVQ level 5 or proceed and leave the system at the end of Level 6 with a National Diploma of NVQ level 6. However, some diploma programmes may not have an exit at NVQ level 5. This is possible where the industry has identified that there is no employment category for a person with competencies achieved up to level 5 only in that technology area.

The programmes are developed so that persons with NVQ level 5 or 6 qualifications will have

C. NQF Level 7

NVQ level 7 programmes conducted by the Univotec allow students to acquire B.Tech. or B.Ed. Tech. degree qualifications. Pathways, from the National Diplomas, will be available to students who have achieved the relevant NVQ qualifications at levels 5 or level 6 to proceed to degree programmes. Those with NVQ level 6 qualifications are eligible to receive appropriate

credit transfer towards the degree programme to be determined by the Univotec.

VII. CRITERIA FOR DETERMINING QUALIFICATIONS OF LEVELS 5 & 6

NVQ Level 5 Diploma

The minimum number of credits required for the NVQ level 5 diploma is 60 of which at least 40 credits must be at level 5 or above and the remaining (up to 20) credits at level 3 or above. The credit system adopted is the European Credit Transfer System.

NVQ Level 6 Diploma

The minimum number of credits required for the NVQ level 6 diploma is 120 of which

- At least 40 credits must be at level 6 or above
- At least 50 additional credits are at level 5 or above
- The remaining 30 (or fewer) credits may be from level 3 or above

A maximum of 60 credits earned towards a level 5 qualification in the relevant technology area can be counted towards the credit requirement of level 6 qualification.

NVQ Level 7 (Degree level)

The degree at the Univotec will meet international norms for first degrees and will consequently be a systematic, research-based, coherent, introduction to the knowledge, ideas, principles, concepts, chief research methods and to the analytical and problem-solving techniques of a recognized major technology subject or subjects. The programme leading to this qualification will involve major studies in which significant knowledge is available. The programme content will be taken to a significant depth and progressively developed to a high level, which can provide a basis for professional careers and post graduate study. The Bachelor's Degrees at the Univotec will require a minimum of 180 credits (the equivalent of three years full-time study). The credit transfer negotiated by the TVEC for qualifications higher than level 5 may reduce the credits to be earned towards the Bachelor's Degree.

Special Degree

Minimum requirement for successful completion of a Special Degree shall be 240 credits earned after NVQ Level 5. A maximum of 180 credits may be given exemption on credits earned in the General Degree.

VIII. QUALITY ASSURANCE

Quality underpins all components of the NVQSL. A quality assurance model based on institutional self-assessment and continuous development has already been adopted. Quality assurance requires that all training agencies take responsibility for excellent performance and demonstrate to stakeholders that quality management systems are to the standard required by the TVEC. TVEC is responsible for quality assurance and has four clusters of activities to support the NVQSL.

1. Registration of training providers
2. Quality Management System
3. Course accreditation
4. Monitoring and audit

Quality assurance is a prerequisite for regular registration of training providers. Registration of training providers may lead to accreditation of courses and programs. Accreditation ensures that training providers adhere to active internal quality management systems with particular reference to the course for which accreditation is being sought.

The Quality Assurance system is subject to monitoring and audit by TVEC. This process systematically verifies registration and accreditation through institutional quality audit. Training providers must have satisfactory audit results in order to maintain the status of registration and accreditation.

Registration of Institutions

All TVET institutions are required to meet the standard specified by the TVEC to achieve institutional registration to enter the TVET education and training market. They need to be properly established and organised with the explicit intention of offering education and training services. Minimum standards are specified in the Act and the Development Plan of TVEC.

Accreditation of courses

To obtain accreditation for a course a training institution needs to satisfy certain essential requirements. These include the ability/capability

of the institution to deliver the training to a satisfactory level of quality and availability of resources needed.

The title of the course should be appropriate and should reflect the content and outcome correctly. The outcomes should be clear and meet the requirements of industry, the professional body, the community or other stakeholders. The qualification and its competencies will have been developed nationally for the NVQs in consultation with the appropriate stakeholders. Assessment will be fair, valid, consistent and to the required standard.

Quality Management System

At the time of registration, or at least during the first year of operation, there must be in place a coherent quality management system within the institution, of policies and procedures, with mechanisms for evaluation that ensure the continued relevance, appropriateness and effectiveness of the education and training services offered. This QMS must be in place before any course accreditation applications for the NVQ 5 and 6 qualifications can be lodged with the TVEC.

Monitoring and Quality Audit

Once registered, with a robust quality management system installed, and with at least one course accredited, education institutions will undergo regular monitoring by the TVEC and quality audit, at the end of the first year, and at least every two years thereafter, to ensure that they are maintaining and enhancing standards through continuous improvement.

IX. ASSESSMENT AND CERTIFICATION

The national Policy on assessment of competence uses two different methods of assessment. For the award of Levels 1 – 4 qualifications the competencies are assessed through competency based assessments focusing on the performance criteria specified in the respective units of competencies.

For Levels 5 and 6 qualifications two stages of assessment are employed. Modular based (Formative and Summative) assessments are conducted for the assessment of learning outcomes as specified in the curricula. Whether the trainee is competent or not yet competent shall be decided through a competency based assessment with respect to all units of competence that constitutes the qualification

which shall be conducted by a registered / licensed assessor. Records of the continuous assessments and the summative assessment conducted shall form part of the evidence used in deciding the competence of the trainee.

A competency based assessment system must be based upon clear and unambiguous benchmarks. These benchmarks are supplied by the National Competency Standards which specify the skills, knowledge and attitudes to be applied in various industry sectors / occupations to the minimum standard of performance expected by the industry.

Assessor/s must collect sufficient evidence of competence from candidates in order to be able to reach an assessment decision. Sufficiency can be defined as evidence which has demonstrated that the candidate can:

- Perform task skills.
- Perform task management skills.
- Contingency management skills.
- Perform according to specific workplace environments.
- Transfer skills to different situations.

The national consistency in competency based assessments

Consistency in assessment involves the achievement of comparable outcomes. An assessment process would be considered to deliver consistent outcomes if assessors assessing trainees against the same unit of competency in different contexts made comparable assessment results. Assessment of trainees must be fair, valid, and consistent and conform to competency based assessment policy.

Achieving consistency requires understanding what is being assessed, what evidence is needed and how the assessment decision be made. Consistency can only be achieved when assessors share a common understanding of the unit(s) of competency which is being assessed.

Principles of Recognizing Prior Learning

Recognition of Prior Learning is a process that recognizes a learner's current competencies regardless of how and where they have been acquired. The competencies may have been achieved through means that include any combination of formal or informal training and education, work experience or general life experience. Recognition of uncertified learning may be combined with any formal certification to

enable assessment decisions to be made. The national vocational qualifications system shall recognize prior learning based on national competency standards and determine the extent to which an individual has achieved the required competencies for partial or total completion of a national vocational qualification. NVQSL Provides full qualification through RPL only up to NVQ level 4. The minimum industrial exposure requirement to become eligible for RPL is 18 months for NVQ level 2 and level 3 qualifications and 24 months after obtaining NVQ Level 2 or 3 for Level 4.

Certification

Accredited training providers and establishments are authorized to award national qualifications jointly with TVEC. The certification of national qualifications shall be maintained in a central database at the TVEC. This will facilitate ready verification of the authenticity of qualifications.

X. CONSTRAINTS AFFECTING IMPLEMENTATION

NVQSL was implemented in year 2004, firstly in the four major state training networks and then in the private/non-state sector training institutions. Initial implementation was limited to courses leading to NVQ level 1 to level 4 in 45 occupational areas identified by labour market survey and the implementation was assisted by an Asian Development Bank sponsored project. The system has now grown to over 90 competency standards and courses at NVQ level 1 to level 4 and 14 competency standards and course curricula at NVQ level 5 and 6 and much larger number of training institutions has adopted the system. The government has officially recognized NVQ as the main qualification in employee recruitment schemes and NVQ have been accepted by several foreign countries for the purpose of immigration and employment.

The major constraints for implementation of NVQ over period can be identified as follows:

- Lack of commitment from certain sections of the training staff to implement the new system of training in the Competency Based Training mode;
- Providing necessary resources such as training equipment, materials and other logistical support to training centres in adequate quantities;
- Necessity to upgrade the technical and training methodology competencies of instructional staff;
- Delays in getting the courses accredited and satisfying quality assurance requirements in training centres;
- Training and appointing Competency Based Assessors and ensuring the correct level of rigor and consistency of assessment; and
- Longer times consumed for competency standards and curricula development and periodic revision.
- Low recognition of the technical and Vocational Education compared to the higher education in the Universities and hence the difficulty of attracting students to TVET and also the higher dropout rates from the courses
- Difficulties in focusing training programmes to the current labour market needs due to lack of flexibility in state run systems
- Difficulties in optimum resource utilization due to lack of coordination among different training providers
- Challenges faced by National Vocational Qualification system from aggressively marketed foreign qualifications.

However, when the general TVET system is concerned several other major issues can be identified as constraints.

CONCLUSION

Establishment of the National Vocational Qualifications Framework is a major achievement of Sri Lanka's TVET sector. This has facilitated the improvement of relevance, creation of qualification upgrading pathways and assurance of quality in training and certification. The qualifications framework through its level descriptors can be mapped to any other vocational qualifications framework elsewhere and hence support the establishment of regional or global qualifications framework.

REFERENCES:

Tertiary and Vocational Education Act No. 20 of 1990.

National Policy Framework on University Education and Technical and Vocational Education – June 2009.

National Vocational Qualifications Operation Manual – 2009.

