A Comparison of Quality Management approaches for the Training and Vocational Sector in Seven Countries

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Abstract

Many countries in the Asia Pacific region are currently developing or upgrading their vocational education and training systems and many of these will be implementing quality systems. However, quality assurance in Technical and Vocational Education and Training (TVET) is often not well understood by policy makers, administrators and senior officials. As a preliminary step to an in-depth analysis, a small study was commissioned by the ILO Asia Pacific Regional Office of different ways that TVET quality is managed in different countries. It was hoped that this would provide an easy reference for countries wishing to introduce and/or review quality management approaches in the TVET sector.

This paper provides a description of various approaches to TVET quality assurance in the following countries: Australia, Bahrain, Malaysia, New Zealand, Singapore, Sri Lanka and The Philippines. The systems are categorized according to their key features and paper also includes a description of the different ways that TVET Quality Assurance is managed at the national, regional (state or provincial) and institutional levels, an analysis and review of data from the ILO study and suggests possible issues related to the suitability of the various systems for countries at different stages of development. It identifies how quality assurance can be applied to workplace learning in different systems and it provides a series of recommendations relating to the development and implementation of quality management systems in the TVET context.

Key Words: TVET, quality assurance, national skills frameworks, competency standards, workplace learning

1. Introduction

This analysis was undertaken as a project for the Regional Office of the International Labor Organization (ILO), to provide an easy reference for countries wishing to introduce and/or review quality management approaches in the Technical and Vocational Education and Training (TVET) sector. It provides an analysis of the following countries: Australia, Bahrain, Malaysia, New Zealand, Singapore, Sri Lanka and The Philippines[1].

The first six countries were specified by the ILO. Bahrain was chosen as a seventh country as its system is of very recent origin and it has drawn on a range of approaches to establish its own approach.

Material was sourced through analysis of web based documentation, information provided by in-country sources and from review of the data by in-country peer reviewers. Competency International Ltd would like to thank all of the country representatives who provided information and review of this material.

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[1] Research on the South Korea and Vietnam systems was undertaken by the Korea Research Institute for Vocational Education and Training (KRIVET) but the findings are not included in this paper.

2. Assumptions and Limitations

This paper covers the main TVET systems within each country but not those that fall outside it. Other systems do exist and some of these may have their own in house quality assurance systems, but are considered outside the scope of this report.

This information has been sourced from websites, from various publications and from individuals within various agencies in the countries studied. The material is provided on the basis that these sources are correct and up to date. Wherever possible this has been confirmed.

We experienced considerable difficulty in obtaining up to date information for some of the countries reviewed, as well as in peer review of these data. Where we are concerned about currency and accuracy or just have not been able to access the information we have indicated this by footnotes in the text.

There has been some conflicting information provided by official websites and by in country peer reviewers. We have taken the view that peer reviewers are likely to provide the most up to date information and proceeded on that basis.

3. What is quality management in a TVET context?

In any TVET system there are a range of stakeholders:

- Students, who want to know that their qualifications are of good quality, comparable with others from other providers and credible in the marketplace:
- Funders (including national governments), who want to ensure they are getting value for the money invested in terms of skilled and employable graduates;
- Employers, who want assurance that a qualification means a graduate has the requisite knowledge, skills and attributes to be useful in the workplace:
- Education providers, who want to be able to benchmark their programmes against other comparable providers and receive funding for their provision; and
- Government policy makers who invest in a TVET system to ensure their country workforce is skilled and can meet the labour requirements for industry and of the international labour market.
- To be effective, quality management systems (QMS) should be able to meet the needs of all of these different groups at national, regional and provider levels.

4. Approaches to quality management

Different approaches to implementing quality were identified in the countries studied. Both compliance and evaluative models of quality assurance were in use together with awards, such as the Baldrige Award, and international standards such as ISO9001 – 2008. Major differences were found in philosophical basis that is represented by the compliance and evaluative approaches to quality.

4.1. Compliance Model

The compliance model is an inputs system that is intended to ensure national consistency in the provision and assessment of TVET. It focuses on:

- establishing standards and criteria to be applied for registration or licensing or accreditation of standards, qualifications, training providers, assessors and/or courses;
- developing processes for ensuring consistency of assessment both within and between providers, assessors and/or courses;
- developing an internal audit requirement within providers;
- placing a strong emphasis on independent external audit to identify areas of compliance and non-compliance;
- implementing processes to ensure remediation of non-compliance.

The model is high cost as it requires strong centralised systems and regular reviews and audit, with follow-up of non compliance performance. There are usually strict rules which make it suitable in countries where there is little tradition of quality assurance within the education sector and/or the general business community. The approach is most suited to countries where any or all of the following conditions apply:

- low or uneven levels of quality provision of TVET;
- lack of consistency between courses and problems with parity of esteem of those courses;
- large numbers of training providers which may operate within agencies with different organisational structures and requirements.

4.2. Evaluative Model

The evaluative model is used in quality assurance to:

- answer questions about the value that learners gain from their education, the utility of their qualifications and the contribution of these to positive longer term outcomes such as employment, social and economic contribution to society;
- explore qualitative and quantitative evidence of educational outcomes and the key processes which contribute to them;
- enable a participatory approach, using systematic enquiry and specific tools to reach robust judgements

Whilst still including 'front end' registration and accreditation standards and criteria, it focuses on institutions self reviewing against a set of evaluative questions/criteria and taking the necessary steps to improve areas of weakness.

External evaluation and review (EER) is a systematic process of enquiry, designed to provide independent judgements about an organisation's performance and capability in delivering high quality education.

Whilst the evaluative model is considered a superior approach to quality assurance, it is usually adopted after a period where the compliance model has been operating and organisations have become accustomed to the scrutiny it provides.

This approach is most suited to countries where any or all of the following conditions apply:

- a TVET sector that is linked to a national qualifications or skills framework;
- experience with compliance based quality assurance systems;
- strong commitment to quality assurance and continuous improvement within the sector;
- public understanding of the need for quality assurance in TVET systems;

Organisations using the evaluative model also generally effective Quality Assurance Bodies (QABs) operating already and may also be ISO9001 – 2008 accredited or have links with other international QABs and agencies such as International Network for Quality Assurance Agencies in Higher Education (INQAAHE). There is also some familiarity with and adherence to international indicators of good practice such as the INQAAHE Guidelines of Good Practice in Quality Assurance (commonly referred to as GGP).

4.3. Other approaches

As indicated above, some systems incorporate components of international standards such as ISO 9001 and the Malcolm Baldrige Quality awards. In some cases these operate as a proxy for other accreditation processes. It is our view that whilst these approaches add value to already existing quality assurance systems, they should not operate as an alternative to them as they are highly generic and often focus on the quality of processes rather than the quality of outcomes.

5. Key findings from the analysis

5.1. Coverage of regulatory requirements

In some countries the regulatory requirements relating to quality cover both public and private organisations. In others, they only cover public institutions and systems. We noticed too that in some countries there are voluntary rather than mandatory requirements for quality management. These may lead to a lack of national consistency across the quality of qualifications, potentially disadvantaging learners. An example of this is where students can achieve a theory qualification from a private institution that may not be accepted by the industry or sector because of its quality, content or lack of competency based assessment.

We recommend that where possible, all institutions providing programmes of learning or qualifications in the TVET sector are covered by national quality requirements.

5.2. Coherence between multiple TVET agencies

In some of the counties studied, multiple government ministries and their agencies such as Ministries of Education and Labour (or their equivalents) are involved in the provision and quality management of TVET programmes. In some cases different agencies are mandated through legislation to undertake different functions. There often appears to be little coherence between each agency's role, function and operational requirements. Potentially this can establish problems with parity of esteem between the programmes, as well as issues around national consistency in programme outcomes and quality. This can be mitigated by the establishment of national qualifications frameworks to which all qualifications and courses are linked, with standardised quality requirements being instituted.

The research found that countries with a single national agency responsible for TVET quality assurance were much better organised from a quality point of view compared to those with multiple agencies and complex systems. Some of the different definitions of TVET, VTET, VET etc used to justify different roles for Ministries of Labour and Education were artificial and impaired the full application of any national quality system

We recommend that in establishing quality management requirements for TVET, every effort should be made to ensure interagency congruence with these requirements.

5.3. Internal and external monitoring and auditing

There was variation between countries with regards to internal and external monitoring and audit of compliance with quality management requirements. Some countries have strongly embedded monitoring and audit, while some seem to take a very limited approach. However, this monitoring is critical to ensure consistency of quality both within and across organisations systems must be in place to train and monitor auditors and quality managers to ensure consistency of requirements and judgements.

5.4. Moderation and consistency of assessments

Considerable variation was found in the embedding of quality management requirements into national skills frameworks and institutions. This seems especially true around the ensuring of consistency of assessment judgements through the moderation of assessment. Whilst there appears to be a level of internal moderation taking place in individual institutions, few countries have a nationally prescribed moderation system that reviews assessment across institutions to ensure national consistency.

In some countries, this is a deliberate strategy as the view is held that industry or the professions will provide moderation in their acceptance of qualifications from various institutions. Moreover, a number of countries believe that the requirements of registration and/or accreditation give this guarantee. While it is possible that some countries considered that the cost of moderation systems outweighed their benefits, the researchers felt that students are entitled to a guarantee that a qualification received from one institution is consistent in quality with that from another institution.

Thus at a national level, a QMS should be underpinned by:

- relevant government policy and enabling legislation which supports a quality assurance agenda;
- establishment of a national qualification or skills framework which aligns all TVET qualifications in a country. This framework should be linked with or at least not inconsistent with secondary, tertiary and professional qualifications;
- establishment of regulatory agencies/quality assurance bodies[2] that have the mandate to license, audit or accredit trainers, assessors or training organisations in accordance with quality assurance standards for
- new competency standards, qualifications and courses,
- new training providers and accreditation systems within these organisations;
- audit processes that ensure mandated (rather than voluntary) internal self evaluation with the standards and criteria and external audit;
- processes for dealing with non compliance

In providing the above a national QMS should provide assurance for the following:

Qualifications:

- have a clear purpose and are aligned with industry/sector needs;
- be internally coherent and clearly document the competencies that those completing the qualification must achieve
- recognise broad transferable and generic skills as well as specialised industry and professional skills;
- have clear indications of entry and exit points for intended graduates;
- provide an indication of their relationship with other qualifications;

Institutions (Training Organisations)

- have clearly specified quality management systems and processes designed to encourage continuous improvement and to ensure they have the capability to deliver education and training to a specified standard;
- have good governance and management systems (including student records, documentation of assessments, backup systems, staff performance reviews etc);
- ensure the scope and methodologies of current and intended course delivery and assessment are defined;
- regularly benchmark their performance against specified standards and/or other providers;
- have policies to guarantee the rights of students or clients (e.g. policies for fee refund or appeal on assessment);
- meet all requirements specified by the relevant Quality Assurance Body (QAB) for their sector/country.

Tutors and assessors

- are trained and competent in competency based assessment and training
- have recent relevant industry experience and relevant qualifications;
- are familiar with the course requirements, including the standards to be judged through assessment;
- ensure that their students receive fair, valid and consistent assessments;

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[2] One central QAB can delegate authority for quality assurance to other regional or industry based QABs on the basis of the national requirements that are themselves subject to audit and review by the central body. We feel that a myriad of fragmented QMS systems, which focus on organisations' performance on criteria other than educational delivery and assessment, are not helpful in sustaining national consistency in TVET or any other tertiary delivery sector.

- are provided with regular opportunities to upskill.

Additionally any QMS should incorporate the following good practice principles:

- provide for equity of access to all training, regardless of ethnicity, gender or geographical considerations
- be embedded in the culture of the organisations operating under its requirements;
- be rigorous, comprehensive, systematic and transparent;
- be focused on identifying strengths and weaknesses and areas for improvement
- be based on a wide range of evidence;
- involve stakeholders;
- lead to targeted action and improvement;
- be recorded and reported;
- be a continuous systematic process as opposed to an event.

5.5. Accreditation of courses or providers

There is a strong divide across the countries studied regarding the extent to which individual providers, trainers, assessors, courses, training programmes and qualifications are licensed or accredited. Some systems had various combinations (e.g. registration of assessors and accreditation of qualifications while others only required that the teacher had a recognised qualification). This study did not attempt to evaluate which system was best but whichever combination is chosen, there should be consistent quality management and monitoring.

5.6. Training requirements

One of the major challenges in establishing quality management systems is in ensuring that all professionals involved are given adequate training in the requirements of such systems. These include management, trainers, assessors, curriculum developer and quality auditors.

We notice that a number of countries have clear requirements for the accreditation of trainers and assessors and we commend this. However the requirements often relate to the qualifications and experience of the practitioners, rather than their understanding and participation in quality management initiatives.

We recommend that in implementing any QMS all stakeholders are given the training required to meet the system's requirements and that some method of accreditation be implemented to ensure that all professionals in the system have had their competence formally measured.

5.7. Implementation of a quality culture

A number of countries have commented on the difficulty in establishing a quality culture. We believe this culture, with support from government policies, can be established over time, and as the public and other stakeholders become familiar with the benefits. However we acknowledge that any system has the potential for corruption and that until a quality culture is embedded, compliance models of quality assurance provide a more robust journey towards that culture. It is important to stress that emphasis on compliance should not be at the expense of improvement and a long term goal to move to an evaluative model.

5.8. Standardisation of criteria for competence into national formats.

In some countries there are standardised formats for the development of standards and qualifications. This does not appear to be so in other countries. This is useful in gaining understanding of the system by students, parents and employers. However, not all of us were convinced that is it important to have a national format for standards. We suggest it only becomes a problem where generic competencies/standards that can be used across qualifications are developed in areas such as communications, management, health and safety and problem solving skills. It may be possible to have a standardised format for these types of standards/competencies and to allow industries to develop their own approaches to formatting that are relevant to their contexts.

We do not support the development of generic competencies or standards for individual industries, professions and courses. Such a plethora of competencies/standards creates huge difficulties in the portability of competencies and qualifications across sectors.

5.9. Appeal issues

There seems to be a significant variation between countries around the establishment of appeal procedures for both institutions in relation to audit, and students in relation to assessment. We are not sure whether this is a gap in the information we could access or in a lack of processes. It is certainly a basic premise that these processes should be available to ensure fairness and consistency. We recommend that all institutions and students have access to appeal procedures.

6. Conclusion

In the countries studied there was a range of quality assurance systems in operation. We have categorised these into three main models based on compliance, evaluative and ISO approaches. Whilst many of the models appear similar, the context creates significant difference in detail and application. This section should be read in conjunction with the summary overview of the key features listed in Section 7.

Model: Evaluative

    Context: Self assessment; periodic evaluation and review.

    Country: New Zealand

Model: Compliance

    Context: Inputs and systems based; institutional quality audit

    Countries: New Zealand, Singapore

Model: Compliance

    Context: Outcomes focused; institutional quality audit, continuous improvement

    Country: Australia

Model: Compliance

    Context: Regulatory quality assurance which is programme based

    Countries: The Philippines; Malaysia

Model: ISO Approach

    Context: International benchmarking, continuous improvement

    Country: Sri Lanka

Workplace Quality Assurance Coverage

    Countries: New Zealand, Australia, Malaysia

System Under Development

    Country: Bahrain

7. Summary Overview of Key Features in TVET Quality Assurance[3]

Parameter	Australia	Bahrain	Malaysia (Higher Education System)	New Zealand Compliance Model	New Zealand Evaluative Model	Philippines	Singapore (CET)	Sri Lanka
Govt. legislation supporting QA	●	●	●	●	●	●	●	●
Govt. policy supporting QA	●	●	●	●	●	●		●
National QA regulatory agency	●	●	●	●	●	●	●	●
State/territory regulatory agency	●	n/a	n/a	n/a	n/a	n/a	n/a	n/a
National skills development framework which includes TVET qualifications	●		●	●	●			●
Separate TVET/CET skills development framework/system			●?			●	●	
Competency based system/Competency Standards	●		●	●	●	●	●	●
Providers in both public	●	●	●	●	●	●	●	●

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[3] The information contained in this summary had not been verified or validated by the appropriate authorities in any of Bahrain, Malaysia or Sri Lanka. Information for Bahrain, and Malaysia is likely to be incomplete.

sector and private sector								
Inclusion of universities in TVET/CET system				●	●		●	●
Separate QA framework	●							
Register of national qualifications	●		●	●	●			
Use of national QA standards or criteria	●		●	●	●		●	
Registration of Providers	●			●	●			●
Licensing of Providers		●						
Registration of programmes						●		
Registration appeal process	●							●
Training regulations or packages containing competency standards	●					●		
Accreditation of Providers				●	●	●	●	●
Accreditation of Assessment Centres						●		
Scope of accreditation	●			●	●			
Accreditation of courses/programmes	●		●	●	●		●	●
Additional provider QMS system (ISO)								●
Additional provider QMS system (Baldrige)						●		

Assessment and certification process	●		●	●	●	●	●	●
Registration of Assessors				●	●		●	●
Min Qualifications for Assessors	●					●	●	●
Min qualification for Trainers						●	●	
Scope or defined assessment area for Assessors	●			●	●	●	●	●
Scope or defined training area for Trainers						●	●	
Provider internal audit/monitoring and review process	●	●	●				●	●
Internal moderation	●		●			●	●	
External moderation				●	●			●
External audit process	●	●	●	●		●	●	●
Provider risk assessment	●							
Monitoring for Continuous improvement	●	●	●			●	●	●
System for managing non performance of provider	●		●	●	●	●	●	●
Audit appeal process	●		●	●			●	●
Self assessment through evaluative enquiry					●			
External evaluation and					●			

review								
Evaluation judgements (statements of confidence)					●			
Evaluation appeal process					●			