

Quality assurance of the qualification process in TVET: Malaysia Country

Abstract

For the Government of Malaysia to remain competitive in an increasingly challenging global environment and to become a high-income nation by 2020, it is imperative that it embarks on an integrated approach which involves government and Economic Transformation Programme. This programme is important on intensifying human resource development in order to produce a workforce which is well-equipped to face a competitive global market. The Government of Malaysia has determined that the Technical and Vocational Education and Training (TVET) sector as the main route in providing highly-skilled human resources and contribute towards economic growth. This article explores general overview of the TVET system in Malaysia, the current quality assurance governance for the TVET qualification and its development based on desk research, documents analyses and interview with stakeholders related. This article also identifies strengths and main issues in current systems and provides suggestions and proposal for improvement of quality assurance system for TVET qualifications in Malaysia.

***Keywords:** Malaysia, Quality assurance, Technical and Vocational Education and Training, Department of Skills Development (DSD), Malaysian Qualifications Agency (MQA), Malaysian Qualifications Framework (MQF), Malaysian Skills Certification System, National Occupational Skills Standard (NOSS), Malaysian Qualifications Register, accreditation, ASEAN Quality Assurance Network (AQAN), ASEAN Quality Assurance Framework (AQAF)*

1 National context

Malaysia is a federal state with a constitutional monarchy system of government. The federation is made up of 13 states and 3 federal territories. The land area is about 329,847 square kilometres. Malaysia is divided into two parts, namely East Malaysia and Peninsular or West Malaysia, between which South China Sea flows. The population of Malaysia as at 2015 is 31million. Of this number 15.99 million (51.6%) are males and the remaining 15 million (48.4%) are females. The total of Gross Domestic Product (GDP) for 2015 is amounted to USD 298 billion; the GDP per capita is USD10.2k.

Malaysia is a rapidly developing middle-income economy in Asia, having transformed itself since the 1970s from a producer of raw materials into an emerging multi-sector economy. The Government of Malaysia is continuing efforts to boost domestic demands to wean the economy off of its dependence on exports. Nevertheless, exports – particularly of electronics – remain a significant driver of the economy. Based on the Labour Force Survey (LFS 2014), Malaysia has a workforce of about 13.9 million, of which the TVET employment in Malaysia

for year 2014 stands at 6.1 million, comprising 46% of the total employment in Malaysia. There is an expected demand for an additional 1.3 million TVET workers by 2020 in 12 National Key Economics Areas (NKEA) identified under the Government's Economic Transformation Programme (ETP). Consequently, TVET has been one of the most critical drivers for the country's transformation from middle- to high-income nation. One of the efforts under the 11th Malaysia Plan is to address skills mismatches in the labour market. To bring forward that effort, the Critical Skill Monitoring Committee (CSC) was established. One of the CSC's key initiatives is to construct a Critical Occupation List (COL). The COL will serve as the primary instrument to promote more effective coordination of human capital policies aimed at up-skilling the workforce; guiding TVET and higher education teaching programmes; retaining skilled Malaysians while also enticing returning Malaysians; as well as attracting international talent.

2 General overview of the TVET system

In this paper, the conceptual definition of TVET cuts across post-primary, secondary, and tertiary educational levels, and encompasses all sectors including formal or school-based, enterprise-based, informal and even apprenticeship. TVET System in Malaysia is divided into three streams i.e. higher education, technical and vocational education and vocational skills training. Vocational and technical education starts at junior secondary level, which lies under the purview of Ministry of Education (MoE). The MoE has developed Vocational Transformation Plan which comprises two components; Junior Vocational Education and Vocational College. Whilst for the post secondary level, TVET delivery is fragmented as government ministries and their agencies, universities, state skills development centres and privately owned institutions offer it. There are 525 public training institutions under seven ministries namely the MoHR, MoHE, Ministry of Youth and Sports (MoYS), Ministry of Regional and Rural Development (MoRRD), Ministry of Agriculture and Agro-Based Industry (MoA), Ministry of Works (MoW) and Ministry of Defence (MINDEF). These institutions continue to offer programmes that were introduced since their establishment and may not necessarily specialise based on their niche areas. In addition, there are 813 private institutions registered with DSD and 12 state skills development centres conducting TVET programmes with varying quality and standards. The Malaysian Technical University Network (MTUN) comprising four public universities, namely Universiti Malaysia Perlis, Universiti Malaysia Pahang, Universiti Teknikal Malaysia Melaka and Universiti Tun Hussein Onn, offer degree qualification for TVET. Universiti Kuala Lumpur (UniKL) and German-Malaysian Institute (GMI) also provide private TVET in higher education.

3 Governance of quality assurance in TVET

There are two accreditation bodies responsible to assure quality of TVET programmes. The Department of Skills Development (DSD) performs accreditation for the skills sector and Malaysian Qualifications Agency (MQA) performs accreditation for the vocational and technical sector as well as academic sector. Both accreditation bodies refer to Malaysian Quali-

cations Framework (MQF) for the qualifications accredited. The Malaysian Qualifications Framework (MQF) is Malaysia's declaration about its qualifications and their quality in relation to its education system.

The MQF is an instrument that develops and classifies qualifications based on a set of criteria that are approved nationally and benchmarked against international best practices, and which clarifies the earned academic levels, learning outcomes of study areas and credit system based on student academic load. These criteria are accepted and used for all qualifications awarded by recognised higher education providers. Hence, MQF integrates with and links all national qualifications. MQF also facilitates educational pathways by linking qualifications systematically. These pathways will enable individuals to progress through credit transfers and accreditation of prior experiential learning, in the context of lifelong learning (Malaysian Qualifications Agency 2007).

TVET delivery in Malaysia is fragmented as it is offered by Government ministries and their agencies, universities, state skills development centres and privately owned institutions. The separation of terms and highly fragmented administration could result in poor coordination and duplication of responsibilities and is also likely to boost up the government funding in the TVET sector. Based on the study done by Economic Planning Unit (EPU), there is a distinct difference between qualifications for institutes under the Skills sector, which are administered by the DSD and those in the Technical and Vocational sector, which are administered by the MQA (Boston Consulting Group 2011). While both fall under the TVET sector, the Skills and the Technical and Vocational sectors are separate sectors within the MQF.

The large overlap between the Skills and Technical and Vocational sectors, particularly in terms of the courses offered, results in poor coordination and duplication of responsibilities in calibrating learning outcomes for the TVET sector. There is also limited collaboration and sharing of best practices between the Skills and Technical and Vocational sectors.

The non-uniformity of the current system creates confusion among students and employers on the value of a TVET certificate and the credibility of its graduates. This situation is indicative of the need for a streamlined qualification system that ensures a minimum standard is met and strengthens the confidence of the employers and students in the TVET sector.

4 Assessment underpinning qualification arrangements of learners and providers in TVET

In general, MQA quality assures programmes through two distinct processes:

- i. Provisional Accreditation: an assessment to determine whether a programme has met the minimum quality requirements preliminary to Full Accreditation.
- ii. Full Accreditation: an assessment exercise to ascertain that the teaching, learning and all other related activities of a programme provided by higher education provider (HEP) have met the quality standards and are in compliance with the MQF.

Students' achievements are measured by learning outcomes. Learning outcomes distinguish the varying competencies as to what a student will be able to do at the end of a period of study. The panel of assessors (POA) involved in assessing TVET programmes will be from various fields based on the field of study of the programmes. The qualifications of the POAs would also differ based on the level of the programmes offered. However, the POAs appointed by MQA must at least have a minimum qualification of Master's Degree and experience in related field. Before the appointment as POAs, all candidates must undergo training conducted by MQA.

Under DSD, The Malaysian Skills Certification System (Sistem Persijilan Kemahiran Malaysia) is utilized to appoint assessors of TVET programmes. It is a skills- and work-based certification system in Malaysia that is achieved through assessment and training. Currently, there are five levels of awards in The Malaysian Skills Certification System.

- Level 1: Malaysian Skills Certificate Level 1 (SKM 1)
- Level 2: Malaysian Skills Certificate Level 2 (SKM 2)
- Level 3: Malaysian Skills Certificate Level 3 (SKM 3)
- Level 4: Malaysian Skills Diploma (DKM)
- Level 5: Malaysian Skills Advanced Diploma (DLKM)

The students can receive Malaysian Skills award if they meet the requirements of the National Occupational Skills Standard (NOSS) developed and regulated by the Department of Skills Development. It is a formally recognised certificate conferred to individuals who have shown capabilities acquired or practiced with competencies to do a task or work, which is usually in the form of basic vocational skills. The criteria and standards of the Malaysian Skills Certification System are articulated with higher level qualifications to enable certificate holders to progress from the level of semi-skilled, to full-skilled production, right up to supervisory, executive and managerial functions. The system was also eventually mapped to the Malaysian Qualifications Framework in 2007 providing a framework for the credit equivalency and transfer between the vocational education and training sectors and the higher education sectors.

DSD quality assures by accrediting centres and its programmes. The approach of assessment is based on competency-based education/learning principles in the vocational training system in Malaysia. This approach basically involves the shifting of emphasis from an instructor-centred approach towards a trainee-centred approach, entailing the identification of distinct and verifiable competencies that are actually required in the working world, apart from focusing on actual performances in the assessment of these competencies. Assessment is the process of determining whether a student meets the skills requirements of NOSS. Students are qualified to be awarded with SKM level 1, 2 or 3 if they passed all of assessment components and are competent in core abilities. Students are awarded DKM and DLKM if they passed all of the assessment components, industrial training and are competent in core abilities.

5 Employer, employee and civil society organisations involvement

Generally, all matters relating to trade unions in Malaysia are under purview of Department of Trade Union Affairs Malaysia (Jabatan Hal Ehwal Kesatuan Sekerja, JHEKS). The JHEKS is under Ministry of Human Resources (MoHR). As part of its function, the JHEKS conducts seminars and trainings on administrative, financial and constitutional aspects of trade union.

Currently, the involvement by employer, employee and civil society organisations are indirect. Both MQA and DSD continuously involved them and external experts from industries for their views and feedback in developing guidelines and standards.

6 Capacities to support quality assurance of TVET qualifications

Accreditation and quality assurance of TVET programmes are under the purview of two agencies, which are the Malaysian Qualifications Agency (MQA) and the Department of Skills Development (DSD). The panel of assessors (POA) involved in assessing TVET programmes are from various fields based on the field of study of the programmes. The qualifications of the POAs would also differ based on the level of the programmes offered. However, the POAs appointed by MQA must at least have a minimum qualification of Masters Degree and experience in related field. Before the appointment as POAs, all candidates must undergo training conducted by MQA.

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7 Funding

Malaysian Qualifications Agency (MQA) and Department of Skills Development are agencies under Ministry of Higher Education and Ministry of Human Resources (MoHR), respec-

tively. Both are funded by the government.

The financing system as of now is decentralised based on the budget from the ministries.

8 Strengths and weaknesses of quality assurance of the TVET qualification process

The strengths of quality assurance process for TVET qualifications can be divided into four major components as follows:

- i. National framework – Malaysian Qualifications Framework (MQF) is a basis for quality assurance of higher education which covers skills, technical/vocational, academic and professional programme. It is an instrument that develops and classifies qualifications based on a set of criteria that is agreed nationally and benchmarked with international practices, and which clarifies the academic levels, learning outcome and credit system based on student academic load. Hence, it is also a reference point for the criteria and standards for national qualifications. MQF also simplifies the process of international recognition and student mobility for employability and further education accessibility, based on international good practices. Therefore, MQF promotes understanding and enhances public confidence in standard and systems of awarding qualifications in Malaysia (Malaysian Qualifications Agency, 2007).
- ii. Code of Practices – It is a structured guideline to all stakeholders about the nine quality assurance evaluation areas for quality assurance purposes. The nine areas are Vision, mission, education goals and learning outcomes; Curriculum design and delivery; assessment of students; Student selection and support services; Academic Staff; Educational resources; Peer monitoring and review; Leadership, governance and Administration and Continual quality improvement. It is compulsory to the stakeholders to comply with the Code of Practices for Programme Accreditation (COPPA) and Code of Practices for Skills Programme Accreditation (COPSPA).
- iii. Programme standards (for academic programme) – They are documents that assist the development of programme in a particular field of study which covers all the education levels of MQF. Whilst for TVET programme, National Occupational Skills Standard (NOSS) document will act as a guideline for the minimum specification/criteria of skilled workers in Malaysia.
- iv. Malaysian Qualifications Register (MQR) is one of the main features of MQF. It plays a significant role in ensuring that accredited qualifications are registered and available for reference to all stakeholders. All accredited qualifications are registered and available for reference to all stakeholders: <http://www.mqa.gov.my/mqr/>

Major issue in quality assurance process for TVET qualifications is uncoordinated governance of quality assurance. Based on the MQF, accreditation and quality assurance of TVET programmes are under purview of two agencies, namely Malaysian Qualifications Agency (MQA) and Department of Skills Development (DSD). The existence of two different

accrediting bodies for TVET has led to confusion and concerns about the varying quality of the programmes. Additionally, it has led to unclear TVET articulation where the mobility of TVET graduates to continue study between institutions under different accrediting agencies is limited. For example, TVET diploma graduates accredited by DSD have limited access to continue their studies at degree programme (level 6 of MQF) in institutes of higher education due to more emphasis on practical components, different quality assurance mechanism and the perception that these graduates are less academically inclined. Whereas, TVET graduates accredited by MQA have more accessibility to pursue higher education in institutes of higher education as their curriculum are inclined towards the academic track.

Lack of industry input in curriculum design has resulted in mismatch of skills required by industry and the skills attained by TVET graduates. Industries demand for work-ready TVET graduates who are competent and multi-skilled. Besides, industries are burdened by multiple requests for collaboration from the multitude of TVET institutions, and have highlighted the need for a coordinated platform for collaboration between industry and TVET institutions. Through engagement with various stakeholders, it was highlighted that TVET instructors in public institutions are mostly lacking in industry exposure. This has been regarded as one of the reasons that have hindered the effectiveness of training in meeting industry requirement (Government of Malaysia, 2015b).

9 Opportunities for and barriers to improving the present quality assurance process

The opportunities to improve the present quality assurance process mainly come from Government Policy on TVET Agenda. The policy was clearly stated in the Tenth Malaysia Plan, under Chapter 5: Developing and Retaining A First-World Talent Base. Two initiatives have been set up to support the Tenth Malaysia Plan (Government of Malaysia, 2010):

- i. Revamping the education system to significantly raise student outcome through Vocational Education Transformation;
- ii. Raising the skills of Malaysian to increase employability through mainstreaming and broadening access to quality TVET. Activities to support these initiatives are as follows:
 - Improving the perception of TVET and attracting more trainees
 - Developing highly effective instructors
 - Upgrading and harmonising TVET curriculum in line with industry requirements
 - Streamlining delivery of TVET

Later, the effort in putting forward the TVET Agenda has continued through the Chapter 5: Accelerating Human Capital Development For An Advanced Nation in the Eleventh Malaysia Plan (Government of Malaysia, 2015a). Under this chapter, there are five initiatives to support the agenda:

- i. Creating more jobs and maintaining full employment;
- ii. Improving legislation and institutions to transform the labour market;
- iii. Mainstreaming and broadening access to quality TVET programmes;
- iv. Upskilling the workforce through lifelong learning;
- v. Improving education delivery through better access and quality.

Strategies to support the TVET agenda have been drawn up in Malaysia Education Blueprint 2013-2025 (Preschool to Post-Secondary Education), Chapter 7: System Structure through enhancing the Vocational Education Transformation Plan to include greater collaboration with the public and private sector and in Malaysia Education Blueprint 2015-2025 (Higher Education), Chapter 4: Quality TVET Graduates.

Even though efforts to mainstream TVET have been successful, four challenges need to be addressed, namely uncoordinated governance, fragmented delivery, and lack of recognition for technologists and competency gaps among instructors as summarised in figure 1 (Government of Malaysia 2015b, 9-4):

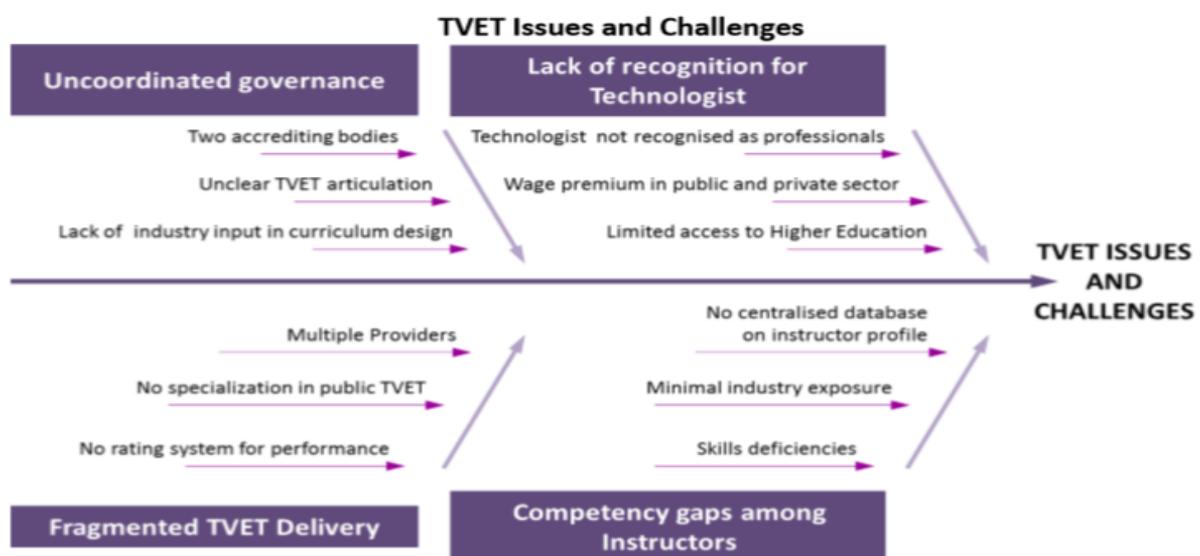


Figure 1: TVET Issues and challenges
Source: Government of Malaysia (2015b), 9-4

9.1 Uncoordinated governance of quality assurance for TVET

Based on the Malaysian Qualifications Framework (MQF), accreditation and quality assurance of TVET programmes are under the purview of two agencies, namely MQA and DSD. The existence of two different accrediting bodies for TVET programmes has led to confusion and concerns about the varying quality of the programmes. Furthermore, mobility of TVET graduates for continuation of study between institutions under different accrediting agencies is limited. Additionally, lack of industry input in curriculum design has resulted in mismatch of skills required by industry and the skills attained by TVET graduates (ibid.).

9.2 Competency gaps among instructors

Through engagement with various stakeholders, it was highlighted that TVET instructors in public institutions are mostly lacking in skills and industry exposure. This has been attributed as one of the reasons that have hindered the effectiveness of training in meeting industry requirements (ibid.).

9.3 Fragmented TVET delivery in Malaysia

TVET delivery is fragmented as it is offered by Government ministries and their agencies, universities, state skills development centres and privately owned institutions. There are 525 public training institutions under seven ministries offer programmes that were introduced since their establishment and may not necessarily specialise based on their niche areas. In addition, there are 813 private institutions registered with DSD and 12 state skills development centres conducting TVET programmes with varying quality and standards (ibid.).

9.4 Lack of recognition for technologists

TVET graduates and practitioners are classified as technologists but are not recognised by the Board of Engineers Malaysia (BEM) as professionals under the Registration of Engineers Act, 1967. Therefore, technologists do not have professional status and hence cannot demand higher wages and career enhancement. In addition, it was reported that there is difference in starting pay of TVET graduates from different institutions (ibid.).

10 Suggestions regarding the adaption of quality assurance to respond to regional developments in Malaysia

Continuous efforts have been done to ensure the quality assurance in Malaysia in response to regional developments. MQA welcomes the initiatives in ASEAN Qualification Reference Framework (AQRF) and ASEAN Quality Assurance Framework (AQAF) to be the common reference framework for qualifications and quality assurance practices within the ASEAN region. Such initiatives not only facilitate the effort in harmonising the qualifications and quality assurance practices among member countries, but they will also increase the mobility of students and professionals as well as recognition of qualifications within ASEAN countries.

Since 2012, MQA has played an active role in the establishment of AQRF. Originally developed with the intention to ease mobility of students among its member countries, the AQRF is expected to become part of the ASEAN's mechanism for recognition of qualifications among member countries. To date, MQA is moving towards the alignment of Malaysian Qualifications Framework (MQF) to AQRF, where the MQF will be benchmarked with the AQRF.

MQA also supports the initiative taken by the ASEAN Quality Assurance Network (AQAN) which has established a quality assurance framework i.e. the ASEAN Quality Assurance Framework (AQAF) with the aim to promote regional harmonisation in higher education in

the ASEAN countries. The member countries can benchmark and align their quality assurance systems of higher education with the AQAF which serves as a common reference point for quality assurance agencies and higher education institutions as they strive towards harmonization amidst the diversity of higher education systems, cultures and traditions within the region. MQA also plays the role as the Chair of the task force in establishing the Referencing Guidelines for AQAF.

11 Suggestions and proposals for improving quality assurance of qualifications

Proposals for improving quality assurance of TVET qualifications were highlighted in The Eleventh Malaysia Plan, 2016 – 2020 (Government of Malaysia 2015a) as follows:

Strategy 1: Strengthening the governance of quality assurance for TVET by establishing a single system for accreditation

The current fragmented TVET sector will be consolidated through the establishment of a single system adopted by both MQA and DSD to facilitate better coordination and monitoring of the TVET sector. The new system will accredit TVET programmes offered by both public and private TVET institutions based on the revised MQF. This in turn will allow mobility of students between and amongst all TVET institutions.

Strategy 2: Enhancing TVET programme quality and delivery

- a) **Strengthening TVET Curriculum** - TVET curriculum will be strengthened to produce high quality TVET graduates that meet industry demand. TVET curriculum development will focus on critical and creative thinking as well as self-reliance learning among TVET students. “Problem, Project, Production” based learning modules which engage students in authentic, real world tasks intended to simulate actual workplace situations, will also be embedded in the curriculum to better prepare students for the working environment.
- b) **Developing High Quality Instructors to Improve Delivery** - Professional development programmes for instructors will be improved by incorporating more industrial training and attachment programmes. A centralised repository of instructor profiles will be established to identify competency gaps and enable the development of an effective training road map. Besides these, more industry experts including retired industry practitioners will be encouraged to serve as TVET instructors through the provision of attractive remuneration packages.

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