

ASEAN Qualifications Reference Framework (AQRF) Referencing Report, Malaysia



one vision
one identity
one community

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Abbreviations

AC	Accreditation Committee
APEL	Accreditation of Prior Experiential Learning
AQAF	ASEAN Quality Assurance Framework
AQRF	ASEAN Qualifications Reference Framework
ASEC	ASEAN Secretariat
AYQON	ASEAN Young Quality Officers' Network
COPIA	Code of Practice for Institutional Audit
COPPA	Code of Practice for Programme Accreditation
DAAD	German Academic Exchange Service
DSD	Department of Skills Development
ENQA	European Association for Quality Assurance in Higher Education
EQA	External Quality Assurance
EUA	European University Association
FA	Full Accreditation
GGP	Guidelines to Good Practices
HEEACT	Higher Education Evaluation and Accreditation Council of Taiwan
HEPs	Higher Education Providers
IQA	Internal Quality Assurance
JPK	<i>Jabatan Pembangunan Kemahiran</i> /Department of Skills Development
JTC	Joint Technical Committee
KAPPK	<i>Kod Amalan Pentauliahan Program Kemahiran</i> /Code of Practice for Skills Programme Accreditation
MAPCU	Malaysian Association of Private Colleges and Universities
MOE	Ministry of Education
MoHR	Ministry of Human Resources
MQA	Malaysian Qualifications Agency

MQF	Malaysian Qualifications Framework
MQR	Malaysian Qualifications Register
MyAQRf	Malaysian National AQRf Committee
NAPEI	National Association of Private Educational Institutions
NASDA	National Skills Development Act, 2006 (Act 652)
NIAD-QE	National Institution for Academic Degrees and Quality Enhancement
NQF	National qualification framework
NOSS	National Occupational Skills Standards
NSDC	National Skills Development Council
NUFFIC	Dutch Organisation for Internationalisation in Education
PA	Provisional Accreditation
PAL	Provisional Accreditation List
PISA	Programme for International Student Assessment
QA	Quality Assurance
RPA	Recognition of Prior Achievement
RPL	Recognition of Prior Learning
SAS	Self-Accreditation Status
SRP	Self-Review Portfolio
STAM	<i>Sijil Tinggi Agama Malaysia</i> /High Islamic School Certificate
STPM	<i>Sijil Tinggi Persekolahan Malaysia</i> /High School Certificate
TIMSS	Trends in International Mathematics and Science Study
TVET	Technical and Vocational Education and Training
VC	Vetting Committee

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Introduction

This is a comprehensive report referencing the Malaysian Qualifications Framework (MQF), 2007 to the ASEAN Qualifications Reference Framework (AQRF). The report establishes the referencing to the AQRF in accordance with the eleven Referencing Criteria endorsed by the AQRF Committee. It describes the education and training system in Malaysia, the bodies responsible for various roles and functions, and most importantly, the qualifications system and quality assurance mechanisms that underpin the MQF.

This report analyses the conceptual and technical features of the MQF and the AQRF to identify the key aspects of similarities and differences, and thereby, determine the comparability between the two. In summary, the report establishes strong evidence of a good fit between the eight levels of the MQF and the eight levels of the AQRF, notwithstanding some non-substantial differences.

The Malaysian AQRF Committee (MyAQRF) oversees the referencing process and the report. The Committee comprises government bodies responsible for education, training, labour, trade, foreign affairs and tourism; providers of higher education and training as well as representatives of employers, employees and industries. The referencing process began in June 2017 with the formation of the Working Committee by the MyAQRF to draft the referencing report.

Wide consultations of various key stakeholders were undertaken in October 2018 to solicit their views, feedback as well as acceptance of the referencing outcomes. Concurrently, an online consultation was also initiated to enable wider stakeholder participation. As required, the report was sent to two international experts for their reviews of the referencing processes and findings vis-a-vis the international practices. Two observers from Indonesia and Brunei as ASEAN members were invited to the stakeholder consultation session in line with the referencing guideline and to provide further feedback on the process.

The two international experts have given very strong support for the description of the national quality and qualifications systems, and the analytical rigour in the comparison of the level descriptors. Their inputs have further improved the clarity of the report. The two observers from ASEAN provided positive comments about the process of consultation which they observed.

The AQRF Referencing Report, Malaysia was formally accepted and endorsed by the AQRF Committee during a meeting in Luang Prabang, Laos on May 21 to 23, 2019. The Malaysian Cabinet, during a meeting on June 26, 2019, also endorsed the AQRF Referencing Report, Malaysia, and agreed for it to be used as a reference point to enable comparisons of Malaysian qualifications with other qualifications from the ASEAN Member States.

The final AQRF Referencing Report, Malaysia was officially submitted to the ASEAN Secretariat on July 17, 2019.

Criterion 1: Malaysian Education and Training Landscape - An Introduction

The structure of the education and training system is described

1.1 Economic and Demographic Background

Malaysia is a middle-income country with a Gross Domestic Product (GDP) of 1.2 trillion Ringgit, per GDP of MR42,937 and is an economy which exports almost 80% of its GDP in value mainly in manufactured items¹. By 2040, the Malaysian population is expected to reach 38.8 million growing at a rate of 1.1%². As Figure 1 shows, the population structure is changing with more ageing citizens and a declining higher education age group (15–24 years).

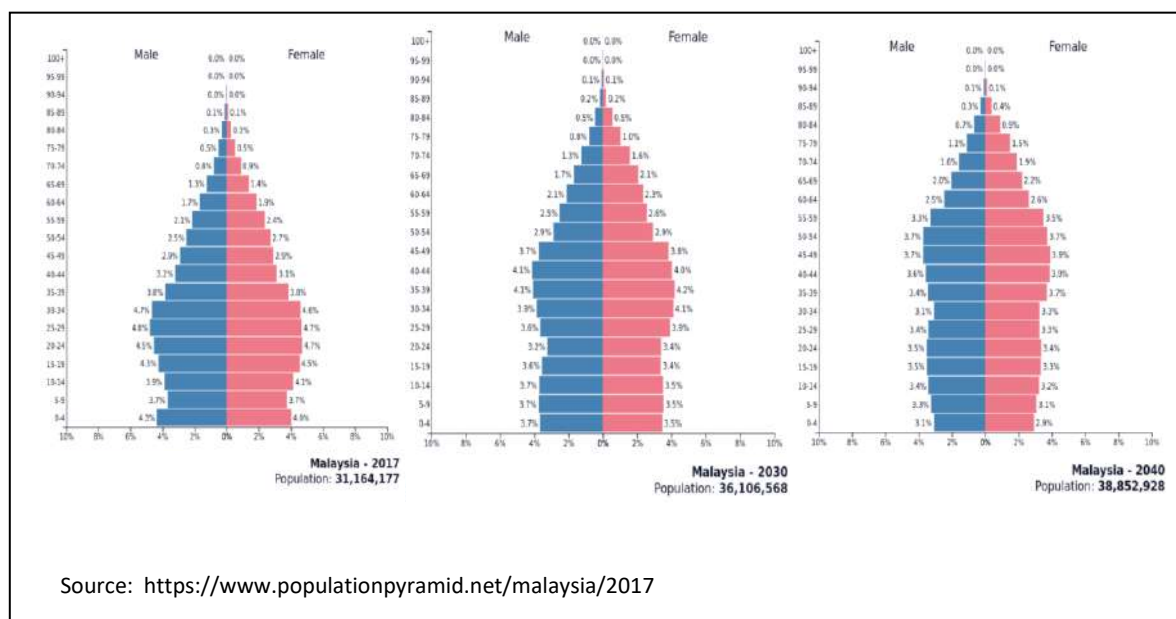


Figure 1: Population Structure: 2017, 2030 & 2040

From the 32.4 million population, 15.5 million are in the labour force with 68.5% overall participation rate. With mandatory primary education, the literacy rate stands at 96%. There is a concerted effort by the government to raise the education and skills level of the workforce from the present 55.8% with secondary education and 28.1% tertiary education.

¹ Economic Report, 2019. http://www.treasury.gov.my/pdf/economy/2019/chart_Malaysia.pdf

² Department of Statistics, Malaysia, 2018. <https://www.dosm.gov.my>

1.2 Malaysian Education and Training System

The Malaysian national education system can be divided into five stages namely preschool education, primary education, secondary education, post-secondary education and tertiary education. Figure 2 shows the typical age and the minimum duration of the of various stages in Malaysian education on the vertical axis and the different sectors i.e., academic, technical-vocational and skills, and their qualifications on the horizontal axis. The different stages of education are vertically colour coded. The Department of Skills Development (DSD) skills certification requires that candidates are able to read, write and do arithmetic although normally the trainees have upper secondary education, and they can progress up to Malaysian Skills Advanced Diploma or Skills Level 5 and beyond.

At the pre-tertiary (preschool to post-secondary education) level, there are six categories of institutions, namely, government and private kindergartens, government schools, government-aided schools, matriculation colleges, private-funded schools and foreign-system schools. The governing authority for pre-tertiary education is the Ministry of Education Malaysia (MOE). The law that regulates the provision of this level of education is the Education Act, 1996. However, the foreign-system schools, which include international schools and expatriate schools, are exempted from conducting the Malaysian National Curriculum.

The tertiary is regulated by the MOE through several legislations, namely the Education Act, 1996, the Universities and University Colleges Act, 1971 for public universities and the Private Higher Educational Institutions Act, 1996 (Amended 2010) for private higher education providers (HEP). The skills sector is regulated by DSD or *Jabatan Pembangunan Kemahiran* (JPK), Ministry of Human Resources under the National Skills Development Act, 2006 (NASDA).

YEAR	AGE	LEVELS	SECTORS				ACCREDITATION OF PRIOR EXPERIENTIAL LEARNING (APEL) (ADMISSION CRITERIA)	
			ACADEMIC	Technical & Vocational				Skills
			Universities/ Colleges/ Degree-Granting Institutions	Polytechnic	Community Colleges	Vocational Colleges		Skills Training Centres
21	27	Higher Education	Doctoral Degree 3 years	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 5px;"> Progression of Diploma & Advanced Diploma to Bachelor with credit transfer </div> </div>				
20	26							
19	25							
18	24		Master's Degree 1-2 years					
17	23							
16	22		Bachelor's Degree 3-4 years					Advanced Diploma 1 year
15	21							
14	20	Post-secondary	Malaysian Higher School Certificate (STPM)/ Matriculation/ Foundation/ Pre-University 1-2 years	Diploma 2 years	Malaysian Vocational Diploma (DVM) 2 years	Malaysian Skills Diploma (DKM)* 1 year		
13	19							
12	18			Certificate (L3) 1 year	Malaysian Skills Certificate 3* 1 year			
11	17							
The horizontal sectoral and institutional descriptors apply above this point								
11	17	Upper Secondary	Malaysian Certificate of Education (SPM) (national secondary/ special education/ religious/ technical/ sports/ arts/ private schools) 2 years	Malaysian Vocational Certificate (SVM) 2 years		Malaysian Skills Certificate 1 & 2* 1 year (student normally enrol after upper secondary)		
10	16							
9	15	Lower Secondary	Form Three Assessment (PT3) (national secondary/ religious school/ special education/ sports/ arts/ private schools) 3 years					
8	14							
7	13							
6	12	Primary	Primary School Achievement Test (UPSR) (national/ national-type Chinese/ national-type Tamil/ special education/ religious/ private schools) 6 years					
5	11							
4	10							
3	9							
2	8							
1	7	Preschool	Public/private preschools 1-2 years					
2	6							
1	5							

Note
*The age guide does not strictly apply to the skills sector due to programme duration and no age limit.

Figure 2: Malaysian Education and Training Pathways

1.3 Pre-School Education

Under the Malaysian education system, preschool education typically starts at the age of five and usually lasts for two years. The providers are kindergartens and preschools that are operated by government agencies, non-governmental organisations as well as private providers. The main government agencies that offer preschool education are the MOE, the Ministry of Rural Development, the State Religious Department and the Department of National Unity and Integration. At present, the majority of the national schools conduct preschool classes. Table 1 shows the number of preschools and student enrollment all over the country³ as of January 2017. The enrollment of preschool population stands at 84.3%.

Table 1: Number of Preschools and Student Enrollment

No.	Type of Preschools	Number of Preschools	Enrollment
1.	MOE/ Other agencies	17,464	498,704
2.	Private	7,374	329,251
Total		24,838	827,955

Source: Quick Facts - 2017 Malaysia Educational Statistics. Putrajaya: Ministry of Education, 2017.

1.4 Primary Education

A child is admitted into the first year of the six years of primary education at the age of seven. Primary schooling is mandatory for all children between the ages of seven and twelve (S. 29A, Education Act, 1996). In 2017, the primary school enrollment rate was 97.9%⁴. The number of primary schools and student enrollment is as shown in Table 2. The medium of instruction in national schools is Bahasa Melayu (the national language) with English as a compulsory subject, while in the national-type⁵ primary schools, the medium of instruction is either Mandarin or Tamil with Bahasa Melayu and English as compulsory subjects. *Ujian Pencapaian Sekolah Rendah* (UPSR) or the Primary School Achievement Test is conducted to assess student performance in the sixth year of primary education.

³ Quick Facts - 2017 Malaysia Educational Statistics. Putrajaya: Ministry of Education, 2017. pg. 10

⁴ Education by the numbers 2017. Putrajaya: Ministry of Education Malaysia, 2017.

⁵ Also known as vernacular schools.

Table 2: Number of Primary Schools and Student Enrollment

No.	Type of Primary Schools	Number of Primary Schools	Enrollment
1.	MOE/ Other agencies	7,849	2,705,485
2.	Private	118	38,227
Total		7,967	2,743,712

Source: Quick Facts - 2017 Malaysia Educational Statistics. Putrajaya: Ministry of Education, 2017.

1.5 Lower and Upper Secondary Education

Secondary education starts at the age of 13. It is for a total of five years, comprising three years of lower secondary from Form 1 to 3 and two years of upper secondary from Form 4 and 5. The medium of instruction is Bahasa Melayu while English is taught as a second language in all schools. Mandarin, Tamil and Arabic Languages are also offered as additional subjects. At the end of the third year at the lower secondary level, students are required to sit for a public examination called *Pentaksiran Tingkatan Tiga* (PT3) or the Form Three Assessment. This public examination is a diagnostic evaluation to stream students to the upper secondary level for another two years to complete 11 years of free public education.

There are three streams namely the academic stream (science/arts), the technical and vocational stream or the religious stream to choose from based on PT3 results. Apart from these three streams, the government also offers sports and art pathways by providing specialist schools at the secondary level to support the development of athletes and artists. Special education schools are also provided at the primary and secondary level to cater to the needs of students with disabilities or special needs. At the end of the two-year upper secondary education, students sit for *Sijil Pelajaran Malaysia* (SPM) or the Malaysian Certificate of Education. The enrollment rate in 2017 at the secondary level was at 91.3%⁶ which the government seeks to raise to a full enrollment by 2021⁷. The number of secondary schools and student enrollment is shown in Table 3.

⁶ Education by the numbers 2017. Putrajaya: Ministry of Education Malaysia, 2017

⁷ Malaysia Education Blueprint 2013-2025 (Preschool to Post-secondary Education). Putrajaya: Ministry of Education Malaysia, 2013. pg. 7-6

Table 3: Number of Secondary Schools and Student Enrollment

No.	Type of Secondary Schools	Number of Secondary Schools	Enrollment
1.	MOE/ Other agencies	2,636	2,193,524
2.	Private	300	171,739
Total		2,936	2,365,263

Source: Quick Facts - 2017 Malaysia Educational Statistics. Putrajaya: Ministry of Education, 2017.

1.6 Post-Secondary Education

Upon completion of secondary education, students can choose to pursue one to two years of post-secondary education, i.e., Form Six for one and a half years at the end of which they sit for *Sijil Tinggi Persekolahan Malaysia* (the Malaysian Higher School Certificate), or *Sijil Tinggi Agama Malaysia* (the Malaysian Higher Islamic Religious Certificate), or Matriculation (one to two-year programme conducted by matriculation colleges under the Ministry of Education). Alternatively, students may apply to enrol in foundation or other equivalent university entrance preparatory programmes. In total, the 12 or 13 years of pre-tertiary education serves as the basic entry requirement into a bachelor's degree programme in higher education providers (HEP). Pre-tertiary levels are not covered under the MQF. Nonetheless, university preparatory programmes offered by HEPs are quality assured by the Malaysian Qualifications Agency (MQA).

1.7 Higher Education

Higher education relates to post-secondary qualifications and awards which are subject to the MQF which is a learning outcome, credits and duration-based framework⁸. The HEPs offer programmes at the certificate (MQF Level 3: minimum 60 credits); diploma (MQF Level 4: minimum 90 credits), advanced diploma (Level 5: minimum 40 credits), bachelor (MQF Level 6: minimum 120 credits) (MQF Level 7: minimum 40 credits if coursework-based) and doctorate levels in academic and professional fields (MQF Level 8: minimum 80 credits if coursework-based). Research-based masters and doctoral programmes are not assigned any credits. The Skills and

⁸ For details on MQF, MQF levels and MQF levels descriptor, refer to Criterion 3.

Technical and Vocational sectors offer programmes from Certificate Level 1 to Advanced Diploma (Level 5). These programmes conform to the eight learning outcome domains and the prescribed qualification titles for each level in MQF. These higher education qualifications have since 2009 become fully outcome-based, MQF compliant and fulfil the minimum requirements.

The duration of study for MQF Level 6 bachelor's degree programmes is between three and five years. For professional programmes⁹, the duration of study is about four to five years. The medium of instruction for bachelor's degree programmes offered at most public universities is Bahasa Melayu, while English is used at most private HEPs, and for postgraduate studies at public universities.

The general entry requirements for all higher education programmes are determined by the Higher Education Sector of the MOE. Basically, entry into Year 1 of bachelor's degree programme at public or private HEPs requires the completion of 11 years of schooling plus one to two years pre-university programmes. Other routes include completion of diploma (Level 4, MQF) programmes which may enjoy up to 30% credit transfer¹⁰. Certificate (Level 3, MQF) programmes are offered to SPM holders who do not meet the minimum 3 SPM credits entry requirements to diploma. Upon completion of the certificate, the candidates can continue to a diploma.

The bachelor's degree (Level 6, MQF) is a normal requirement for entry to master's degree (Level 7, MQF) which is typically one to two years of study. A person who holds a master's degree or other equivalent qualifications can be admitted to doctoral degree (Level 8, MQF) programmes.

⁹ Professional programmes (e.g., in the field of Medicine, Engineering, Architecture) are regulated by professional bodies established under an Act of the Parliament in conjunction with MQA.

¹⁰ Credit transfer (CT) may be awarded subject to the following requirements: a) The applicant must have obtained a minimum grade of C or its equivalent (satisfactory performance or a pass) in the previous course; b) The CT must be for the same credit as the course credits of the programme being transferred into; c) The CT must be based on subject or course mapping with at least 80% match in content and equivalent course outcomes (parity of course); and d) The programme from which the course credits are transferred from are accredited or approved in the country of origin (recognition).

As of July 2018, there are 20 public universities, comprising five research universities¹¹, four comprehensive universities¹² and 11 focused universities¹³. These public universities enrolled 538,555¹⁴ students in 2017 in programmes ranging from diploma (Level 4, MQF) to doctoral degree (Level 8, MQF). Apart from the HEPs established under the MOE, there are other degree-granting (Levels 6–8, MQF) and non-degree-granting¹⁵ (Levels 1–5, MQF) HEPs governed by other ministries under various statutes for academic or specific training purposes. Some examples include the National Arts, Culture and Heritage Academy of the Ministry of Culture and Tourism, the National Institute of Public Administration (*Institut Tadbiran Awam Negara*, (INTAN)) of the Public Service Department as well as various skills training institutes under the Ministry of Human Resources (MoHR), Ministry of Youth and Sports and Ministry of Rural and Regional Development.

As for the private HEPs, there are 47 universities, 34 university colleges, 10 international branch campuses and 377 private colleges which enrolled 666,617 students, including 100,765 international students in 2017¹⁶. Table 4 shows the number of HEPs and student enrollment as of 2017.

Table 4: Number of Higher Education Institutions and Student Enrollment

No.	Type of HEPs	Number of HEPs	Enrollment
1.	Public Universities	20	538,555
2.	Private HEPs	468	666,617
Total		488	1,205,172

Source: Statistik Pendidikan Tinggi 2017. Putrajaya: Kementerian Pendidikan Tinggi, 2018

¹¹ Research universities focus on research, innovation, publication and offer predominantly postgraduate studies.

¹² Comprehensive universities offer programmes in a wide range of disciplines at all levels.

¹³ Focused universities have clearly identified and specific mission, for example, management, entrepreneurship, education or technical education.

¹⁴ Statistik Pendidikan Tinggi 2017. Putrajaya: Kementerian Pendidikan Tinggi, 2018. pg. 3

¹⁵ Non-degree granting institutions offer programmes at certificate and diploma levels.

¹⁶ Statistik Pendidikan Tinggi 2017. Putrajaya: Kementerian Pendidikan Tinggi, 2016. pg. 58

1.8 Technical and Vocational Education and Training (TVET)¹⁷

Recognising the importance of Technical and Vocational Education and Training (TVET) in addressing the industry demand, TVET pathways are provided at upper secondary level through vocational colleges, secondary and technical schools. Further TVET pathways for post-secondary level are provided by various skills and technical-vocational providers i.e., polytechnics, community colleges and public as well as private skills training centres (see Table 5).

Technical-vocational education is career-oriented and prepares students for careers requiring a specific set of competencies. It also prepares students for higher education particularly in science and technology related courses and careers in engineering and other professional fields.

The skills sector, on the other hand, emphasises practical work to develop competency in occupational or trade skills required by related industries. The students are prepared for *Sijil Kemahiran Malaysia*¹⁸ (SKM) awarded by the Department of Skills Development of the Ministry of Human Resources through 1,272 training institutions all over the country¹⁹. Students pursuing skills qualifications may enrol for SKM Level 1 up to *Diploma Kemahiran Malaysia*²⁰ (DKM) and *Diploma Lanjutan Kemahiran Malaysia*²¹ (DLKM) which are at Level 4 and Level 5 of the MQF, respectively. There is also an opportunity for DKM and DLKM holders to further their study in engineering technology at the bachelors level. Table 5 shows the number of skills training providers and student enrollment as of 2017.

The descriptors at Level 1 to 5 of the MQF provide for both technical-vocational and academic (general) learning pathways and use the same qualification titles. The technical and vocational programmes provide more specialised technical knowledge and skills, are industry/occupational standards-oriented and have a higher practical component. The entry requirements are as generally prescribed or subjected to

¹⁷ A term that refers to both Skills and Vocational and Technical education and training.

¹⁸ Malaysian Skills Certificate

¹⁹ Laporan Tahunan 2017. Putrajaya: Jabatan Pembangunan Kemahiran, 2017. pg 24

²⁰ Malaysian Skills Diploma

²¹ Malaysian Skills Advanced Diploma

specific programme standards or professional body requirements or via Accreditation of Prior Experiential Learning (APEL).

Table 5: Type and Number of TVET Providers, and Student Enrollment

No.	Type of TVET Providers	Number of TVET Providers	Enrollment
1.	Polytechnics	34	99,606
2.	Community Colleges	99	20,921
3.	Vocational Colleges	82	61,896
4.	Technical School	9	4,848
5.	National Youth Skills Institute	22	5252
6.	Industrial Training Institutes	34	8,241
7.	MARA Skills Institutes and GIATMARA Centres (Pusat GIATMARA)	248	17,188
8.	Vocational Colleges and Secondary Schools	187	12,329
9.	Other Government Skills Training Institutes	94	11,274
10.	Private Skills Training Centres	692	39,481
Total		1,501	281,036

Source:1. Statistik Pendidikan Tinggi 2017. Putrajaya: Kementerian Pendidikan Tinggi, 2018

2. Malaysia Educational Statistics 2017. Putrajaya: Ministry of Education, 2017

3. Statistik Jabatan Pembangunan Kemahiran, 2017.

1.9 Recognition of Prior Achievement (RPA), APEL for Access [APEL (A)] and APEL for Credit Award [APEL (C)]

To recognize non-formal and informal learning as provided in the MQF, APEL (A) was introduced in 2011 to provide learners who lack formal qualifications but wish to pursue higher education in academic and technical-vocational fields. They can now, through assessment of their work experiences, enrol in certificate, diploma, bachelor or master

studies. Since its introduction in 2011, annual APEL (A) applications have increased from 9 to 3,874 in 2017. Of the total 6,525 applications, 1,280 students or 20% are enrolled in HEPs²².

Following the implementation of APEL (A), MQA introduced on APEL for Credit Award, known as APEL (C) in 2016. APEL (C) provides a mechanism to systematically assess relevant experiential learning of an individual against the course learning outcomes for credit awards. As of December 2017, four HEPs have granted credits to 84 successful applicants.

The DSD also implements the Recognition of Prior Achievement (RPA) scheme, which certifies individuals based on work experiences. It was introduced since 1996 and as of December 2017, 139,863 certificates have been awarded through RPA at various levels of certification. The competency assessment for this certification is based on the National Occupational Skills Standards (NOSS)²³. In 2017, 17,500 individuals were certified through this scheme²⁴.

1.10 Current and Future Developments

Although the education and training sector is always experiencing changes, the following description highlights some key changes taking place.

1.10.1 Enhancing TVET

In 2016, the government released the 11th Malaysia Plan 2016-2020 (11MP) that outlined six strategic thrusts to help Malaysia to face the challenges and embrace opportunities emanating from global politico-economic changes. One of the thrusts – accelerating human capital development for an advanced nation, stresses the importance of enabling the industry-led TVET in the country. This is based on the projection that 60% of the 1.5 million jobs that will be created during the plan period will require TVET related skills. Thus, TVET must be transformed to meet industry demand. This will be done by strengthening the governance of TVET, enhancing

²² Based on MQA survey of HEPs in 2017. The actual number might be higher.

²³ National Occupational Skills Standards (NOSS). Portal Rasmi Jabatan Pembangunan Kemahiran. 29 March 2018. <<http://www.dsd.gov.my/index.php/my/perkhidmatan/noss>>

²⁴ Q Fact JPK: Jabatan Pembangunan Kemahiran, Dec 2017. pg. 1

quality and delivery of TVET programmes to improve employability, and rebranding TVET to increase its attractiveness.

Among the major shifts expected to take place are the single qualifications system adopted by both the MQA and the DSD; single rating system for both public and private TVET institutions; design and delivery of curriculum led by individual TVET institutions or government; institutions to specialise in and create Centres of Excellence in niche areas of TVET expertise; 225,000 TVET student intake per annum by 2020; and more career choices including further studies for TVET students.

By implementing this thrust, the government aspires to achieve an increase in the intake of SPM leavers in TVET programmes from 164,000 in 2013 to 225,000 in 2020; a 58% increase in the number of skilled employees from 1.77 million in 2014 to 2.8 million in 2020 through skills enhancement.

1.10.2 General Education

The Malaysia Education Blueprint 2013-2025 (MEB) has been developed with the long-term targets for quality, equity and access. The priorities of the government are to ensure better alignment between policy formulation and implementation along the entire education value chain; to improve resource productivity by strengthening the link between desired outcomes and the effective allocation of resources as well as efficient implementation of high impact programmes to enhance the quality of the education system. The MEB offers a vision of the education system and student aspirations and as well as 11 strategic and operational shifts to realise this vision.

In terms of the education system, there are five outcomes that are expected to occur by implementing the 11 shifts. These include equal access for every children to an education that will enable a child to achieve his or her potential; universal access and full enrollment of all children from preschool to upper secondary school level by 2020; opportunity for all children to attain an excellent education that is uniquely Malaysian and comparable to the best international systems; being in the top third of countries in terms of performance in international assessments as measured by outcomes in Trends in International Mathematics and Science Study (TIMSS) and Programme for International Student Assessment (PISA) within 15 years; and to halve the current

urban-rural, socio-economic, and gender achievement gaps by 2020. In terms of funding, the Malaysian education system has always been well funded. Thus, the government will further maximise student outcomes within the current budget levels.

1.10.3 Higher Education

The Malaysia Education Blueprint 2015-2025 (Higher Education) [MEB (HE)] focuses on five aspirations, i.e., access, quality, equity, unity and efficiency. The main goals and plans are to nurture domestic talent and be recognised for quality education that attracts international students from the region; be in the top one-third of nations in the world for education and to increase the number of its universities in world rankings such as the QS World University Rankings and equip the Malaysian university graduates not only with 21st Century skills and knowledge but also build characters with moral and spiritual values.

In terms of global presence, the government aims to place one university in Asia's Top 25, two in the Global Top 100, and four in the Global Top 200 by 2025. It also aims to raise graduate employability to over 80% by, among others, having at least 15% of students involved in entrepreneurship activities while studying and at least 10% of the graduates becoming entrepreneurs upon graduation. The government also plans to make the TVET pathway as an equally attractive choice to higher education by enlarging the pathway to higher technical and professional education and training.

Criterion 2: Mandate and Representation for Referencing

The responsibilities and legal basis of all relevant national bodies involved in the referencing process are clearly determined and published by the main public authority responsible for the referencing process

2.1 National Mandate

The Malaysian Government on 29th April 2015 mandated the MQA, an agency under the MOE, to oversee and coordinate all AQRF related matters in Malaysia.

2.2 Malaysian Qualifications Agency (MQA)

The MQA was established on 1st November 2007 with the enactment of the MQA Act 2007. The main role of the MQA is to implement the MQF as the basis for quality assurance of higher education and as the reference point for the criteria and standards for national qualifications. The functions of the MQA include:

- i. to implement the MQF as a reference point for Malaysian qualifications;
- ii. to develop standards and criteria and all other relevant instruments as national references for the conferment of awards with the cooperation of stakeholders;
- iii. to quality assure higher education institutions and programmes;
- iv. to accredit courses that fulfil the set criteria and standards;
- v. to facilitate the recognition and articulation of qualifications; and
- vi. to maintain the MQR.

In addition, the MQA also evaluates foreign qualifications for comparability to the MQF.

2.3 Malaysian National AQRF Committee

Pursuant to the endorsement of the AQRF Governance by three ASEAN Ministerial Meetings, which were held in the first half of 2016, the Malaysian AQRF Committee (MyAQRF) was established. The MyAQRF is an inter-sectoral committee which consists of representatives from key ministries, government agencies, higher

education and training providers and well as the industries, employees and employers. The selection of membership of the committee is based on the role and relevance of their organisation's function in matters related to the implementation of the AQRF in Malaysia. The members of the committee and the nature of their representation are stated in Table 6.

Table 6: Representation in Malaysian AQRF Committee

No.	Organization	Nature of Representation
Government Agencies		
1.	Malaysian Qualifications Agency	The national body responsible for the implementation of MQF and quality assurance of programmes and qualifications in Malaysia higher education including self-accrediting universities.
2.	Ministry of Education	<p>The federal ministry responsible for overseeing education system which includes pre-tertiary education (preschool, primary education, secondary education and post-secondary education) and tertiary education (public universities, private higher educational institutions, teacher training institutes, polytechnics, community colleges and vocational colleges).</p> <p>The Ministry is also responsible for overseeing the implementation of the Malaysia Education Blueprint 2013-2025 and the Malaysia Education Blueprint 2015–2025 (Higher Education).</p>
3.	Ministry of Human Resources	The federal ministry responsible for skills development, labour affairs, occupational safety and health, trade unions, industrial relations, labour market information and analysis as well as social security.
4.	Ministry of Foreign Affairs	The federal ministry responsible for overseeing foreign relations. This includes matters related to political relations, economic affairs, security matters as well as social and cultural promotions.
5.	Ministry of International Trade and Industry	<p>The federal ministry responsible for international trade, industry, investment, productivity, and small and medium enterprise.</p> <p>This ministry is also responsible for the promotion of international trade and economic growth.</p>

No.	Organization	Nature of Representation
6.	Ministry of Tourism, Arts and Culture	The federal ministry responsible for tourism, culture, archives, library, museum, heritage, arts, theatre, handicraft, visual arts, conventions and exhibitions.
Employers and Trade Unions		
7.	Malaysian Employers Federation	The national organisation of private sector employers in Malaysia. The federation promotes and safeguards the rights and interest of employers.
8.	Malaysian Trade Union Congress	The federation of trade unions in Malaysia. The federation represents trade unions in all major industries and sectors.
9.	Federation of Malaysian Manufacturers	Association of Malaysian manufacturing enterprises.
Education and Training Providers		
10.	Malaysian Association of Private Colleges & Universities	Association of private colleges and universities in Malaysia.
11.	Federation of JPK Accredited Centres, Malaysia.	Association of accredited skills training providers in Malaysia.
12.	National Association of Private Educational Institutions	Association of private educational institutions in Malaysia.

The list of legislation under the responsibility of each ministry or agency is provided in Appendix 1 to show their role in national and international affairs in the context of higher education and training and related matters.

The MyAQRf is guided by the agreed Terms of Reference (ToR) which, among others, outlines the following:

- i. to discuss and agree on the elements of the referencing exercise, including but not limited to its underlying principles, key features, and structure;

- ii. to discuss and agree on the schedule of MyAQRf meetings, to complete the referencing exercise and duties required for AQRf implementation in Malaysia;
- iii. to discuss and agree on any information and issues raised by the AQRf Committee;
- iv. to discuss and agree on the policy required for the implementation of AQRf in Malaysia; and
- v. to prepare reports and update the progress of the exercise, as required, for the AQRf Committee and ASEAN Secretariat.

The ToR also provides for the formation of working groups to carry out the referencing exercise.

The MQA acts as the Chair and the Secretariat of the MyAQRf. The first meeting of the MyAQRf was held on 23rd September 2016 to finalise the terms of reference which was followed up by four further meetings to deliberate and endorse three progressive reports. The members of the MyAQRf in its 5th meeting held on 19th March 2019 expressed full support and unanimously approved the full final AQRf referencing report for submission to ASEC.

2.4 Malaysian AQRf Working Committee

The Malaysian AQRf Working Committee was set-up to prepare the AQRf referencing report. The Committee consists of members from the MQA, the DSD and experts in quality assurance. The full list of Malaysian AQRf Working Committee members and contributors is provided in Appendix 2. The Committee has met formally over nine times to review the report in the light of the feedback received from the ASEAN Member States (AMS), consultants, partners, observers, stakeholders and international experts. The proposed changes to the report with justifications are tabled in MyAQRf for approval before these improved reports are submitted to AQRf Committee.

Information on the MyAQRf, the Malaysian AQRf Working Committee and the referencing process is also published on the MQA website - <http://www2.mqa.gov.my/myaqr>.

2.5 Stakeholder Consultation

Although the MyAQRf comprises members representing a wide range of stakeholders, an online consultation forum was opened between 13th Sept 2018 and 26th October 2018 to enable stakeholders from all over the country to provide feedback. One hundred and eighty-nine general and 23 specific comments were registered via the online forum. To allow for more in-depth interaction, a face to face consultation session was held in Putrajaya to obtain further feedback from interested parties. A total of 152 individuals from government agencies, HEPs, training providers, employers, workers and industry associations, professional bodies, assessors and officers from accreditation bodies attended this session.

Since the AQRf and the referencing process is new to most stakeholders, information on the process and the outcomes was provided to all. The general feedback is one of strong support for the referencing exercise and the potential for greater student mobility within ASEAN.

Criterion 3: Inclusion of Qualifications in Malaysian Qualifications Framework

The procedures for inclusion of qualifications in the national qualifications framework or for describing the place of qualifications in the national qualifications system are transparent

3.1 Malaysian Qualifications Framework (MQF)

The MQF was mooted in 2002, approved by the National Higher Education Council in 2003 and endorsed by the Malaysian Cabinet in 2005. The MQF was fully enforced since 2009 by the MQA as provided for under the MQA Act 2007 or Act 679 [S. 6 (2)(a)]. By virtue of the Act, the MQF is the sole national reference for all post-secondary and higher education qualifications. The Act sets out the broad legal framework for the development of any study or training programme which leads to an accredited qualification against the Framework (also referred to as award).

The MQF is a national instrument, which develops and classifies qualifications based on a set of criteria that is nationally agreed and internationally benchmarked, and which clarifies the academic levels, learning outcomes and credit system based on student academic load. These criteria are accepted and used for all qualifications awarded by the Higher Education and Training Providers (MQF, 2007: p.1).

The objectives of the MQF as outlined in S.36 of the MQA Act, 2007 are:

- i. to secure standards of qualifications and reinforce policies on quality assurance;
- ii. to promote accuracy or consistency of nomenclature of qualifications;
- iii. to provide mechanisms for the progression or interrelation between qualifications, including non-degree and degree qualifications;
- iv. to encourage collaboration between public and private sector higher education providers and skills training providers;
- v. to encourage parity of esteem among academic, professional, technical, vocational and skills qualifications;

- vi. to establish a credit system to facilitate credit accumulation and transfer which is acceptable within and outside Malaysia;
- vii. to provide clear and accessible public information on programmes or qualifications in higher education;
- viii. to promote where applicable, the presentation of qualifications in forms that facilitate their evaluation by any person, including government agencies, higher education providers, students, academic staff, quality assurance and accreditation bodies, professional bodies, examination bodies and employers; and
- ix. to articulate links with qualifications from outside Malaysia.

3.1.1 Sectors of MQF

The MQF contains post-secondary national qualifications, which are conferred in the (1) Skills, (2) Vocational and Technical, and (3) Academic sectors (as depicted in Figure 3). The qualifications from these three sectors comply with the appropriate level descriptors despite the difference in purpose.

3.1.2 Levels of MQF: The Descriptors and Credits

The MQF is an eight levels outcome-based qualifications framework which organises qualifications hierarchically. The qualification levels indicate the level of capabilities. The typical qualifications of each level are described by generic outcomes or achievement features, i.e., level descriptors, which signify the expected capabilities from learners in terms of:

- i. the depth, complexity and comprehension of knowledge;
- ii. the application of knowledge;
- iii. the degree of autonomy and creativity;
- iv. the communication skills;
- v. the breadth and sophistication of practices.

Descriptors of all the MQF levels are explained in Criterion 4.

Levels	Min, Credit	Sectors			Lifelong Learning
		Skills	Vocational and Technical	Academic	
8	80*			Doctoral Degree	Accreditation of Prior Experiential Learning or APEL
7	40* 30 20			Master's Degree Postgraduate Diploma Postgraduate Certificate	
6	120 66** 36**			Bachelor's Degree Graduate Diploma Graduate Certificate	
5	40	Advanced Diploma	Advanced Diploma	Advanced Diploma	
4	90	Diploma	Diploma	Diploma	
3	60	Skills Certificate 3	Vocational and Technical Certificate	Certificate	
2		Skills Certificate 2			
1		Skills Certificate 1			

Note:

*Research-based doctoral and masters programmes are not assigned any credit value.

** 6 credits of Mandatory *Mata Pelajaran Pengajian Umum*/General Subjects

Figure 3: Malaysian Qualifications Framework, 2007

The MQF is also a credit-based qualifications system. The credit is a quantitative measure of academic load necessary to complete the requirements of any qualifications at an MQF level. One credit is equal to 40 hours of notional student learning time. Every level of qualification except for research-based (limited to Level 7 and 8) and skills (limited to Levels 1 and 2) programmes must meet the minimum credits as stated in Figure 3 to be accredited.

3.1.3 Learning Outcome Domains

Learning outcomes are statements that explain what students should know, understand and can do upon the completion of a period of study or training. Learning outcomes are references for standard and quality as well as for the development of curriculum in terms of teaching and learning, the determination of credits and the assessment of students.

The MQF identifies eight learning outcome domains (see Table 7) which are significant for Malaysia. While level descriptors provide guidance on the expected complexities of a qualification, learning outcome domains provide an organizing scheme for the development of learning outcomes of the qualification.

Table 7: Eight Learning Outcome Domains

No.	Learning Outcome Domains
1	Knowledge
2	Practical skills
3	Social skills and responsibilities
4	Values, attitudes and professionalism
5	Communication, leadership and team skills
6	Problem-solving and scientific skills
7	Information management and lifelong learning skills
8	Managerial and entrepreneurial skills

3.1.4 Qualifications Title

Qualification titles at every level are identified in the MQF (see MQF, Clause 13 and 17). Generally, qualifications across the Skills and Technical and Vocational sectors begin with the Certificate (Level 1 – 3); Diploma (Level 4) and end at Advanced

Diploma (Level 5). For the Academic Sector, the qualifications progress to Graduate Certificate/Diploma and Bachelors (Level 6); Postgraduate Certificate/Diploma and Masters (Level 7) and Doctorate (Level 8). The levels are distinctly differentiated by learning outcomes, credits and student learning time.

The postgraduate and graduate certificates and diplomas provide a narrower or focused set of knowledge and skills at levels 6 and 7. They are primarily intended to provide continuing professional education and training to level 6 and 7 graduates in keeping with changes in the field of study, work and practice.

3.2 Process of Locating a Qualification within the Framework/Complying to the MQF

The procedures for accreditation of programmes or qualifications, i.e., that it meets the minimum requirements of the MQF, relevant standards and other requirements of the MQA, DSD, and professional bodies, are documented and accessible to all stakeholders²⁵. This includes the foreign collaborative programmes and those from international branch campuses operating in Malaysia²⁶.

3.2.1 Locating a Qualification within the Framework

There are two approaches to determining the MQF compliance of a programme or qualifications and including it in the Malaysian Qualifications Register (MQR) or the DSD list. The MQA lists the qualifications or programmes which meet the relevant criteria for inclusion in the MQR while DSD lists the accredited training centres which are approved to conduct skills programmes (MQF Levels 1 to 5) based on the National Occupational Skills Standards (NOSS).

3.2.1.1 Malaysian Qualifications Agency and Professional Bodies

For the MQA including self-accrediting universities and professional bodies, the accreditation process is the route to verifying the location of a programme or qualification within the MQF. A HEP decides on a particular sector, field and level of







²⁵ MQA – www2.mqa.gov.my; DSD – <https://www.dsd.gov.my/index.php/my/>; Board of Engineers Malaysia, <http://bem.org.my/>

²⁶ Collaborative programmes are programmes of local and foreign universities offered by local HEIs under a franchise agreement to be completed fully or partially in Malaysia. These programmes are accredited by MQA (listed in MQR) and approved by MOE.

programme to be offered based on its institutional aspiration, national policy and market need. The programme is designed based on appropriate MQF descriptors, programme standards, policies, guidelines and benchmarks, which guide the HEP in establishing the right body of knowledge, level of competencies, skills and mode of delivery. A typical process applicable to MQA, the self-accrediting universities and professional bodies is described in Figure 4 for a Level 6 (bachelor) programme in finance. This process is followed in the accreditation of programmes at all levels of MQF and in any discipline by all professional bodies and self-accrediting universities.

The key determinant in locating a qualification or programme to an MQF level is the learning outcomes set for it. Successful articulation of an MQF level in programme design depends on the constructive alignment and cohesiveness of the whole curriculum involving programme educational objectives, programme learning outcomes, course learning outcomes, strategies and approaches of delivery as well as student assessment. Other requirements include minimum study duration, credits as well as entry requirements. A typical format for describing the mapping and alignment of programme outcomes to the MQF requirements is provided in Appendices 3-1 and 3-2.

An accredited programme is registered in [MQR](#) with an allocated MQF level, the qualifications title, the credits, duration, mode of study, name of HEP and other programme information (see Appendix 4 for a sample MQR list). The listing in MQR is the authoritative indication that a programme meets all the MQF requirements which are monitored through periodic maintenance audits by the MQA. As of January 2019, there are 13,563 programmes of all levels listed in MQR. The MQR also provides links to the [DSD's accredited centres registry](#).

<p>Standards & Benchmarks</p> 	<p>MQF Level Descriptors</p> 	<p>MQF Level 6 Descriptors</p> <ol style="list-style-type: none"> 1. demonstrate knowledge and comprehension on fundamental principles of a field of study, acquired from advanced textbooks 2. use the knowledge and comprehension through methods that indicate professionalism in employment 3. argue and solve problems in their field of study 4. show techniques and capabilities to search and use data to make decisions having considered social, scientific and relevant ethical issues 5. communicate effectively and convey information, ideas, problems and solutions to experts and non-experts 6. apply team and interpersonal skills which are suitable for employment 7. possess independent study skills to continue further study with a high degree of autonomy
	<p>Standards, Codes of Practices, Guidelines etc.</p> 	<p>Programme Learning Outcomes for Bachelor in Finance (MQA Programme Standards in Finance, 2016)</p> <ol style="list-style-type: none"> 1. evaluate concepts and theories of finance 2. utilise relevant finance-related knowledge and demonstrate critical thinking skills for decision-making 3. comprehend contemporary financial issues 4. interpret and evaluate financial and non-financial information for decision-making purpose 5. communicate creative and innovative financial ideas effectively 6. display financial and entrepreneurial abilities in managing business 7. demonstrate leadership, teamwork and social skills in accordance with professional, ethical and legal practices 8. apply the skills and principles of lifelong learning in their academic and career development
<p>Programme Design and Delivery</p> 	<p>Programme Learning Outcomes</p> 	<p>Programme Learning Outcomes for Bachelor of Finance (developed by an HEP)</p> <ol style="list-style-type: none"> 1. Demonstrate ability to analyse, synthesise and integrate knowledge and necessary skills to operate within the context of finance. 2. Develop knowledge of alternative financial institutions and instruments and of the economic and finance theories underlying the financial markets. 3. Develop analytical thinking skills and specialised practical skills relevant to the industry's needs. 4. Demonstrate an understanding and awareness of commercial, ethical, legal and social issues and implications related to finance in both local and international business environments. 5. Develop communication skills and be able to work independently or in teams and create a professional development plan that fosters personal and professional growth. 6. Analyse, critically evaluate and interpret information to solve problems and make financial decisions. <p>Constructive alignment:</p> <ol style="list-style-type: none"> 1. Mapping of programme learning outcomes to MQF and programme objective 2. Mapping of programme learning outcomes to course learning outcomes 3. Articulation of course learning outcomes to course content, deliveries and student assessment.

↓	↓	The programme design and preparation must be verified by MQA, DSD or professional bodies prior to the offering.
	Programme Delivery and Monitoring	Institution delivers, monitors, reviews and improves the quality of the programme
External Quality Assurance ↓	Accreditation ↓	Institution provides self-assessment report and relevant information on the design, delivery, monitoring and review of the programme. MQA, DSD or professional bodies assign experts to verify the MQF compliance based on relevant standards and benchmarks in accordance with programme level and field of study.
Registration	MQR/ DSD Register	Accredited programme is registered at appropriate MQF level. The registers are accessible to the public for reference. See Appendix 4 for MQR listing

Figure 4: Example of Locating a Qualification within MQF – Bachelor of Finance

3.2.1.2 Department of Skills Development (DSD)

The DSD has developed the NOSS for different areas and occupations for different levels of the MQF which is further articulated in the Malaysian Occupational Skills Qualifications Framework (MOSQF, see Figure 8 for details). For example, DSD has five different levels of NOSS within the area of Automotive Sales - Vehicle Sales Retail Management (L5 & L4); Vehicle Sales Supervision (Level 3); Vehicle Sales Operation (Level 2); Vehicle Sales & Supports (Level1)²⁷. The learning outcomes and competencies as stated in the Curriculum of Competency Unit (CoCU) for each Competency Unit are aligned to the MQF levels. An example of a learning outcome in the Competency Unit from the NOSS for Machining Operation is shown in Appendix 5. The accredited training centres which are permitted to admit and train students for specified skills programmes, develop appropriate training programmes subject to the DSD's guidelines. A search facility for accredited training centres with the approved skills programmes is available at the [DSD](#) website.

3.2.3 Evaluation of Equivalency of Qualifications

Qualifications offered or obtained inside or outside the country (which are not accredited locally) can be submitted to the MQA and the DSD, as appropriate, for equivalency evaluation (S.79, MQA Act, 2007 and S. 36, NASDA). The Committee for

²⁷ Full information on NOSS standards available at <https://www.dsd.gov.my/images/perkhidmatan/NOSS/Daftar%20NOSS%208%200ktober%202018.pdf>

Equivalency Evaluation, MQA and the Skills Qualifications Evaluation and Recognition Committee, DSD which comprises key stakeholders with knowledge and expertise in education and skills qualification systems, assess applications by individuals or institutions in relation to specific qualification and the MQF level.

3.2.4 International Comparability Evaluation

The MQA has a process to evaluate the comparability of Malaysian qualifications with that of another country. There were two comparability studies concluded with the New Zealand Qualifications Authority (NZQA) by which both countries have accepted that specified qualifications are comparable at agreed levels within their respective qualifications frameworks. Any qualification from New Zealand that falls within the ambit of this comparability study will be located at the agreed level in the MQF.

Two mutual recognition agreements have been signed with China and India to recognise specified qualifications from listed HEPs. In addition, the MQA has signed Statement of Confidence in the quality assurance of qualifications with the Higher Education Assessment and Accreditation Council of Taiwan (HEAACT), Taiwan and the National Institute for Academic Degree and Quality Enhancement (NIAD-QE), Japan. Mutual recognition of quality assurance practices creates trust in the qualifications of the participating countries.

Criterion 4: Linking Malaysian Qualifications Framework to ASEAN Qualifications Reference Framework

There is a clear and demonstrable link between the qualifications levels in the national qualifications framework or system and the level descriptors of the AQRF

4.1 Establishing Clear and Demonstrable Link

The purpose is to establish the extent to which a convincing and trusted link exists between the MQF and qualifications system levels, and the levels in the AQRF.

The section begins with:

- i. Broad structural comparison of the Frameworks addressing the policy, objectives and functions, the overall architecture of both frameworks, scope, level and learning outcomes from linguistic and conceptual understanding.
- ii. Technical matching with Level-to-Level horizontal comparison of level descriptors.

4.2 Broad Structural Comparison

In the following sections, the key structural elements of the MQF and the AQRF are explained highlighting the differences and similarities between the two frameworks.

4.2.1 Malaysian Qualifications Framework (policy, objectives and functions)

The idea to develop the MQF began in 2002 and it was only launched officially in November 2007. The basis for the development was the need to harmonise and consolidate qualifications practices by different sectors into a national system; to improve the quality of higher education; to ensure international comparability, address national economic agenda and to focus on improving the potentials of individuals by addressing access vertically and between sectors to lifelong learning, manage foreign programmes and qualifications in Malaysia, and international recognition of Malaysian qualifications, credits and learning. With the approval of the MQF, the quality assurance system was also reviewed for the same reasons and to minimise the dichotomy between public and private HEPs. The national quality assurance system

through programme accreditation became the main instrument for the implementation of the MQF. The implementation of the MQF began fully in 2009 and continues to this day.

For the purpose of this referencing exercise, reference is made to the MQF, 2007 as it has been implemented since 2009 encompassing all qualifications including those developed and delivered before the enforcement of the MQF.

4.2.1.1 Post-secondary level

The MQF covers qualifications, which are of post-secondary level²⁸ awarded by HEPs as defined by S. 2 of the MQA Act 2007. The key purposes of the MQF are to streamline, strengthen and consolidate the Malaysian qualifications system and practices. It is an instrument to develop and classify all national qualifications in Malaysia, which is nationally endorsed and internationally benchmarked. The MQA Act 2007, S. 37(1) provides that “no programme or qualification shall be accredited unless it complies with the MQF”.

4.2.1.2 Sectors and Programmes

The MQF is national, single, overarching and comprehensive qualifications framework, which covers three sectors (Academic, Vocational and Technical, and Skills) and lifelong learning. The Levels 1 and 2 (no descriptors are provided in the MQF) refer to skills competencies described in the NOSS. The NOSS competency statements are also articulated in the Malaysian Skills Occupational Qualifications Framework.²⁹ Levels 3 to 5 consist of Academic, Vocational and Technical and Skills type qualifications. Degree level qualifications (Academic) are provided by Levels 6 to 8. All the MQF levels enable learners to acquire knowledge and skills for work and to further their studies although levels 1 to 5 in the skills and vocational and technical sectors have a stronger industry and work orientation.

²⁸ Post- secondary school level refers to qualifications obtained after 11 years of schooling or after the completion of SPM.

²⁹ Further information on the comparative analysis of descriptors for Levels 1 and 2 of MQF and AQR are provided in Appendix 5.

4.2.1.4 Qualification Titles

The MQF sets basic qualification standards for all qualifications and qualification titles for all levels.

4.2.1.5 Objectives of the MQF

S. 35 of the MQA Act, 2007 provides for the objectives of the MQF and includes ensuring quality of programmes through accreditation; the nomenclatures; support progression of learners; lifelong learning through APEL; advocates parity of esteem of qualifications between sectors; a credit system; mobility between sectors and for the employment/labour market; and international comparability. Various policies, measures, mechanisms have been developed in collaborations with key strategic partners help to ensure these objectives and processes are acceptable and the qualifications recognised.

4.2.1.6 Levels and Descriptors

The **eight levels and their descriptors** set the outcomes expected at each level in terms of what the students should know, understand and can do upon completion of their studies. It outlines the capabilities, which enable the learners to pursue further education and undertake a role or perform a duty. The level descriptors set the minimum standards of the learning demand in terms of depth, breadth and complexity in application. These parameters are applied by HEPs in their programme design and contextualised by discipline/subject/institutional purposes, in the teaching, learning and assessment of students. The levels are hierarchically linked to allow for progression within and between the sectors.

4.2.1.7 Learning Outcomes Domains

The eight learning outcomes domains listed below must be appropriately articulated in all programmes and aligned with the MQF levels for successful accreditation.

- i. Knowledge
- ii. Practical skills;
- iii. Social skills and responsibilities;
- iv. Values, attitudes and professionalism;
- v. Communication, leadership and team skills;
- vi. Problem-solving and scientific skills;

- vii. Information management and lifelong learning skills and
- viii. Managerial and entrepreneurial skills.

4.2.1.8 Credit and Lifelong Learning

The MQF focusses on qualifications awarded by HEPs to learners. The MQF has developed a credit system in addition to a robust system to support lifelong learning and pathways through credit transfers, the Accreditation of Prior Experiential Learning (APEL) by the MQA and the Recognition of Prior Achievement for individuals by DSD.

4.2.2 The AQRF (features/objectives)

The AQRF serves particularly the ASEAN Economic Community agenda which, amongst others, is the free movement of skilled workers and skills services. In addition, it also serves to improve integration and harmonisation in the education and training sector through qualification structures and common quality assurance system.

The AQRF is a regional reference framework or a meta-framework, which functions as a translational and neutral device for the national qualifications framework (NQF) referencing. It provides a common reference point to facilitate comparison of national qualifications systems. Referencing against the AQRF is voluntary and does not require restructuring of the national system.

4.2.2.1 Objectives

The objectives of the AQRF includes the promotion of higher quality qualifications systems which will support recognition of qualifications; encourage the development of qualifications frameworks that can facilitate lifelong learning; encourage the development of national approaches to validate learning gained outside formal education; and promote education, learner and worker mobility. It supports transparency, comparability and trust through the quality assurance processes. The design and objectives have taken into account the needs and different stages of development in the ten ASEAN Member States.

4.2.2.2 Scope/Sectors

AQRF describes eight levels of learning without reference to sectors or type of education.

4.2.2.3 No Qualification Titles

At the same time, the AQRF does not provide any qualification titles/nomenclature for each level.

4.2.2.4 Levels and Descriptors

The AQRF has eight levels and with each level descriptors clearly distinguishing the level's requirements and complexities. It clearly shows the continuum and accumulation of learning acquired in vertical progression and the expected outcomes and competency.

4.2.2.5 Learning Outcomes

The learning outcomes of the AQRF are broad and generic, and which underpin two of the four competencies stated i.e., cognitive and functional competency. While the AQRF considers personal and ethical competencies to be important, it is for the national qualifications systems to set the requirements. The learning outcomes in the AQRF are:

- i. **Demonstration of Knowledge and Skills** - the Framework describes the type/level/complexity of knowledge set at each level. It does not, understandably, elaborate the skills to perform a function except to say it includes skills such as practical and cognitive skills.
- ii. **Application and Responsibility** - it refers to the application context, problem-solving element and degree of independence and responsibility.

4.2.2.6 No Specific Credit System

It does not include a credit system but notes the utility of one in facilitating comparisons across ASEAN member states.

4.3 Differences and Similarities

From the above explanations of the key elements of both frameworks, similarities and differences are identified below. Given that both frameworks have different purposes, differences are understandable and expected.

4.3.1 Key Similarities and Differences

Table 8 provides description of the key similarities and differences between the MQF and the AQRF.

Table 8: Key Similarities and Differences between the MQF and the AQRF

Similarities	
1	They have fairly similar objectives
2	They have hierarchical levels and covers all kinds of learning (formal, non-formal and informal).
3	Both use learning outcomes – Knowledge, skills and application (the application component is less explicit in the MQF).
4	Level descriptors are neutral and generic to enable different sectors to use it.
5	The levels are linked and promote integration between sectors.
Differences	
1	The roles are different. The MQF is a national qualification framework which is applied locally as a regulatory and administrative instrument while the AQRF is a regional framework for referencing or as a translational instrument to the NQFs.
2	The MQF sets qualifications standards, which focuses on individual learners and the HEPs.
3	MQF applies only to post-secondary qualifications while AQRF is a comprehensive framework.
4	The learning domains in the AQRF are broad and focus on two aspects. The MQF lists a range of learning outcomes.
5	AQRF is explicit in setting the level requirements of the learning outcomes e.g., ‘basic and general knowledge’ at level 1 and progress to ‘general principles and some conceptual aspects’ at Level 3. It is not explicitly described in the MQF.
6	The AQRF prescribed the application context and responsibility explicitly unlike the MQF where it is implicit.
7	The MQF is explicit on personal and ethical domains while the AQRF is understandably silent.
8	The MQF uses a credit system as part of qualifications requirements whereas the AQRF does not.
9	The MQF has a set of qualifications titles for each level while the AQRF does not refer to any qualification titles.

4.3.2 Understanding and Comparing Definitions

Before proceeding further with the comparison exercise, it is important to understand the key terms used in the two frameworks as the context and meaning may differ. Most

of the terms used are similar except the MQF is not explicit in the application and responsibility outcomes (see Table 9).

Table 9: Definition Comparability of the MQF and the AQRF

MQF	AQRF	Analysis
<p>MQF:</p> <p>S.35(1): “...consisting of qualifications, programmes and higher education provider based on a set of criteria and standards, including learning outcomes achieved and credits based on students’ academic load.”</p> <p>MQF 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 outcomes and credit system based on the student academic load. (MQF, 2007: 1)</p>	<p>NQF/QF:</p> <p>Instrument for the development and classification of qualification (at national or sectoral levels) according to a set of criteria or criteria for levels of learning achieved.</p>	<p>MQF satisfies the five key elements in the NQF/AQRF definition;</p> <ul style="list-style-type: none"> ✓ instrument ✓ development of qualifications (through accreditation) ✓ Classifications of qualifications ✓ Set of criteria ✓ Levels of learning achieved <p>The additional difference is the elements of credits and the use of learning outcomes</p>
<p>Learning Outcomes:</p> <p>A statement on what students should know, understand and can do upon the completion of a period of study (MQF, 2007)</p>	<p>Learning Outcomes:</p> <p>Are clear statements of what a learner can be <u>expected</u> to know, understand and/or do as a result of learning</p>	<p>Similar definitions of learning outcomes (linked)</p>
<p>Credits</p> <p>A quantitative measurement that represents the learning volume or the academic load to achieve the learning outcomes:</p> <p>It is a representative measure that reflects the academic load.</p> <p>Academic load: means a quantitative measurement for all learning activities required to achieve the learning outcomes</p> <p>(MQA Act 2007)</p>	<p>Credit:</p> <p>Describes the value of amount of learning; transferable to qualification, accumulated to predetermined levels for awards, governed by rules in a credit framework</p>	<p>In MQF, credits explain the quantitative volume of learning i.e., academic load of students.</p> <p>Similar notion but the AQRF does not prescribe the credit system.</p> <p>Credit and academic load in the MQF can be read together.</p> <p>Similar (Linked)</p>

MQF	AQRF	Analysis
<p>Qualifications:</p> <p>A certificate, diploma or degree, which is awarded by a higher education provider or any party that is authorised to confer or to award the qualification and to affirm the acquired learning outcomes (S.2, MQA Act, 2007)</p> <p>'Qualifications are certificates, diplomas or degrees that are awarded by any competent authority, having affirmed that one has been successful in completing the study at the determined standard, and has satisfied the determined level of achievement and is able to take on a role, duty or work'.</p> <p>MQF, 2007: 3</p>	<p>Qualifications:</p> <p>Is recognition that an individual has been assessed as achieving learning outcomes or competencies to the standard specified for the qualification level or title, usually a type of certificate, diploma or degree. (workplace experience, and/or programme of study - official recognition which confers value).</p>	<p>Related to affirmation of achieving the learning outcomes to standards and level.</p> <p>Similar (linked)</p>
<p>Programme:</p> <p>Means any arrangement of a course of study that is structured or designed to achieve a learning outcome leading to an award of higher education qualification</p> <p>(MQA Act, 2007)</p>	<p>Programme:</p> <p>The arrangement of teaching and learning of a body of knowledge, set of skills and of wider competencies. A learning programme can lead to a qualification.</p>	<p>MQA's definition of achievement of a learning outcome rather than a set of learning outcomes should be read as encompassing the plural. The AQRF definition is more expansive referring to the wider curricula elements while the MQF is rather direct courses (which include content knowledge, skills and competencies) leading to an award.</p> <p>Both can lead to a qualification.</p> <p>Similar (linked)</p>
<p>Qualification descriptor:</p> <p>A generic statement that explains the main learning outcomes for qualifications at a particular level.</p> <p>Qualification levels: an award level described with generic outcomes or a qualification descriptors which characterizes typical qualification</p>	<p>Level descriptor:</p> <p>A general statement that summarises the learning outcomes appropriate to a specific level in a qualifications framework. They are usually grouped for personal, social and/or professional reasons.</p>	<p>The AQRF uses the term 'level descriptors' whilst the MQF refers to 'qualifications descriptors'. The statement relates to a specific level only.</p> <p>Similar (linked)</p>

MQF	AQRF	Analysis
<p>Recognition of prior learning:</p> <p>A verification process of an individual's achievement of a set of learning outcomes acquired through formal, non-formal or informal learning, irrespective of time or place (MQF, 2007:1).</p> <p>(Source: MQA Act, 2007. S. 74 (6) Prior learning means knowledge, skills or attitudes previously acquired and includes prior experience).</p>	<p>Non-formal learning:</p> <p>Learning that is embedded in planned activities not explicitly designated as learning in terms of objectives. Non-formal learning is intentional from the learner's point of view.</p> <p>Informal Learning:</p> <p>Learning that is embedded in planned activities not explicitly designated as learning (in terms of learning objectives, learning time or learning support).</p>	<p>The MQA provides for APEL.</p> <p>The DSD provides RPA.</p> <p>Both addresses the AQRF objectives on lifelong learning</p> <p>Similar (linked)</p>
<p>There is no explicit definition of 'competence' or competencies or capabilities.</p>	<p>Competence:</p> <p>... is an ability that extends beyond the possession of knowledge and skills. It includes</p> <ul style="list-style-type: none"> i. cognitive (use of theory and concepts-informal tacit knowledge; ii. functional things that a person should be able to do when they work in a given area; iii. personal competence involving knowing how to conduct oneself in a specific situation and; iv. ethical competence involving possession of certain personal and professional values' 	<p>However, in the MQF this is addressed indirectly in the definition of qualifications and the eight learning outcomes domains.</p> <ul style="list-style-type: none"> 1. Definition of qualifications <ul style="list-style-type: none"> – qualification...enables one "to take on a role, duty or work" denotes capabilities or competence. 2. Learning outcomes domains encompasses the four specific competencies – cognitive, functional, personal and ethical.
<p>Learning outcomes</p> <p>A statement on what students should know, understand and can do upon the completion of a period of study.</p>	<p>Learning outcomes:</p> <p>Clear statements of what a learner can be expected to know, understand and/or do as a result of a learning experience.</p>	<p>Essentially the same (linked)</p>

MQF	AQRF	Analysis
<p>MQF learning outcomes of eight domains:</p> <p>No specific definition or explanation of the 8 specific learning outcomes domains.</p>	<p>Knowledge and Skills:</p> <p>It includes the various kinds of knowledge such as facts and theories as well as the skills used, such as practical and cognitive skills.</p>	<p>Both covers knowledge and skills and capabilities or competencies.</p> <p>The MQF requires a wider set of skills.</p> <p>Similar (linked)</p>
<p>MQF does not explicitly describe the application of knowledge in this context. It is implicit in the level descriptors.</p>	<p>Application and Responsibility:</p> <p>Domain defines the context in which the knowledge and skills are used in practice as well as the level of independence including the capacity to make decisions and the responsibility for oneself and others.</p>	<p>There is a difference between the MQF and the AQRF. It is explicit in the AQRF but not in the MQF. Nonetheless, the MQF levels descriptors do indicate the context of application and the extent to responsibility albeit implicitly. Please see Appendix 6 for detail analysis of level descriptors.</p>

4.4 Comparing Learning Outcomes and Level Descriptors in the MQF and the AQRF

Two types of analysis were carried to compare the MQF and the AQRF descriptors. The first covers the learning outcome domains used in the level descriptors. This is provided in Table 10 while the detailed level-to-level descriptor analysis and findings are presented in Appendix 6.

4.4.1 MQF Learning Outcome Domains

The learning outcomes domains of the MQF broadly cover knowledge, skills, abilities and attitude. However, there is no definition of specific learning outcomes unlike in the AQRF which provides definitions of knowledge, skills, competence, application and so forth in its glossary. To enhance further understanding of these learning outcomes, the MQA has published a number of programme standards since 2007 to be used by HEPs to design their programmes in various disciplines.

The level descriptors in the MQF are statements that describe the achievement of learning outcomes at each level. The MQF level descriptors guide the setting of levels of programmes designed by HEPs as well as a reference point to assessors who

assess programmes for accreditation. Once accredited, the level is indicated in the Certification of Accreditation and on the Malaysian Qualifications Register for the programme. The levelling is guided by the purpose of the qualification, the depth and breadth of knowledge and understanding, the complexity in the application of knowledge and skills; the degree of autonomy and creativity in decision making; the communications skills and the breadth and sophistication of practice. Other than Levels 1 and 2, all other levels are provided with level descriptors.

The MQF does not explicitly note that the learning is accumulated progressively from the lower levels to upper levels. Vertical analysis of the level descriptors might not show a very systematic or distinctive vertical progression of the learning outcomes as seen in the AQRF. However, in each of the level/qualifications, it does state that for e.g., a Master's degree provides for furtherance of knowledge, skills and abilities obtained at a bachelor's level. The notion of progression is nevertheless present in the MQF.

4.4.2 The AQRF Learning Outcome Domains

As stated above the learning outcomes of the AQRF consist of two domains - demonstration of Knowledge and Skills as well as Application and Responsibility. In addition, the level descriptors "include the notion of competence, which is the ability that extends beyond the possession of knowledge and skills" described as follows:

- i. Cognitive competence involving the use of theory and concepts, as well as informal tacit knowledge gained experientially
- ii. Functional competence (skills or know-how), those things that a person should be able to do when they work in a given area
- iii. Personal competence involving knowing how to conduct oneself in a specific situation
- iv. Ethical competence involving the possession of certain personal and professional values

Table 10: Comparison on Learning Outcomes of the MQF and the AQRF

AQRF	MQF	Analysis
Learning outcomes and concept of competencies	Learning outcomes and notion of abilities /capabilities	<p>Similar</p> <p>There are subtle differences between capabilities and competencies although sometimes they are used interchangeably.</p>
<p>1. The Knowledge and Skills domain includes the various kinds of knowledge such as facts and theories.</p>	<p>1. Knowledge and understanding</p>	<p>Similar</p> <p>The MQF provides for knowledge (theory, technical and practical) at each level. It stresses more on the level of comprehension. The AQRF defines the knowledge requirement depth succinctly for each level.</p>
<p>Skills used such as practical and cognitive skills.</p>	<p>2. Skills</p> <ul style="list-style-type: none"> • Practical skills • Problem-solving and scientific skills • Information management and lifelong learning skills • Managerial and entrepreneurial skills • Communication, leadership and team skills • Social skills and responsibilities • Values, attitudes and professionalism 	<p>Similar but the MQF skills are more granular and also arguably more comprehensive.</p> <p>Skills</p> <p>The MQF provides the range of different skills required for the graduates including practical and cognitive skills. The AQRF provides skills used such as practical and cognitive skills.</p> <p>Skills in the MQF are arguably within the scope of skills in the AQRF such as practical skill, problem-solving skill, communication skills, leadership, team-skill, and information management skills.</p> <p>The other skills such as lifelong learning skill, social skill, values, attitudes and professionalism address the personal and ethical skills of the AQRF. Indirectly, this supports the requirement of responsibilities in the AQRF.</p>
<p>2. The Application and Responsibility domain</p> <p>'Application and responsibility' defines the context in which</p>		<p>Difference</p> <p>Application and responsibilities</p> <p>The AQRF defines the context /complexity of application of knowledge and skill and problem-solving at each level.</p>

AQRF	MQF	Analysis
<p>the knowledge and skills are used in practice as well as the level of independence including the capacity to make decisions and the responsibility for oneself and others.</p>		<p>The MQF does not define clearly the context of application for all levels the way the AQRF does.</p> <p>However, the level descriptors from levels 3 to 8 in the MQF must be read holistically to understand the context of application.</p>
<p>The AQRF also describes the level of autonomy and accountability as it determines the level of responsibilities as well.</p>	<p>3. Abilities/capabilities From level 3 and above, the levels refer to decision-making, autonomy, responsibility and independence broadly.</p>	<p>Similarities – the AQRF is more demanding than the MQF</p> <p>The MQF learning outcomes from levels 3 to 8 provide matters related to level of independence, autonomy, responsibility for self, to others or to the society. These levels require actions, solutions and decision making to take into account social, scientific and ethical issues.</p> <p>Particularly, at level 7 and 8, the responsibility extends from sharing of new ideas, knowledge, practices and solutions to promoting technological, social and cultural progress. This is beyond the scope of the AQRF.</p>

4.4.3 Overview of the Analysis

In summary, the analysis indicates the following:

- i. Both the MQF and the AQRF apply learning outcomes and the need to demonstrate them while MQF indicates what the students are capable of.
- ii. Both frameworks are applicable to study and work context and used or to be used in assessment of prior learning (e.g., APEL).
- iii. In terms of context and application, the AQRF is very specific and describe the range of contexts for each level, whilst the MQF requires a holistic reading of the statements in the levels to assess the context complexity, autonomy and responsibility.
- iv. The MQF determines the range of skills specifically for Malaysian graduates and it includes practical and cognitive skills while the AQRF is not detailed on the skills elements.

- v. Most of the learning outcomes of the MQF are incorporated implicitly in the learning outcomes of the AQRF.
- vi. The AQRF also requires personal and ethical competencies to be considered in NQFs. The MQF learning outcomes domains address both these competencies.

Overall, there is a good fit between the MQF and the AQRF levels descriptors when learning outcomes are technically, linguistically and contextually compared and analysed.

4.4.4 Technical and Contextual Matching/Comparison Level-to-Level Outcomes Descriptors of the MQF and the AQRF

The technical level comparison of level-to-level descriptors of the two frameworks has been carried out on individual descriptors by domain as well as addressing the level learning outcome statements holistically to determine the comparability and the nature of the link of the MQF to the AQRF. Since MQF does not have specific descriptors for Levels 1 and 2, NOSS competencies for these levels as generically articulated in Malaysian Occupational Skills Qualifications Framework are used in the comparative analysis. These competency statements are remarkably similar to AQRF descriptors as can be seen in the analyses of Levels 1 and 2 of MQF and AQRF in Appendix 5. Overall, there are similarities in technical and linguistic comparison despite the way the statements are written in the MQF. The AQRF is systematically and carefully written with short simple statements whereas the MQF which is a decade old instrument which requires further refinement³⁰.

However, it is also expected that there will be differences in both frameworks particularly in the levels' comparison as well as how it fits in within the national context and systems. For example, the MQF covers only post-secondary qualifications whereas AQRF is neutral to the location of school certificates within the framework. Levels 1, 2 and 3 of the MQF have skills or technical-vocational-based outcomes while AQRF is more generic.

³⁰ The revised MQF, 2017 provides descriptors for all eight levels along five clusters of learning outcomes which are clearer, simpler and more explicit showing progressive levels of complexity of knowledge, skills and practice.

The approach used is the 'best fit' concept as it is challenging to compare and fit the 8 sets of learning outcomes of the MQF to the two learning outcome domains of the AQRF. The advantage is the possibility of broad interpretation of the AQRF learning outcomes so as to relate to the eight domains of the MQF.

The technical matching approach provides an in-depth textual comparison of the level descriptors in both frameworks (See Appendix 6).

4.5 Conclusion

The establishment of the MQF in 2007 was to address the development, classification and systemisation of qualifications and programmes, and underpin the quality assurance practices in Malaysian higher education and training.

The MQF is ten years old and has been implemented in earnest since 2011 while the AQRF is about four years old and yet to be referenced. As a national framework, the MQF outlines the capabilities expected of learners through well-designed and delivered programmes which benefit the individuals, industry and society. On the other hand, AQRF is designed as a regional qualifications reference framework for greater economic integration through harmonisation of qualifications systems within ASEAN.

Although both frameworks share similar objectives and some key characteristics e.g., levels, learning outcomes and level descriptors which define the learning outcomes to be achieved at each level, there are some explicit stylistic differences. The MQF fulfils the credit requirements and addresses the functional skills (work and core skills) more explicitly, which are transversal/generic in nature. In addition to knowledge and skills, the MQF requires personal and ethical competencies which are important to address social, professional, economic, technological and cultural progressions of the nation.

The comparison and analysis provided earlier show that the MQA need to address Levels 1, 2 and 3 with more succinct and generic learning outcomes, to distinguish the levels descriptors with more clarity (better illustrated in the programme standards) and in particular, more explicitly explain the context of application and responsibility. In

other aspects, there is evidence to show that, for example, Level 3 of the MQF is more complex in terms of the learning outcomes than Level 3 of the AQRF.

Overall, the findings show strong evidence of a good fit between the MQF and the AQRF levels notwithstanding some differences observed in the foregoing description.

Figure 5 provides a summary of the findings.

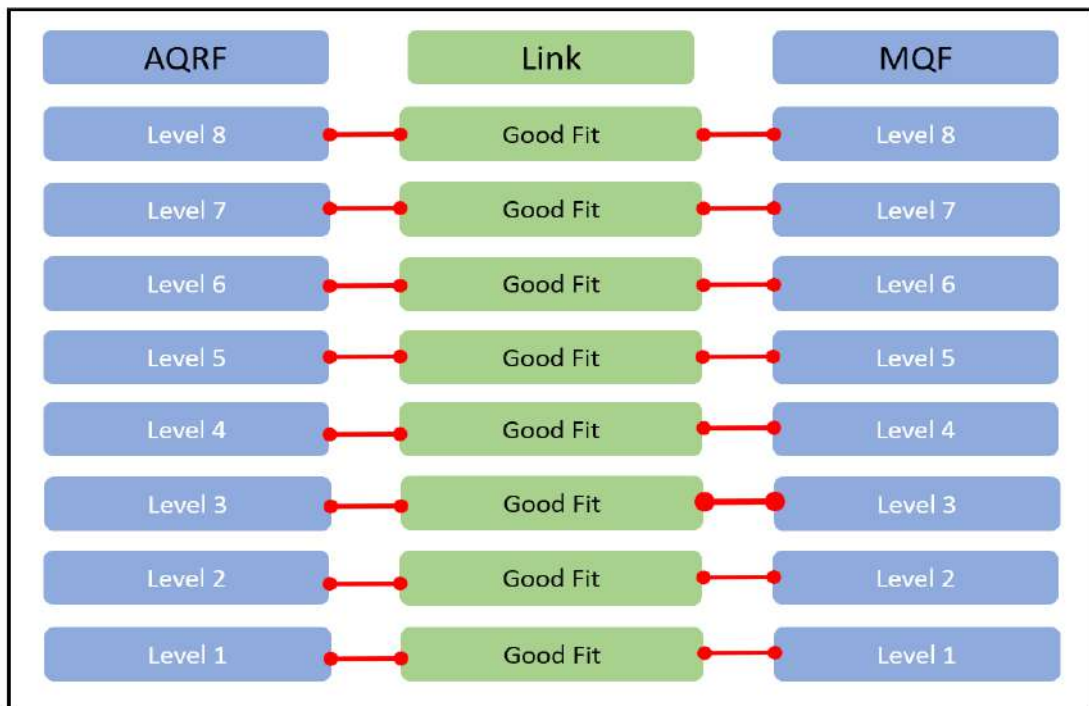


Figure 5: Summary of Findings of Fit between MQF and AQRF Levels

Criterion 5: Standards, Criteria and Guidelines for Accreditation

The basis in agreed standards of the national framework or qualifications system and its qualifications is described

5.1 The Malaysian Qualifications Framework (MQF), Quality Standards Documents and Learning Outcomes

Section 37 (1) of the MQA Act, 2007 provides that no programme or qualification shall be accredited unless it complies with the MQF. Hence, a programme is required to fulfil all the prescribed criteria and standards in the MQF in order to be accredited and registered in the MQR.

The development of key standards and criteria documents consistently references to and guided by the level descriptors and the eight learning outcome domains of the MQF. The key standards documents used by the MQA and the DSD are listed in Table 11.

Table 11: Key Standards

MQA	DSD
Code of Practice for Programme Accreditation and Code of Practice for Institutional Audit	<i>Kod Amalan Pentauliahahan Program Kemahiran(KAPPK) /Code of Practice for Skills programme Accreditation</i>
Programme Standards and Standards for specific levels of qualifications	Malaysian Occupational and Skills Qualification Framework and National Occupational Skills Standards (NOSS),
Others: Guidelines to Good Practices Advisory Notes	Others: Rules & Regulations, Guidelines, Standard Operating Procedures

5.2 Standards Development in the Context of Skills, Technical-Vocational and Academic Sectors

The need for specific qualifications or programme standards emanates from rising applications from HEPs in a discipline or programme. Standards may also be developed in response to requests from national bodies. When the need for a specific standard or guide becomes apparent, the MQA will establish an ad hoc Standards Committee, consisting of experts in the field of study and/or practice to formulate the standard. The members of these committees are from the academia, ministries, professional bodies and industry. The selection of members of the standards committee is guided by the programme standards and suitability, expertise and experience of the prospective committee members. The main function of the Standards Committee is to develop or review the guidelines, standards and criteria for programme accreditation.

The MQA's procedure for the development of standards requires that the framework of the QA documents developed during the conceptual stage must be based on current good practices. Figure 6 shows the standards development process from committee formation to its approval for implementation. These standards documents are also referenced to and benchmarked against international good practices.

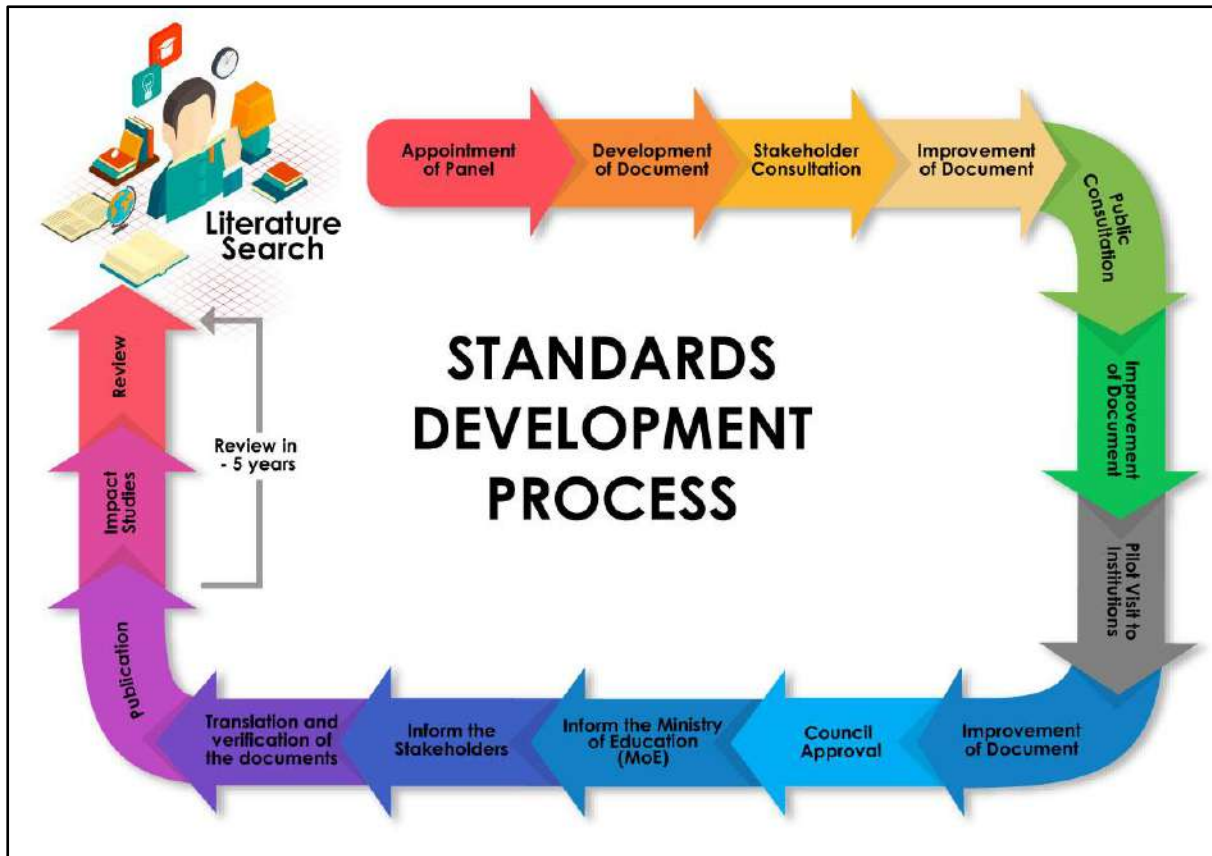


Figure 6: Standards Development Process

Study visits are carried out, whenever possible and necessary, to foreign QA counterparts to have a better understanding of the implementation of certain standards before it is developed and implemented in Malaysia. For example, in the case of developing guidelines for APEL (Credits) and prior to its implementation, a study visit was made to the relevant agencies responsible for Recognition of Prior Learning (RPL) i.e., the National Institute for Lifelong Education of Korea, and MQA participated in the RPL Conference in Canada to learn about the implementation of APEL (Access). Comparative exercises are also conducted to ensure the currency and relevancy of the documents. At times, international experts are invited to advise on certain standards.

These quality assurance documents are periodically reviewed and updated to ensure their currency, relevancy, reliability, adaptability and effectiveness to address the ever-changing environment within which the higher education industry operates.

Further details on how these standards and policies are disseminated to the public by the MQA can be found in Section 6.4.10.

5.3 The MQA Standards Documents

As shown in Table 11, accreditation by the MQA is guided by a series of standards and guidelines.

5.3.1 COPPA and COPIA

The implementation of Outcome-Based Education (OBE) requires a clear demonstration of learning and teaching and the appropriate assessment on what the students will be able to do at the end of their study. The Code of Practice for Programme Accreditation (COPPA) was developed to ensure that all of these requirements are complied with during the assessment of a programme for accreditation. The Code of Practice for Institutional Audit (COPIA) uses the same nine areas of evaluation as in COPPA but the assessment focuses on the institutional level. The nine areas of evaluation are as follows:

- i. Vision, mission, educational goals and learning outcomes;
- ii. Curriculum design and delivery;
- iii. Assessment of students;
- iv. Student selection and support services;
- v. Academic staff;
- vi. Educational resources;
- vii. Programme monitoring and review;
- viii. Leadership, governance and administration; and
- ix. Continual quality improvement.

Each of these nine areas contains quality standards and criteria which are stated as benchmarked standards and enhanced standards. The former must be complied with for accreditation while the latter standards are expected as part of the improvement process.

5.3.2 Programme Standards

Programme Standards for specific disciplines articulate generic learning outcomes in MQF into discipline learning outcomes (see Appendix 7 for a full list of programme standards with links to documents published online). These programme standards assist the HEPs in designing their programmes in specific disciplines in alignment with the MQF. The HEPs have the flexibility to formulate the programme learning outcomes as long as they are mapped to the appropriate MQF level descriptors. This is to ensure that students are equipped with the necessary knowledge, skills and competencies at the respective levels as prescribed in the MQF to enable them to pursue career opportunities or further studies.

In addition to the discipline learning outcomes, the programme standards also specify the body of knowledge, the minimum graduating credits and programme composition for core, specialisation or electives components for all levels of qualifications (Appendix 8: shows the programme structure and credits required of business programmes contained in the Business Studies Programme Standards).

5.3.3 Guidelines to Good Practices (GGPs) and Advisory Notes

The MQA has developed a series of GGPs to assist the HEPs in developing and implementing their programmes (see Appendix 9 for a list of GGPs with links to the actual documents on the MQA website). Most of these GGPs are an extension of, and complementary to, the COPPA requirements focusing on specific areas of evaluation like assessment, curriculum design, programme monitoring and review, and continual improvement.

In addition, where there has been a significant lack of understanding by the HEPs about specific requirements, [Advisory Notes](#) are issued to expand, clarify and illustrate how the requirements may be met.

5.3.4 Policy on Credit Transfer

Credit transfer practices provide richer and diverse student learning experiences, allowing for student mobility between programmes, and institutions within and between nations. The MQA has established the following credit transfer (CT) policy for recognition of formal learning:

- i. The applicant must have obtained a minimum grade of C or its equivalent (satisfactory performance or a pass) in the course from which credits are to be transferred;
- ii. The CT must be for the same credit as the course credits of the programme being transferred into;
- iii. The CT must be based on subject or course mapping with at least 80% match in content and equivalent course outcomes (parity of course); and
- iv. The programme from which the course credits are transferred from is accredited or approved in the country of origin (recognition).

The MQA has also established credit transfer policies covering not only formal learning (horizontal and vertical credit transfer) but also informal and non-formal learning through (APEL(C) and credit transfer for Massive Open Online Courses (MOOC). APEL(C) provides a credible mechanism to recognise an individual's prior experiential learning that is relevant and specific to a course within a programme of study (see Appendix 10 for an example of documents used in the assessment of prior experiences) conducted by the HEPs. The basic premise of credit transfer is that all learning acquired can be potentially mapped to the course learning outcomes. Various guidelines have been issued by the MQA to ensure that these policies are adhered to and the credit transfer is implemented in a responsible, transparent and fair manner.

5.4 Standards for Regulated Professions

The professional bodies have their own programme standards for accreditation of professional programmes which are generally consistent with the MQF and its key requirements. These standards outline the professional competencies of graduates and the HEP requirements similar to COPPA.

Appendices 11-1, 11-2 and 11-3 show the comparability of Engineering Accreditation Council (EAC)/Engineering Technology Accreditation Council (ETAC) standards and the MQF as well as the alignment of their accreditation criteria to the COPPA. In relation to qualifications regulated by professional bodies, there are provisions in the MQA Act 2007 which require the Agency "... to cooperate, coordinate and work with the relevant professional body..." to carry out accreditation through the Joint Technical

Committees (JTC). These JTCs facilitate harmonization of the standards and QA processes used by professional bodies in the accreditation of their programmes. All professional programmes which are fully accredited by the respective boards or councils are approved by the Accreditation Committee within the MQA and listed in the MQR.

5.5 DSD's Accreditation Criteria and Standards

In accordance with the provisions of the National Skills Development Act, 2006 (Act 652), the DSD accredits skills training programmes based on the NOSS; coordinate, regulate and promote the implementation of Malaysian Skills Certification System; develop, review and regulate NOSS according to industry requirements and promote skills training for the development and improvement of the abilities of a person needed for vocation. The DSD also plays a major role in formulating, promoting and coordinating industrial and vocational training strategies and programmes, including implementing national skills certification programme from Levels 1 to 5 of the MQF.

5.5.1 DSD's Criteria for Accreditation of Training Providers

In general, criteria for accreditation of training centres as set by Director General of the DSD are as follows:

- i. Legally constituted training centre;
- ii. NOSS-based training curriculum;
- iii. Sufficient training tools, equipment and materials in accordance with NOSS;
- iv. Sufficient qualified personnel (ratio of trainer to trainees, 1:25); and
- v. Conducive training premises equipped with facilities and infrastructures.

The accreditation of the training centres by the DSD is also guided by the NOSS, *Kod Amalan Pentauliahan Program Kemahiran (KAPPK)* and Malaysian Occupational Skills Qualifications Framework (MOSQF).

5.5.2 National Occupational Skills Standards (NOSS)

The [NOSS](#) is a national document of occupational skills standard established under Part IV of the National Skills Development Act, 2006. It specifies the competencies expected of a skilled worker for an occupational area, level and the pathway to achieve the competencies in Malaysia. As stated under Sections. 20, 21 and 22, Act 652, the

DSD is responsible for developing the NOSS which is the basis of developing a national curriculum for skills training programmes, as the main reference for programme accreditation and a standard of competency that a candidate must achieve to be awarded a skills certificate. There are 1845 Level 1 to Level 5 NOSS developed and used in the accreditation of centres and certification of the skills trainees³¹.

The NOSS identifies the competency units in a particular job area, which is a basis for developing a syllabus or a training curriculum. An example of a Learning Outcome of Competency Unit is shown in Appendix 5 which is extracted from the NOSS document for Machining Operation. It is transformed into training materials such as Written Instructional Materials (WIM). Learning outcomes are represented in the Competency Unit (CU) in the NOSS. The learning outcomes are accompanied by Curriculum of Competency Unit (CoCU) which includes appropriate assessment criteria used to evaluate whether the expected learning outcomes have been achieved. It covers the knowledge, skills, attitude, and employability skills needed by an individual in order to succeed in a particular occupation. The document also reflects the occupational structure for each level of competency and the career path within the occupation. The DSD assures that the trainees produced by training providers meet the requirements of the industry.

The Director-General may authorise any person, organisation or other body of persons to develop the NOSS on his behalf. The DSD has set up Industry Lead Bodies (ILB) which represent specific industry sectors as strategic partners in determining the needs for the development of skilled workers, enhancing the acceptance of the skills-testing industry and becoming the driver of skilled worker development and training. Among ILB functions are the analysis of relevant occupations within specific industries, development of new the NOSS and periodic review of existing NOSS. Figure 7 shows the processes adopted in developing the NOSS.

The NOSS is reviewed from time to time according to current needs of the relevant occupation. Any variation of any part of the NOSS shall be approved by the National Skills Development Council (NSDC). As a result of NOSS review, accredited centres

³¹ Statistics from Department of Skills Development for 2018

are given ample time of 12 months for transition to fulfil requirements in the revised NOSS.

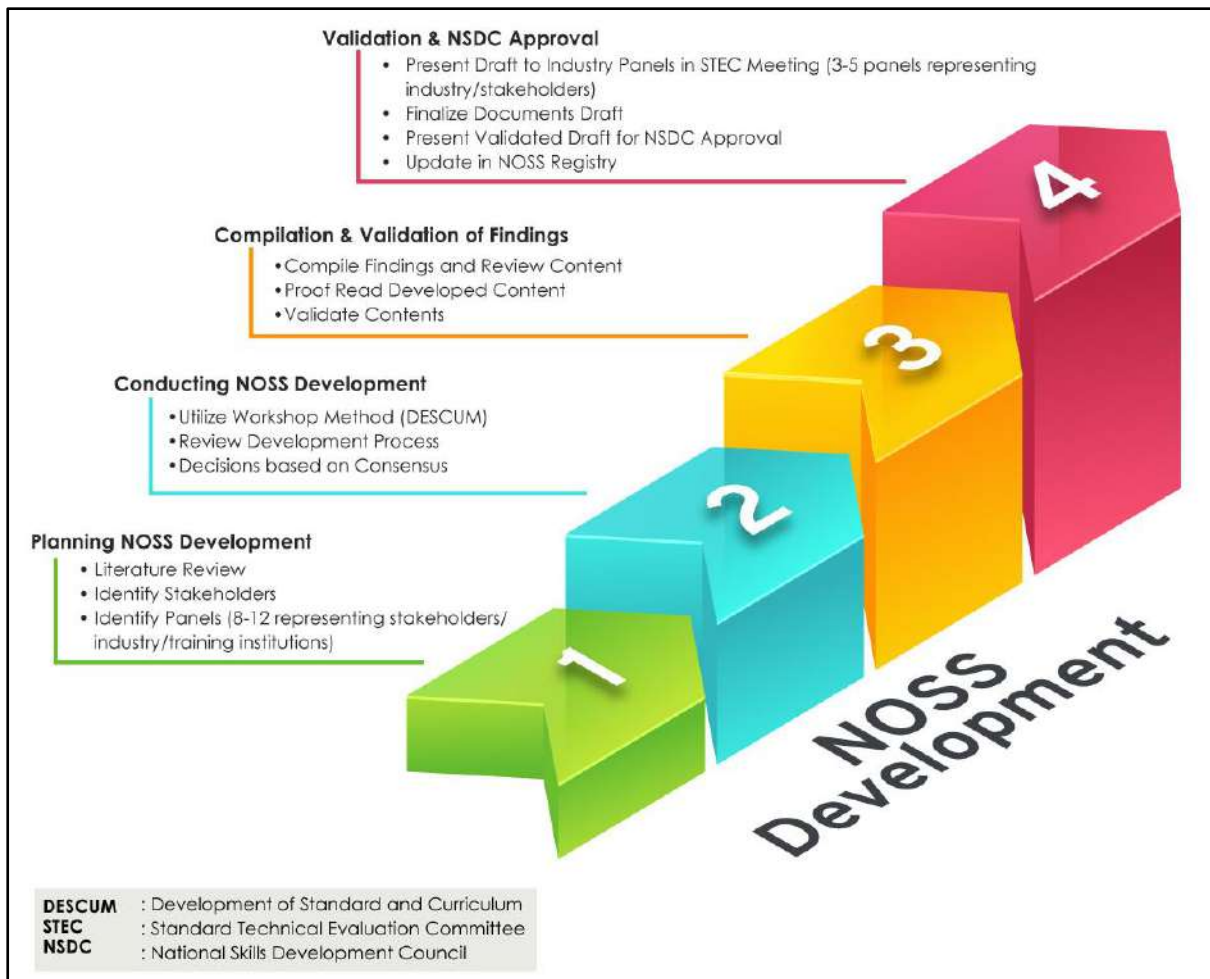


Figure 7: NOSS Development Process

5.5.3 Standards for Accreditation of Skills Providers

The DSD has developed a standard for programme accreditation, called [Kod Amalan Pentauliahahan Program Kemahiran \(KAPPK\) or Code of Practice for Skills Programme Accreditation](#). The objective of KAPPK is to serve as a guideline for the DSD officers, training providers, policy makers, professional bodies and stakeholders about the standard, criteria, procedures, process and requirements of programme accreditation. It outlines the DSD’s standards which training providers must comply with for accreditation.

S. 2 of KAPPK contains nine (9) areas of evaluation which outline standards in line with national and international good practices. The standards are defined as a level

of achievement for each criterion and acts as key performance indicator. The DSD uses the accreditation standard to evaluate the application for programme accreditation. The nine (9) areas of accreditation standards comprise of the following elements:

- i. Vision, mission, objectives of skills training & learning outcomes;
- ii. Curriculum design and training delivery;
- iii. Student assessment;
- iv. Student selection and support services;
- v. Staff training;
- vi. Training resources;
- vii. Monitoring and programme review;
- viii. Leadership, governance and administration; and
- ix. Continual quality improvement.

5.5.4 Malaysian Occupational Skills Qualifications Framework (MOSQF)

S. 1 of the KAPPK explains the certification under the skills sector which is based on the concept and structure of the Malaysian Skills Certification System consisting of five (5) levels as shown in the MOSQF. The DSD has developed the MOSQF to articulate skills competencies within the levels 1 to 5 of the MQF. A trainee equipped with required competencies as prescribed in the standards will be entitled to obtain qualifications as stipulated in the MOSQF. The MOSQF is divided into five levels with descriptors as shown in Figure 8.

The requirements for the certification are as follows:

- i. **Level 5 - Malaysian Skills Advanced Diploma** - competent in applying a significant range of fundamental principles and complex techniques across a wide and often unpredictable variety of contexts. Very substantial personal autonomy and often significant responsibility for the work of others and for the allocation of substantial resources feature strongly, as do personal accountabilities for analysis and diagnosis, design, planning, execution and evaluation. Specialised technical skills should be demonstrated.

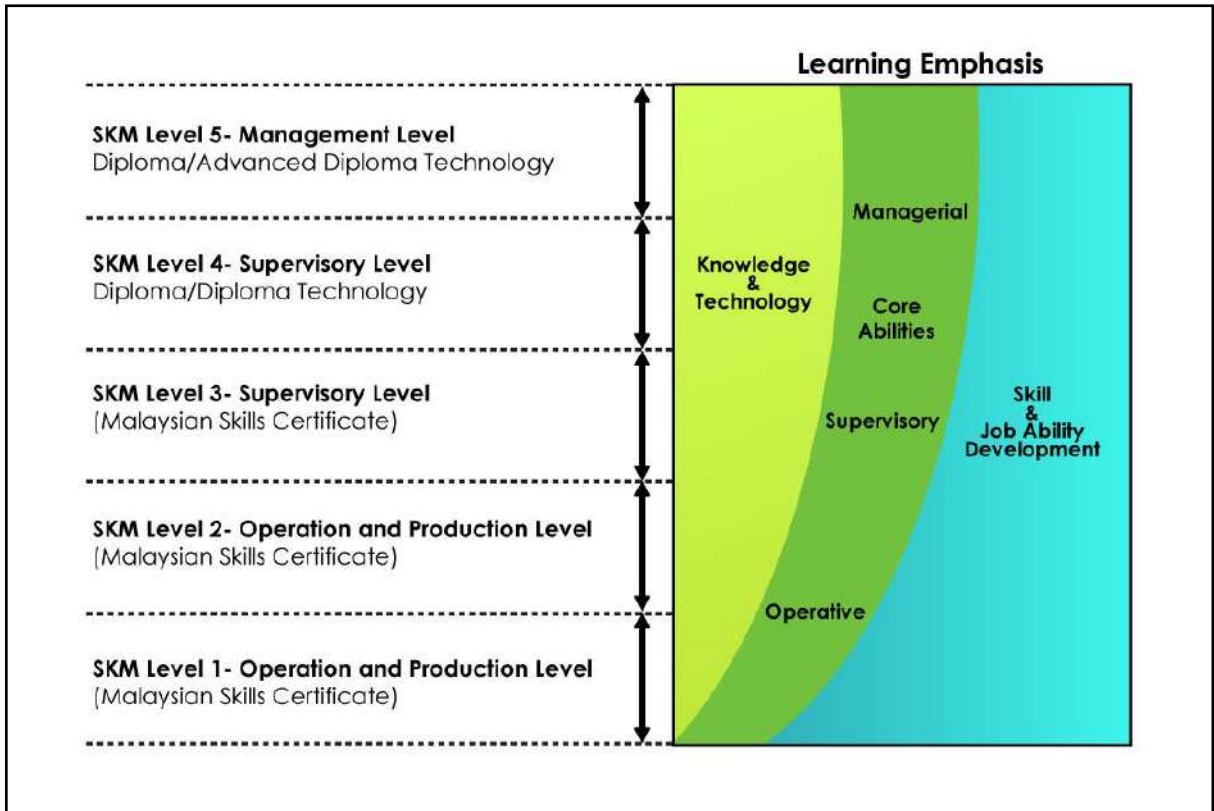


Figure 8: Malaysian Occupational Skills Qualifications Framework, 2012

- ii. **Level 4 - Malaysian Skills Diploma** - competent in performing a broad range of complex technical or professional work activities performed in a wide variety of contexts and with a substantial degree of personal responsibility and autonomy. Responsibility for the work of others and allocation of resources is often present. Higher level of technical skills should be demonstrated.
- iii. **Level 3 - Malaysian Skills Certificate** - competent in performing a broad range of varied work activities, performed in a variety of contexts, most of which are complex and non-routine. There is considerable responsibility and autonomy and control or guidance of others is often required.
- iv. **Level 2 - Malaysian Skills Certificate** - competent in performing a significant range of varied work activities, performed in a variety of contexts. Some of the activities are non-routine and require individual responsibility and autonomy.
- v. **Level 1 - Malaysian Skills Certificate** - competent in performing a range of varied work activities, most of which are routine and predictable.

5.5.5 Certification Through Recognition of Prior Achievement (RPA)

[Recognition of Prior Achievement](#) (RPA) is a certification method under the DSD, to give recognition to an individual or employee who can demonstrate skills and knowledge outlined in the NOSS based on his/her work or life experiences, training (formal and informal) and past achievements. It is a recognition of a lifetime of learning that has been experienced by an individual. The candidate is required to demonstrate his/her prior experience and achievements by providing evidence for RPA assessment in the form of a portfolio and/or sit for a practical assessment.

Criterion 6: National Quality Assurance System for Education and Training

The national quality assurance system(s) for education and training refer(s) to the national qualifications framework or system is described. All of the bodies responsible for quality assurance state their unequivocal support for the referencing outcome.

6.1 The Quality System in Education and Training

The quality system of education and training in Malaysia is the responsibility of many agencies with different but interconnected and complementary functions. The functions include, among others, regulatory functions, quality assurance (QA) functions and qualification recognition functions (see Figure 9).

The Ministry of Education and the Ministry of Human Resources regulate the establishment and registration of education and training institutions and the approval of programmes.

Quality assurance of HE is carried out by various QA bodies, namely, the MQA, the DSD and the professional bodies which implement the standards.

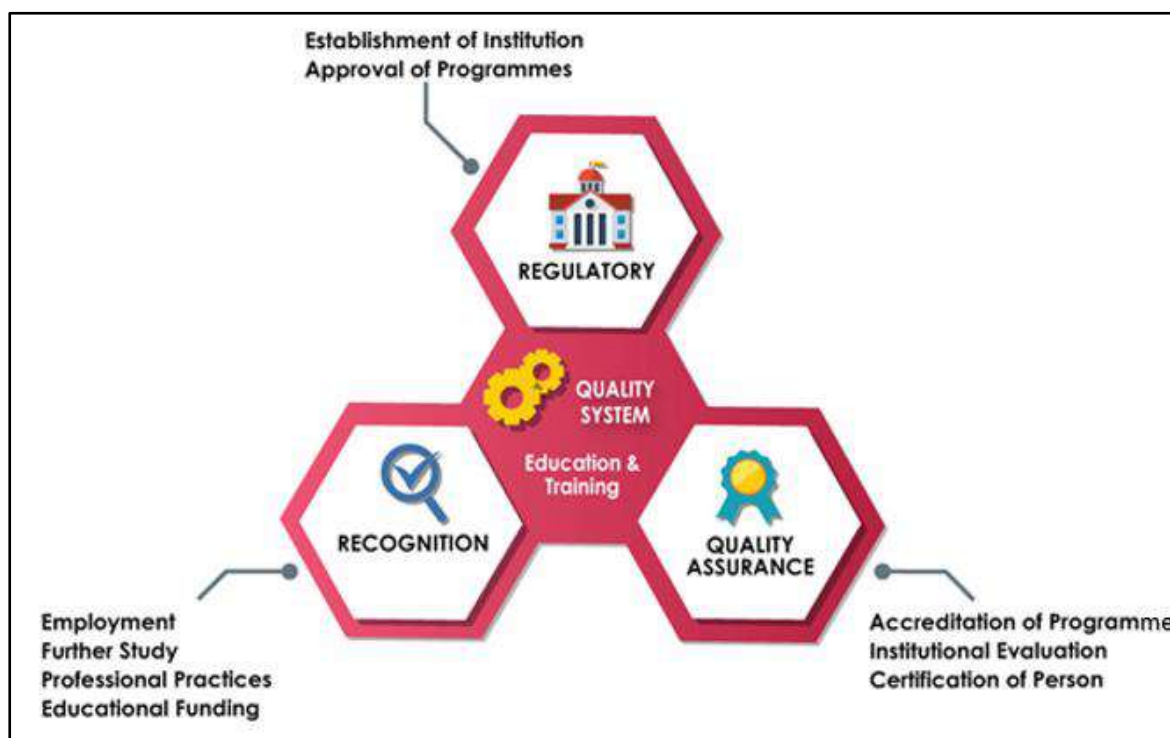


Figure 9: Quality System in Education and Training

The recognition function is carried out by authorised bodies based on the purpose of recognition which includes, among others, employment (e.g., Public Service Department), education funding (e.g., Higher Education Fund Corporation and Skills Development Fund Corporation) and professional practice.

QA results are essential for regulatory and recognition bodies to make informed decisions within their respective remit. In some cases, the regulatory, QA and recognition functions are invested in one body. In the case of professional bodies, the quality assurance of programmes within the remit and also recognise qualified persons for professional practice. The DSD regulates and registers skill centres, accredits skills programmes and also certifies trainees.

6.1.1 Malaysian Quality Assurance System

The QA system in Malaysia conceptually involves four components (see Figure 10). The first component is the MQF, which is the overarching benchmark that defines the qualifications system in Malaysia. The second component is the standards in higher education and training that provides operational benchmarks capturing various learning contexts and orientations in the national system. The third component is the implementation of audits and assessments for assuring quality based on established standards. The fourth component is qualification referencing where QA results are accessible to various parties within and outside the country for various related purposes.

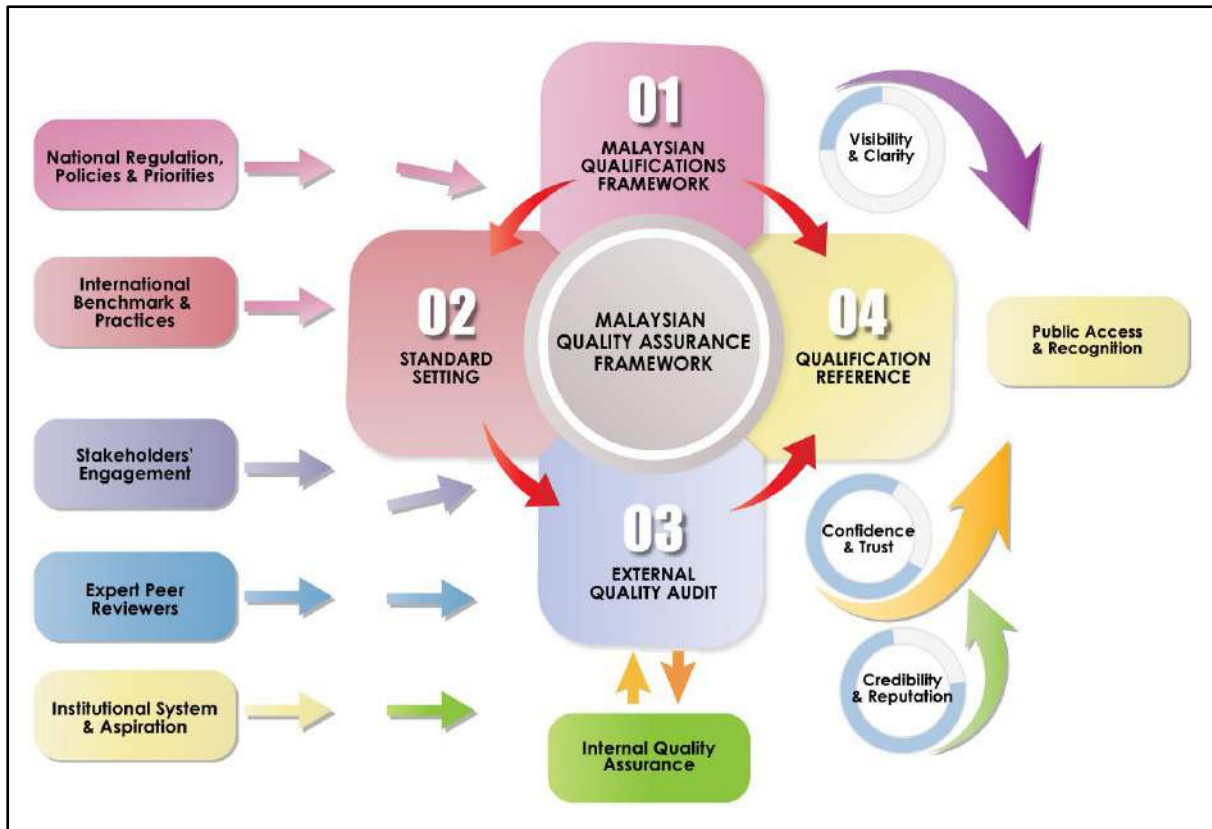


Figure 10: Quality System in Education and Training

Learning outcomes are statements that explain what students should know, understand and can do upon the completion of a period of study or training. Learning outcomes are references for standard and quality as well as for the development of curriculum in terms of teaching and learning, the determination of credits and the assessment of students., 32, 177

These interconnected and interdependent components are aligned to the country's key policies and agenda as well as international good practices. Its operations also require the involvement of various key parties such as policymakers, QA specialists, field experts, the industry as well as education and training institutions.

This arrangement of MQF-based quality assurance enables Malaysia to create a national qualifications system which is clearly understood and trusted by various parties within and outside the country.

6.2 Using ASEAN Quality Assurance Framework (AQAF) Principles in Outlining the National Quality Assurance Systems

The description of the Malaysian QA system for the AQRf referencing is based on the principles outlined in the AQAF which covers four key QA aspects with further principles enunciated for each³². The following aspects are considered in the selection of the AQAF principles for the referencing exercise:

- i. The AQAF principles enable a more precise explanation for the implementation of QA for various sectors, namely, higher education (HE), professional education, TVET as well as non-formal and informal education.
- ii. The AQAF is developed by stakeholders in the Southeast Asian region and is an indigenous system of the region.
- iii. The MQA went through the alignment process with GGP of the International Network for Quality Assurance Agencies in Higher Education (INQAAHE) in 2014 and a partial alignment assessment to the AQAF in 2017. The AQAF principles are used to describe the national QA system.

In principle, the MQA as the main body responsible for the implementation of the MQF sets out the general framework of its implementation and QA. This general framework is also subscribed by other organisations assuring MQF compliance through inter-agency relationship and cooperation as defined by the MQA Act, 2007.

6.3 Malaysian Qualifications Agency

6.3.1 The vision, mission and common goals statements

Vision and mission statements of an organisation are keys to driving all employees in achieving common and long term organisational aspirations, through planning, implementation, review and improvement initiatives. It is a norm for public sector organizations in Malaysia to have explicit vision and mission statements.

³² The ASEAN Quality Assurance Framework (AQAF) enunciates principles in four quadrants i.e., External QA agency, Standards and Criteria, Internal QA and National Qualifications Frameworks which the AMS should seek alignment with.

Visions and missions of the external quality assurance (EQA) agencies are key statements that guide the overall plans and activities which consistently and dynamically correspond to the national agenda and priorities as well as the latest regional and international developments. While the MQA has an explicit aspiration on the MQF implementation, other QA and accreditation bodies which are linked to the implementation of and compliance to the MQF have set their own visions and missions or similar policy statements to guide them in performing their specific functions.

As the main QA body in Malaysia, the MQA is guided by its vision “to be a global authority on QA of higher education”. This vision has been slightly restated to reflect the twin purposes enshrined in the MQA Act, 2007 – to develop and administer the national qualifications framework and to accredit programmes. In pursuit of this vision, the MQA’s mission is “to put in place a system of quality assurance and best practices that is recognised internationally”.

While the vision serves to guide the MQA in terms of its long term aspirations, the mission statement reflects the agency’s desire to have its feet firmly planted on enhancing the global recognition of the Malaysian higher education sector. The MQA intends to play its role as an effective partner in the nation’s higher education development. Its immediate main goal is to implement the MQF (the basis for QA of higher education and the reference point for standards and criteria of national qualifications) and quality assure programmes and institutions via accreditation as well as monitor the QA practices of HEPs.

To reach this goal, the MQA has consistently implemented, monitored and reviewed its five-year Strategic Plan (starting from 2007–2010 to 2011–2015 and 2016 –2020) which were developed in conjunction with other national higher education plans and economic blueprint, and in consultation with its stakeholders. Its vision, mission and strategic goals were developed taking into account the needs and interests of all stakeholders.

6.3.2 Legal Mandate

Almost all QA bodies in Malaysia are public organisations established by legislation. These laws provide the legal basis of establishment of these bodies and enable them

to perform their functions effectively. Pursuant to the Act 679, the MQA was established in November 2007 as the national body to implement the MQF, to accredit higher educational programmes and qualifications, to supervise and regulate the quality and standard of higher education providers, to establish and maintain the MQR and to provide advice on related matters. It provides a coordination platform to connect QA functions implemented under various Acts to the overarching principles of the MQF.

The detailed functions of the MQA as stated in S. 6 of the MQA Act, 2007 are as follows:

- i. to implement and update the Framework;
- ii. to accredit programmes, qualifications and higher education providers;
- iii. to conduct institutional audit and review of programmes, qualifications and higher education providers;
- iv. to establish and maintain a register to register programmes, qualifications and higher education providers;
- v. to conduct courses, training programmes and to provide consultancy and advisory services relating to quality assurance;
- vi. to establish and maintain liaison and cooperation with quality assurance and accreditation bodies in higher education within and outside Malaysia;
- vii. to act as a qualifications reference centre on accredited programmes, qualifications and higher education providers;
- viii. to advise the Minister on any matter relating to quality assurance in higher education; and
- ix. to do all things reasonably necessary for the performance of its functions under the Act.

6.3.3 Autonomy for Decision Making

The credibility of quality assurance by the MQA relies heavily on its ability to control the evaluation and the decision-making process. Effective process control depends heavily on the integrity of standards, benchmarks and procedures, which have been described comprehensively in Criterion 5.

In terms of decision making, the MQA and other QA bodies in Malaysia are autonomous bodies as provided under their respective acts. Within each body, different committees are involved in making decisions to ensure their credibility and accountability.

The MQA is a self-governing statutory body with its own authority and mandate operating under the broad purview of the Minister responsible for higher education. The key organs involved in decision making in the MQA i.e., the Council of MQA, Accreditation Committees, Equivalency Committee and Self-Accreditation Committee as well as their composition and functions are outlined in Table 12.

Table 12: Key Decision Making Committees of MQA

No	Committees
1.	<p>The Council of MQA is an apex body which provides policy directions and monitors the performance of the Agency with regard to implementation of the qualifications framework, standards setting, quality assurance and also the Agency's financial management. The Council consists of a non-executive chairman and 16 members, who are high-level officials representing various ministries, public and private higher education institutions as well as members of civil and professional societies appointed by the Minister of responsible for HE for a term of three years. The MQA's Chief Executive Officer is one of the 16 members.</p>
2.	<p>The Accreditation Committees comprises two components i.e., the Accreditation Committee for the Arts and Social Sciences and the Accreditation Committee for Sciences. These two committees are responsible for evaluating and analysing programme accreditation reports submitted by external assessors and to make decisions on applications of higher education providers for Provisional and Full Accreditation of programmes and qualifications. The assessment reports prepared by the panel of assessors are tabled and deliberated in the Accreditation Committee Meetings chaired by the MQA's Chief Executive Officer.</p>
3.	<p>The Equivalency Committee is responsible for evaluating equivalency reports of programmes and qualifications, and for making decisions on equivalency of programmes or qualifications in terms of its comparability to levels in the MQF. All qualifications offered in Malaysia must establish their level vis-a-vis the MQF as there are qualifications, within as well as those originating from outside of Malaysia, where their level in the MQF is unclear and needs to be determined. The equivalency statement is binding for the purpose of admission for further studies but not legally binding on the authorities for employment purposes. Nevertheless, the equivalency statement is respected.</p>

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|-----------|---|
| 4. | The Self-Accreditation Committee receives audit reports on the invited universities evaluated for the conferment of this status. In addition, it also reviews biennial reports and five-yearly Maintenance of Self-Accreditation Reports. This committee comprises representatives from the Council, the two Accreditation Committees, public and private university vice-chancellors or presidents, and MOE senior officials. |
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6.3.4 Appointment of Council Members

The criteria and procedures for the appointment of board members and councillors of all QA and professional bodies in Malaysia are stipulated by their respective Acts. In general, all Acts require the membership of the boards and councils to reflect a broad representation of the principal stakeholders to enable them to perform their functions effectively in the interests of the various related parties. The appointments are made by respective ministers responsible for the implementation of the Acts based on consultation and a selection process undertaken by the bodies.

The Council of MQA is an apex decision-making body of the MQA with members representing stakeholders of the higher education ecosystem. To ensure an international representation in the Council, normally one council member is appointed from among the QA bodies in the ASEAN region. As provided by the Act, the Council members are appointed by the Minister responsible for HE in accordance with criteria set out in Section 11 (2) and shown in Table 13.

Table 13: Appointment Criteria of Council of MQA Members

1.	Chairman
2.	Chief Executive Officer, Malaysian Qualifications Agency
3.	Director General of Public Service Department or his representative
4.	Secretary-General of Ministry of Education or his representative
5.	Secretary-General of Ministry of Human Resources or his representative
6.	Director General of Higher Education or his representative
7.	A representative of the public higher education providers
8.	A representative of the private higher education providers
9.	Eight other members who, in the opinion of the Minister, have special knowledge, experience and professionalism in matters relating to higher education or employment, at least two of whom shall be from a professional body.

6.3.5 Governance Structure and Management System

The implementation of QA relies heavily on the public and stakeholders' trust in the integrity of the organisation and its administrative system. The MQA and professional bodies subscribe to good governance, transparency and accountability as outlined by government regulations and internationally recognised practices.

The MQA's organisation structure (see Figure 11) shows its functional division, the chain of command and communication channels to the Council. At the highest level, MQA is organised into three key sectors viz., the CEO and corporate function, the Deputy CEO (Quality Assurance) and the QA function, and the Deputy CEO (Management) and the management services function. The CEO and corporate functions include the Secretariat Unit, the Integrity and Enforcement Unit, the Legal Advisor and the Public and International Affairs Unit.

To ensure effective decision-making to drive and to coordinate the functionally-organised management system, there is a system of committees chaired by the CEO or the deputy CEO. The directors together with the heads of division and their units plan, organise and manage the activities identified within the endorsed annual plans and budget, with the overall guidance of the CEO, two Deputy CEOs and two Senior Directors. The MQA is subject to a suite of manuals, standard operating procedures, internal memos, and applicable circulars from central agencies like the Public Service Department (for human resource management) and the Treasury (for financial management).

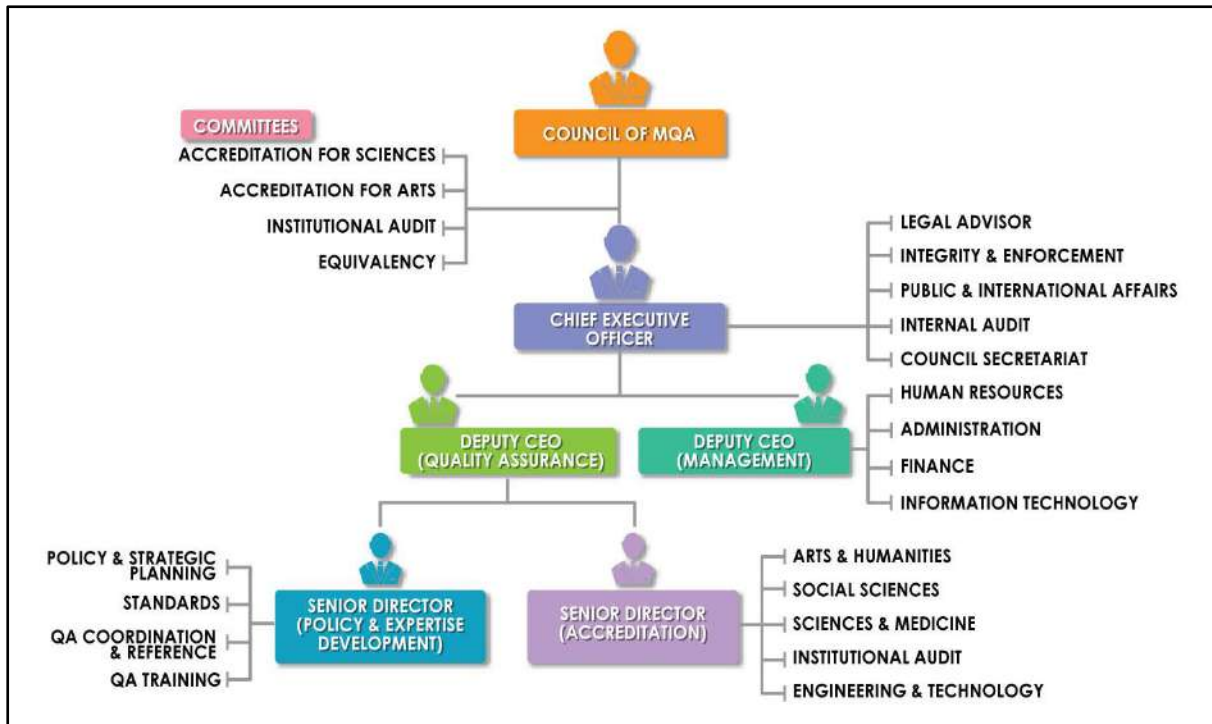


Figure 10: MQA Organizational Structure

The QA function is organised into two broad sectors of Accreditation as well as Policy and Expertise Development. The Policy and Expertise Development sub-sector encompasses Standards, Quality Assurance Coordination and Reference, Training as well as Policy and Strategic Planning. The Accreditation sub-sector consists of the Institutional Audit Unit and four accreditation divisions, namely, Social Sciences, Sciences and Medicine, Engineering and Technology as well as Arts and Humanities.

The divisions that handle the core accreditation functions report to the Deputy CEO (QA), who is assisted by two senior directors. These segments are subject to a quality management system certified to ISO 9001:2015. All their policies, processes and procedures are under close monitoring and subjected to periodic external surveillance by SIRIM QAS Sdn. Bhd.

The Management Services function, which includes Human Resources Management (HRM) and Financial Management, Information Technology (IT) and General Administration, provides valuable support for the implementation of the MQA mandate. These services are headed by the Deputy CEO (Management). The HRM function is closely based on the schemes approved by the government and all federal rules

issued and adopted by the Council. The financial planning and management functions are subject to a strict set of financial procedures issued by the Treasury and adopted or adapted by the Council. The Management Committee, Quotations Committee and Staff Appointments and Promotions Committees review and endorse the plans and actions. Financial performance is tabled at the Quarterly Finance and Accounts Management Committee meeting and at every Council Meeting. The annual reports which include the audited annual financial statements are tabled at the Council, the Malaysian Cabinet Meeting and eventually to the Parliament. These annual reports are published on the MQA's website.

6.3.6 New Developments and Innovations in Quality Assurance

The education and training sector is constantly changing to meet the needs of the industry and society. It requires the QA process to be constantly improved and updated so that it is always relevant and up-to-date. Thus, it is imperative for QA bodies to have effective mechanisms to ensure that any changes made to their processes will always meet the needs of the sector's stakeholders.

As an agency vested with the responsibility of promoting the highest standards of QA amongst the nation's HEPs, the MQA has a number of ways by which it reviews, refreshes, improves and innovates its QA operations to implement its mandate.

Institutionally, the formulation of the 5-year strategic plan provides the platform for the MQA to review current practices, their effectiveness and consider alternative and new ways to enhance external quality assurance (EQA) and internal quality assurance (IQA), learning from its own practices and those of other QA bodies. The current plan envisages structural, organisational and operational changes some of which calls for major reorganisation. For enhancement, the MQA is constantly scanning the QA industry for leads and ideas to improve its capacity to develop, maintain and enhance a QA system where IQA is paramount and EQA plays a catalytic role. The QA networks and networking, as well as outbound and inbound staff exchanges, are key platforms that provide fresh new perspectives to its processes.

The core accreditation related operations are subject to regular ISO 9001:2015 audits and to external reviews which include, among others, the evaluation of feedback from

education and training providers, staff, assessors and other parties to improve the management system. For example, the internal auditors have suggested that the MQA considers raising the bar on its client charter.

In addition to the MQA staff attending local and international conferences as well as seminars to learn from sharing of experiences, the MQA has a huge reservoir of over 1700 trained assessors who are subject specialists. Together they form a valuable source of ideas on teaching, learning and assessment to inform the development and review of policies, standards and guidelines.

6.3.7 Resources

Sufficient resources are essential to enable QA bodies to carry out their roles and responsibilities efficiently and effectively. As all QA bodies in Malaysia are public organisations, operational resources - physical, human capital or financial - are acquired based on the rules and regulations outlined by the government. In most cases, the bodies are partly funded by the government and partly by fees or charges from the provision of QA services.

The MQA has a staff strength of about 330 staff recruited and managed in accordance with the policies and rules of the Public Service Department (PSD). Over two-thirds of the staff provide accreditation-related services with the balance providing valuable support services in HRM, finance, IT, and corporate services. The MQA has in place a Competency Development Framework that encompasses both generic and functional competencies. This Framework is implemented via a training plan which is reviewed annually to address the MQA's staff training needs to meet their expected skills and knowledge requirements. The MQA accreditation activities are supported by a pool of 1794 trained external assessors who provide professional expertise in QA work and audits.

The MQA is a federal statutory body with almost 70% of its operating expenditures funded by government grants provided through the annual budgetary allocations. The rest of the funding is generated from fees earned for services rendered and investment income. Since 1996, the National Accreditation Board and MQA, as the successor

agency, have accumulated reserves up to RM140 million. These reserves have been invested to generate income or reduce operational costs.

The MQA is highly dependent on IT resources for internal management and provision of accreditation and other QA services. The Information Technology Division plans, acquires, manages and maintains all required IT infrastructure and services to support the MQA's operational needs. To date, the MQA has internally developed and acquired from external providers fifteen IT systems for engagement with external parties and seventeen IT systems to support internal processes. In realising the critical importance of IT systems for enhancement of operational effectiveness and efficiency, the MQA has provided for and is in the process of developing an end-to-end enterprise system which will completely automate all accreditation and internal management services.

6.3.8 Collaboration with Key National and International Stakeholders

Quality assurance work and the recognition of the outcomes require collective effort of the stakeholders. Hence, a QA body needs to always work together and engage with various parties within and outside the country to ensure full acceptance of the QA work it undertakes.

Active collaboration in implementing the MQA Act, 2007 and the HE regulation in a complex HE ecosystem is required for effective QA of the higher education sector. The Council membership institutionalises inter-ministerial engagement and collaboration which has enabled MQA to develop and implement a wide array of policies and standards and to resolve any resulting tensions. The collaborative arrangements with professional bodies through the establishment of Joint Technical Committees further provide coordination in programme accreditation. Beyond this, MQA has continual engagement through periodic as well as ad hoc meetings with the MOE, which is a key player as the nation's higher education regulator.

The MQA continuously engages the employers and the industries in various QA activities. The MQA ensures their significant involvement in the standard development processes by having their representatives in the development committees and by engaging their communities in town hall sessions. Key industry representatives are

also parties to various policy and accreditation decisions through their participation in the Accreditation and Equivalency Committees. Dialogues are also held by MQA with employers and industries, especially on specific issues of mutual interests.

As an EQA body, the MQA interacts with all the providers including foreign establishments having local operations for the purpose of accreditation. Without the MQA's certificate of accreditation, programme approvals will not be given by the MOE. Both private and public education provider groups meet with and exchange views on regulation and quality of HE with the MQA at roadshows to introduce and explain changes in accreditation standards. The MQA also frequently meets with the Malaysian Association Private Colleges and Universities (MAPCU) and the National Association of Private Educational Institutions (NAPEI) through MOE, the Ministry of International Trade and Industry and the Prime Minister's Office to improve services and to consider new ideas.

The MQA always seeks to establish policies, practices and systems which are nationally appropriate and internationally benchmarked. Thus, the MQA values highly the international connectivity it has forged through a wide network of national, regional and international QA bodies. For this reason, the MQA has been playing an active role in various QA networks. These have enabled the MQA to learn from and to share knowledge and experiences with other QA bodies in the world. The MQA led the formation of the ASEAN Quality Assurance Network (AQAN), the Association of Quality Assurance Agencies of the Islamic World and the ASEAN Young Quality Assurance Officers Network (AYQON).

Thus far, the MQA has signed 21 memoranda of understanding (MoU) with QA bodies, in ASEAN, South Asia, Asia-Pacific, Africa, Europe and the Middle East. The MQA has concluded QA comparability projects with Higher Education Evaluation and Accreditation Council, Taiwan (HEEACT), New Zealand Qualifications Authority (NZQA) and National Institution for Academic Degrees and Quality Enhancement, Japan (NIAD-QE) and a similar project with South African Qualifications Authority (SAQA) is still in progress. The MQA has maintained close collaborations for capacity building on many fronts with the ASEAN Secretariat (ASEC) and the EU Support to Higher Education in ASEAN Region (EU-SHARE) which comprises of the British

Council, German Academic Exchange Service (DAAD), Dutch Organisation for Internationalisation in Education (NUFFIC), European Association for Quality Assurance in Higher Education (ENQA) and European University Association (EUA). The MQA also hosts annual internship programmes for international delegates and has consistently sent its staff to its partners for internships.

The MQA recognises the strategic value of media services in fulfilling its mandate as a QA body. Given the need to actively cultivate an informed public about quality, quality assurance, qualifications framework, programme standards and MQR, the MQA has invested in electronic broadcast media services such as television and radio interviews, television and radio advertisements, online news portal and also printed medium such as billboard advertisements and advertisements in the mainstream newspapers. The MQA has also contracted BERNAMA Corporation, a national news service provider, to publicise the MQA's events and activities.

6.3.9 Control, Audit and Assessment of Operations

QA bodies must always ensure that their stakeholders' expectations are met. Therefore, high professional standards and integrity are indispensable in the Agency's work. Review and improvement of the MQA's activities are continuously implemented to ensure that its services to institutions and communities are optimal.

To manage all QA and administrative operations, the MQA has a set of documented practices involving annual planning, approval, reporting, assessment, auditing and improvement. All parts and units develop annual targets based on strategic plans, feedforward from the past, prioritisations, and internal capacity presented to management for approval. The annual targets are implemented based on approved budgets and their achievements are reviewed regularly on a quarterly basis.

The MQA's management system is certified to meet the ISO 9001: 2015 QMS standards. This certification requires that internal quality audits (linked to appropriate ISO procedures) are implemented in a planned and risk-based manner before corrective and preventive measures are initiated. The certification requires all management processes and procedures to be inspected annually by SIRIM QAS Sdn. Bhd., the certification agency. No major non-compliance has so far been reported

from these external reviews. This testifies the compliance with established internal procedures.

In addition, the internal audit team conducts planned operations audits for review of compliance with policies and procedures and provides reports to the management and to the Council. This review regime and internal inspection are also complemented by mandatory and annual financial audits by the Auditor-General to attest the MQA's financial health.

As a statutory body, the MQA is also monitored by the Prime Minister's Office in two aspects. The statutory body unit reviews the MQA's compliance with all applicable federal regulations on governance and management of statutory bodies. In addition, public response, as well as the retention, retrieval, use and disposal of data and information, are audited from time to time from a security standpoint.

6.3.10 Dissemination of Information

The dissemination of information relating to standards, processes and results of QA work effectively to the public is essential to ensure the ultimate goal of QA in safeguarding the interests of stakeholders is met. QA bodies and professional bodies in Malaysia have taken various approaches to ensure that important information reaches the intended stakeholders effectively and in a timely manner.

In the spirit of openness, the MQA ensure that the QA documents are made available and accessible to stakeholders at all times. During the development process of any standard, inputs from experts and stakeholders (via a series of focus group discussions and exchanges), are continuously sought and taken into consideration. Feedback from stakeholders obtained through survey and reports are published in the MQA's Portal. Members of the public are also encouraged to give suggestions from time to time for the continuous enhancement of standards. Upon completion, the information regarding the QA processes and documents is disseminated to all HEPs as well as other stakeholders. The MQA believes that the feedback and openness would lead to standards that are fit-for-purpose and promote greater acceptance from the stakeholders.

All the QA documents are accessible online from the MQA's Portal at <http://www2.mqa.gov.my/QAD/>. All published QA documents are also available in print or as e-books and can be purchased at a minimal cost. From time to time, the MQA also issues circulars, advisory notes and notification letters to all relevant stakeholders on policies, procedures and criteria of QA. Current news and information relating to accreditation and higher education are also announced through press releases, press conferences, published by local media and interviews at television and radio stations. The MQA holds bi-weekly Client's Day (on every other Thursday) for the HEPs, members of the public, and other stakeholders to seek advice and to discuss accreditation issues.

Advisory clinics are conducted regularly to guide the HEPs in their preparation of the accreditation documents. The clinics discuss application procedures, work processes, policies and criteria as well as standards for submission of application. Training, briefing and dialogue sessions are provided to the stakeholders, including HEPs, standards committee members, panel of assessors, MQA officers and other relevant stakeholders, to enable them to be familiar with the standards and to ensure consistent understanding on its implementation.

All outcomes of the Accreditation Committee (AC) meetings are released monthly on the MQA's portal. Successful provisional accreditations are announced online in the Provisional Accreditation List whereas successful full accreditations are listed in the MQR Register at <http://www2.mqa.gov.my/mqr/>. The MQA's Portal also publishes the [list of universities with self-accreditation status](#).

The MQA also leverages on other forms of social media like Facebook, Twitter and Instagram to widen the platform for information dissemination:

<https://www.instagram.com/mqamalaysia/>

<https://www.facebook.com/AgensiKelayakanMalaysia/>

<https://twitter.com/MQAMalaysia>.

6.3.11 Student and Society-Focused Quality Assurance

The MQF is a point of reference for qualifications level that is accepted nationally. It has been benchmarked against international qualifications frameworks to reinforce the

confidence of national and international stakeholders in Malaysian qualifications. The MQF is a learner-centred and outcome-based framework stipulating pathways in the skills, vocational and technical as well as academic sectors. The MQF systematically classifies and defines the qualification levels by clarifying the learning outcomes and a credit system based on the student learning time for each level. By incorporating APEL, the MQF also provides a pathway for individuals to progress through a transfer of credit and recognition of prior learning, acquired not just from formal learning but also from non-formal and informal learning, regardless the time and place of learning. This facilitates the recognition of lifelong learning in the interest of Malaysian society (MQF, 2007: p.1-2).

The MQA uses the following documents to evaluate and accredit the HEPs and the programmes they offer:

- i. Malaysian Qualifications Framework (MQF), and
- ii. Code of Practice for Programme Accreditation (COPPA), or
- iii. Code of Practice for Institutional Audit (COPIA).

The contents of these documents also indicate that the interest of students and society is at the forefront of the MQA's QA processes. Both codes of practice require HEPs to demonstrate that their programmes meet the requirements of the MQF by providing relevant evidence. Only programmes that comply with the MQF are accredited by the MQA.

Both the COPPA and COPIA require HEPs to respect the rights of students (COPPA: 2.4.1, p.14) and to establish systems to seek their individual feedback on teaching and learning, programme management, and pastoral care services as well as through student representation in committees within the HEPs (COPPA: 4.5, p.20; COPIA: 4.5 p. 26). In accreditation evaluations, students are interviewed by the Panel of Assessors to determine the effectiveness of learning. No full accreditation can be carried out without access to and engagement with students to evaluate the effectiveness of the programme delivery.

Both codes of practice also require HEPs to monitor the relevance of their programmes and institutions to existing and emerging needs of the industry and the larger society (COPPA: 1.2, p. 13; 2.3.1, p. 16; COPIA: Area 2, p. 18; 1.4.3, p. 52). HEPs are expected to establish mechanisms to monitor the performance of their graduates as well as to determine the perceptions of the society and employers on the strengths and weaknesses of their graduates and to respond appropriately (COPPA, Area 7, p.32; COPIA, Area 7, p.34).

To further protect the interests of students, parents, employers, and funding agencies, the MQA has always worked closely with professional bodies and employers to ensure accredited qualifications are recognised for employment and professional practices. The MQA publishes and maintains the MQR which carries a record of all qualifications with full accreditation status, and a separate list of provisionally accredited programmes. Beginning January 2017, the Malaysian Cabinet has also mandated that the MQA accredited programmes, with a few exceptions, will automatically lead to recognition by the government for employment in the public service.

In 2015, the MQA introduced the Malaysian Qualification Statement (MQS) to provide the users of qualifications in Malaysia and cross-border with full information about the courses, grading systems, programme outcomes and structure, and qualifications levels in MQF to facilitate student and graduate mobility.

6.3.12 Overview of Quality Assurance Process in the Technical-Vocational and Academic Sectors

Supporting the MQF is the generic COPPA which outlines the mandatory minimum standards and recommended enhanced standards to be observed by HEPs for the programme accreditation. The COPPA has since expanded into 22 discipline-based programme standards which specify the requirements in the 9 areas of evaluation.

HEPs are also required to observe the MQA standards and specific arrangements for selected qualification levels (e.g., foundation and postgraduate studies) and modes of delivery (e.g., open and distance learning). All these QA documents are accessible at <http://www2.mqa.gov.my/QAD/>.

There are also policies in respect of minimum programme duration³³, minimum entry requirements³⁴ and a suite of quality policies issued by the MQA relating to the nine areas of evaluation in the COPPA. A [compilation of related policies](#) can be retrieved from the MQA's Portal.

6.3.12.1 Provisional Accreditation (PA)

The purpose of PA is to evaluate the compliance of the proposed programme to the MQF, the Codes of programmes or programme standards and all other applicable policies, and the extent of readiness of the HEP to conduct the programme. With PA, the HEP, after obtaining programme approval from MOE, can admit students, carry out the teaching and learning activities and assist students to obtain financial aid.

Sections 38 to 41 of the MQA Act, 2007 provides the legal basis for the Agency to carry out provisional accreditation of higher education programmes. In the case of qualifications which are regulated by professional bodies³⁵ e.g., Malaysian Medical Council, Board of Engineers, Malaysia, Pharmacy Board, Malaysia, S. 43 requires that the MQA "...cooperate and coordinate with the relevant professional body..." to carry out accreditation through the Joint Technical Committee.

The codes of practice and programmes standards set out the criteria and standards to be complied by the HEPs in their applications for programme accreditation. At the provisional accreditation stage, the proposed programme is evaluated for its compliance with all curricular requirements of the Agency, including its relevance to market needs. The readiness of the HEP in terms of academic staff, support services, resources and programme management systems are also evaluated before approval.

New qualifications/ programmes applications or proposals³⁶ (MQA-01-2008, <http://www.mqa.gov.my/PortalMQAv3/borang/coppa/MQA-01.pdf>) require HEPs to reference their proposed curriculum to MQF level descriptors, programme standards (where applicable) and applicable policies of the MQA (e.g., credit transfer) and the

³³ Department of Higher Education Letter: JPT(A)1000/001/013/05(17) dated 27th March 2012

³⁴ MQA Circular No. 1/2013: MQA 07/07 Jld. 2(24) dated 19th December 2013

³⁵ Qualifications regulated by professional bodies are mostly Level six programmes.

³⁶ Includes also collaborative programmes (franchise) with local and foreign partners

MOE (e.g., minimum programme duration and entry requirements). These programmes are evaluated by a panel of two or three trained subject matter experts. The final provisional accreditation report of the panel outlines the extent to which the proposed programme is consistent with the requirements and make recommendations to the Agency. These reports are reviewed by a Vetting Committee (VC), comprising the QA officers of the MQA. A decision is taken to forward the report to the relevant Accreditation Committee (AC) or to allow the HEP some time to address inadequacies or to terminate the process if the HEP is unresponsive. Upon receipt of the report, the AC can grant provisional accreditation with or without conditions or refuse provisional accreditation. The complete PA process for MQA, professional bodies and self-accrediting universities³⁷ is shown in Figure 12.

Provisionally accredited programmes are not listed in the Malaysian Qualifications Register (MQR) but recorded in the [Provisional Accreditation List](#), which is accessible to the public.

³⁷ See 6.3.15 for further details on self-accrediting universities

MALYSIAN QUALIFICATIONS AGENCY

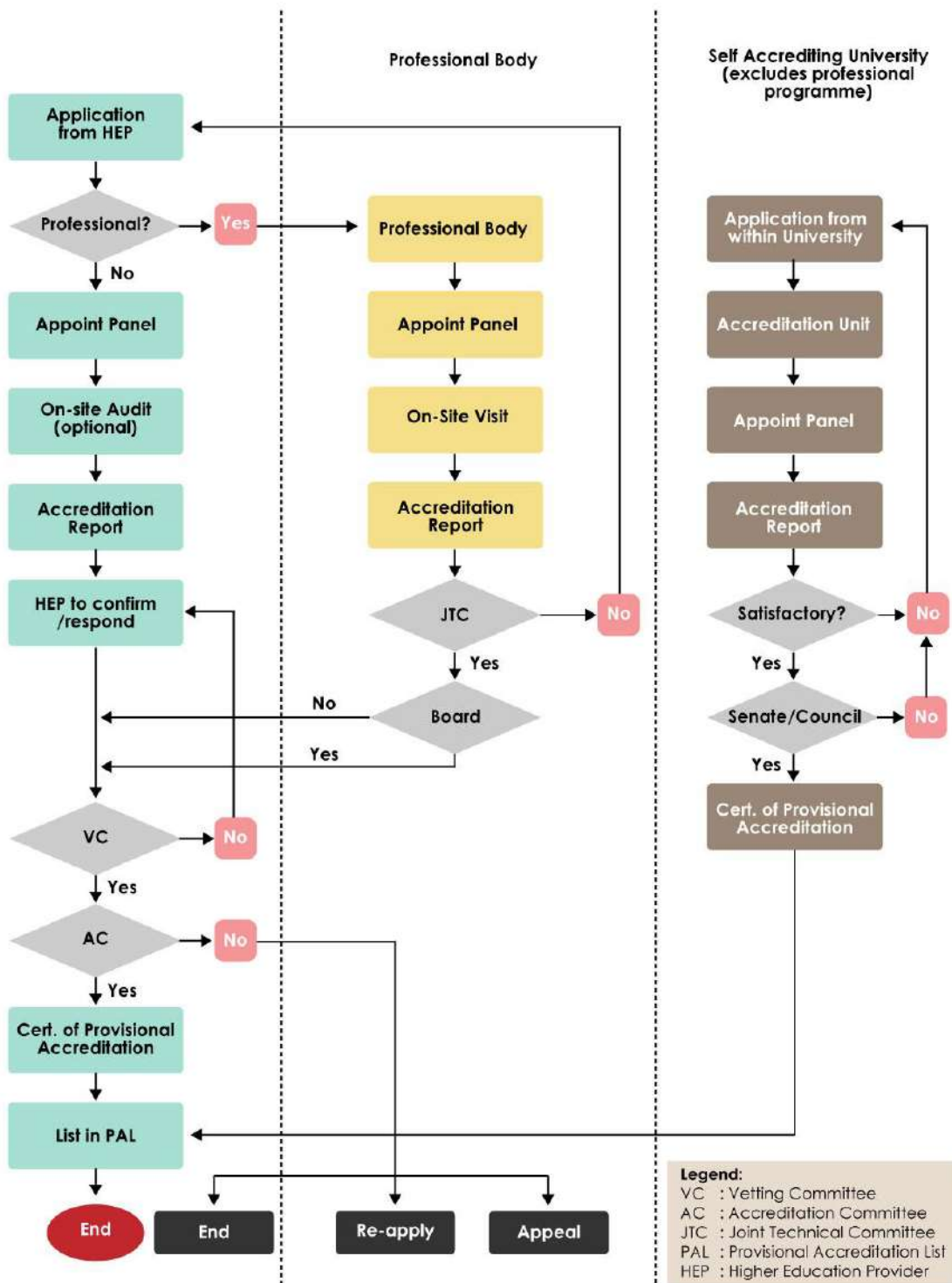


Figure 11: Flowchart of Provisional Accreditation

6.3.12.2 Full Accreditation (FA)

FA is the evaluation of a programme that has received PA and is usually conducted when the first cohort of students is in the final year. FA entails the evaluation of the delivery of a provisionally accredited programme by examining all evidence of teaching, learning and assessment and achievement of learning outcomes to determine compliance with all required standards.

The HEPs granted provisional accreditation are required to submit applications (MQA-02-2008, <http://www.mqa.gov.my/PortalMQAv3/borang/coppa/MQA-02.pdf>) to commence the full accreditation audit process. A panel of two or three trained subject matter experts carries out the on-site audit based on the Self Review Report (SRR) provided by the HEP and all evidence obtained through the on-site visit. Once the accreditation report is completed, it is shared with the HEP for confirmation and also to institute improvement measures within a reasonable time frame. The verification Committee (VC) reviews the feedback from the HEP based on the evaluation by the panel on the improvements carried out and forwards the report to the AC with recommendations for a decision.

Programmes accredited by the MQA with or without conditions will be issued with a Certificate of Accreditation which states the following information:

- i. Name of the qualification
- ii. Name of higher education provider
- iii. MQF level
- iv. Premise where the programme is conducted
- v. Duration of accreditation where it is applicable/required.

After payment of requisite fees and completing relevant documents, the programme is listed in MQR for public reference (Appendix 4). Once accredited and listed in MQR, it remains valid until the accreditation is invalidated by the expiry of accreditation (as in the case of professional bodies) or by revocation by the MQA. The complete FA process including the professional bodies and self-accrediting universities is illustrated in Figure 13.

6.3.13 Commitment to Timeliness and Transparency

For programme accreditation, the MQA has committed in its Client's Charter to complete the process within specified timelines as follows:

- i. Provisional Accreditation process within three months and three weeks and
- ii. Full Accreditation process within seven months.

The MQA monitors its accreditation process performance against the Client's Charter and reports the achievement to its stakeholders via the MQA's Portal (http://www.mqa.gov.my/portalmqav3/red/en/profil_piagam.cfm).

6.3.14 Appeal Mechanism

S. 82 of the MQA Act, 2007 provides for HEPs to appeal against any decision of the MQA or professional body to refuse or revoke an accreditation. For professional programme accreditation, the HEP may appeal in writing to an Appellate Committee within thirty days from the date the refusal or revocation is served on the institution. The Appellate Committee constitutes representatives appointed by the relevant professional bodies and a representative of the MQA. For non-professional programme accreditation and institutional self-accreditation, the HEP may appeal by writing to the Minister within thirty days from the date the refusal or revocation is served on the HEP.

In line with the provisions of the MQA Act, 2007, the MQA has appropriate policies and methods that allow HEPs to appeal for reconsideration of a denial of accreditation. All decisions made include a notification to the HEPs of their right to appeal. The COPPA (4.10, p. 91) and COPIA (4.2.12, p. 95) stipulate that appeals can be made in relation to:

- i. factual contents of the reports;
- ii. substantive errors within the report; or
- iii. any substantive inconsistency between the oral exit report, the final report, and the decision of the MQA.

In considering any appeals made, the Minister or the Appellate Committee may confirm, revoke or vary the decision appealed upon. The results of an appeal are communicated in writing to the MQA and the HEP making the appeal. The decision of the Minister or the Appellate Committee is final.

6.3.15 Self-accrediting Universities

Under Chapter 4 of the MQA Act, 2007, HEPs can be invited by the Minister of Education to be considered for self-accreditation status (SAS). Universities which have robust IQA system are, upon invitation by the Minister, evaluated through a comprehensive audit based on the COPIA. The audit report after confirmation by the HEP is reviewed by the Self Accreditation Committee and granted SAS if these universities show good to excellent standing in the nine areas of evaluation in the COPIA. To date, there are nineteen universities that have been granted the SAS. The [self-accrediting universities](#) carry out provisional and full accreditation based on the same MQA requirements internally with accreditation endorsed by its highest academic authority (i.e., the self-accrediting university's Academic Senate or equivalent).

The accreditation reports from universities with SAS are submitted to the MQA as an appendix to the MQR listing request. These qualifications or programme details are then listed in the MQR for public reference after necessary checks by MQA.

6.3.15 Revocation of Accreditation

Under Sections 42 and 49 of the MQA Act, 2007, accreditation continues until it is revoked. Programmes which are found to be not in compliance with the MQF or breached any conditions or Full Accreditation (S. 49), will have the accreditation revoked and the outcome recorded in the MQR. Similarly, non-compliances at the Provisional Accreditation (S. 42) stage will result in the removal of the programme in the Provisional Accreditation List.

6.3.16 Maintenance of Accreditation

The Agency carries out five yearly maintenance audits of all accredited programmes and qualifications to ensure these are compliant with the MQF and all applicable standards. In the case of self-accrediting universities, they are required by the terms of the SAS to carry out similar maintenance audits of its programmes and report to the MQA biennially. The universities with the SAS undergo a five-yearly maintenance audit by MQA to ensure the continuance of the SAS privileges.

6.3.17 Training, Professionalism and Ethical Conduct of Assessors

Assessors are the experts in their respective fields of study from different backgrounds and they include academics, professionals and individuals from the industry. Assessors are seen to be the backbone of all QA systems. They play a prominent role in providing expert verification which leads to an accreditation decision. In response, the MQA has put in place a comprehensive and professional procedure for selecting, appointing and training of the assessors.

As of June 2017, the MQA has appointed 1794 assessors in various fields of expertise. The fields can be categorised into four main areas; Engineering and Technology (532), Art and Humanities (474), Medical and Health Sciences (420) and Social Sciences (344). In addition, the MQA also has appointed 24 auditors to assist in Institutional Audits. For professional programmes, the various professional bodies have their own list of assessors, many of whom are also on the MQA's list.

The MQA has established a systematic approach to manage matters pertaining to assessors. Information about the assessors including personal details, academic and career background, records of QA training and workshop as well as information on accreditation assignment is kept in a database. Since 2012, a portal on assessors is in operation which can be accessed by MQA officials. Since 2015, the portal is accessible to assessors to view and update their profile, to peruse their assignments history as well as be informed about recent developments in MQA.

Applications may come from individuals as well as nominations from HEPs. Candidates for the MQA assessors must meet the criteria stipulated. The MQA also appoints assessors with considerable experience and achievement in industries on a

case-to-case basis, even though they may not fulfil minimum academic requirements. This is largely to accommodate the evaluation of critical or specialised industry-based programmes.

The training programmes are designed to cater to different needs of assessors depending on their knowledge and experience in QA work. The MQA conducts two types of training programme for its assessors. Pre-appointment training programme is a compulsory training for assessor prior to their appointment while for serving assessors special training programme is designed for continuous professional development (CPD) purposes. These training programmes are important mechanism to ensure that they are competent in assessing higher education programmes and informed with the latest developments. As part of their continuous professional development serving assessors are required to attend specific courses such as the Effective Audit Report Writing for Programme Accreditation, the Guidelines to Good Practices: Work-Based Learning, the Workshop for APEL (Access) Assessors and updates on QA documents. For continuous improvement of the training programme, the MQA also conducts surveys to gather inputs regarding the training content and other needs from assessor's perspective. The inputs then will be reflected in the improvement of its training content.

Acknowledging the fact that assessors are the most important component in the whole accreditation exercise, their conduct and professionalism has a bearing on the quality and credibility of their assessment and eventually the outcome of the accreditation. The MQA undertakes both capacity building and performance monitoring to ensure that the assessors are competent and adhere to a high standard of professionalism in performing their accreditation assignment.

During assessor training programmes, they are reminded of their roles and responsibilities especially on issues relating to professional conduct and work ethics. The MQA takes professionalism and ethical conduct of the assessors seriously and this forms an integral part of Assessor Appraisal. At the end of every accreditation assignment, the assessors are evaluated via two sources i.e., the audited HEP and the MQA accreditation officer managing the institutional submission. The performance appraisal of the assessors also includes the quality and comprehensiveness of the

report, timeliness of report submission, personal conduct and communication skills of the assessors. The monitoring of integrity and conduct of assessors require a concerted effort by both the HEPs and MQA officers in providing objective feedback and evaluation.

To further strengthen professionalism and ethical conduct of assessors, the MQA is currently developing a system that links the assessors' honorarium to their performance. The evaluation system will track the performance of the assessors in terms of the number of task assigned, quality of report, timeliness and their ethics and professionalism. This is also done with the intention to motivate, encourage and inculcate greater professionalism among the assessors.

6.4 Professional Bodies

6.4.1 The Vision, Mission and Common Goals Statements

Professional bodies in Malaysia subscribe to the norms of public organisations and the good practices of their respective international communities. The vision, mission and goals of professional bodies which have joint accreditations with the MQA are shown in Figure 14.

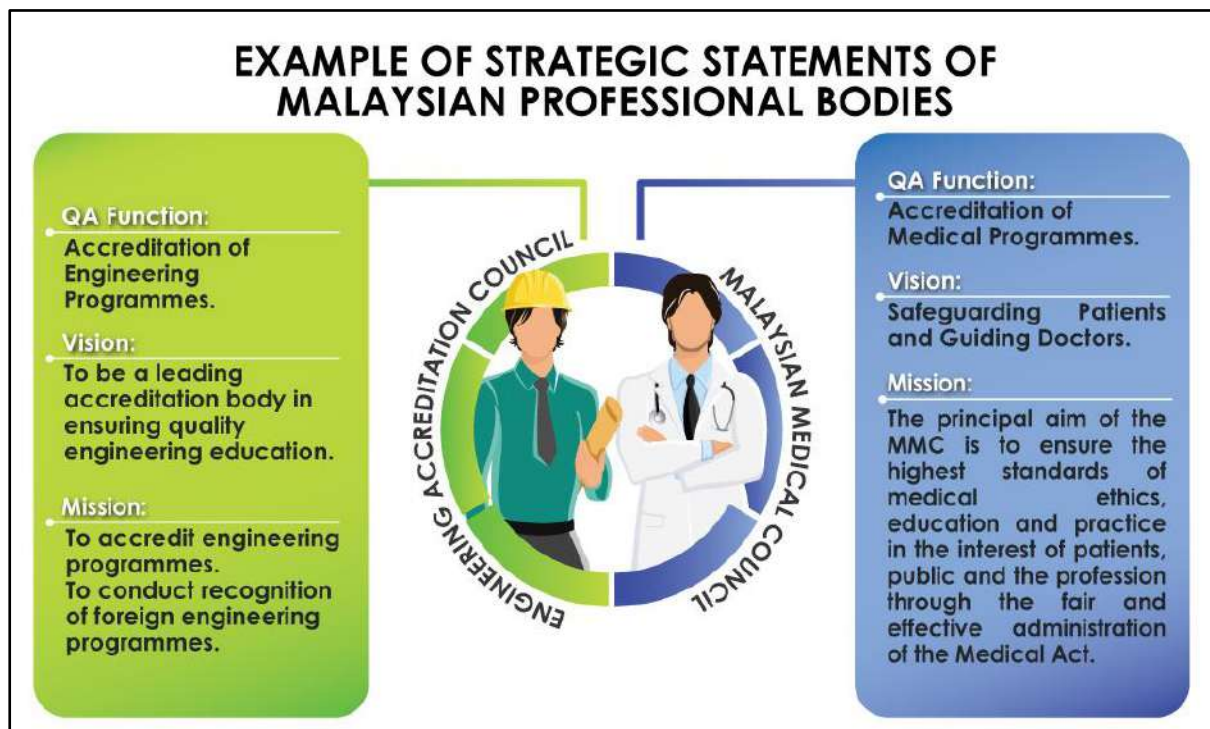


Figure 13: Examples of Vision and Mission of Malaysian Professional Bodies

6.4.2 Legal Mandate

All professional bodies are established by the Acts of Parliament providing them with legal competence to regulate their profession. Two examples of professional bodies, which conduct joint accreditations with the MQA, are shown in Figure 15.

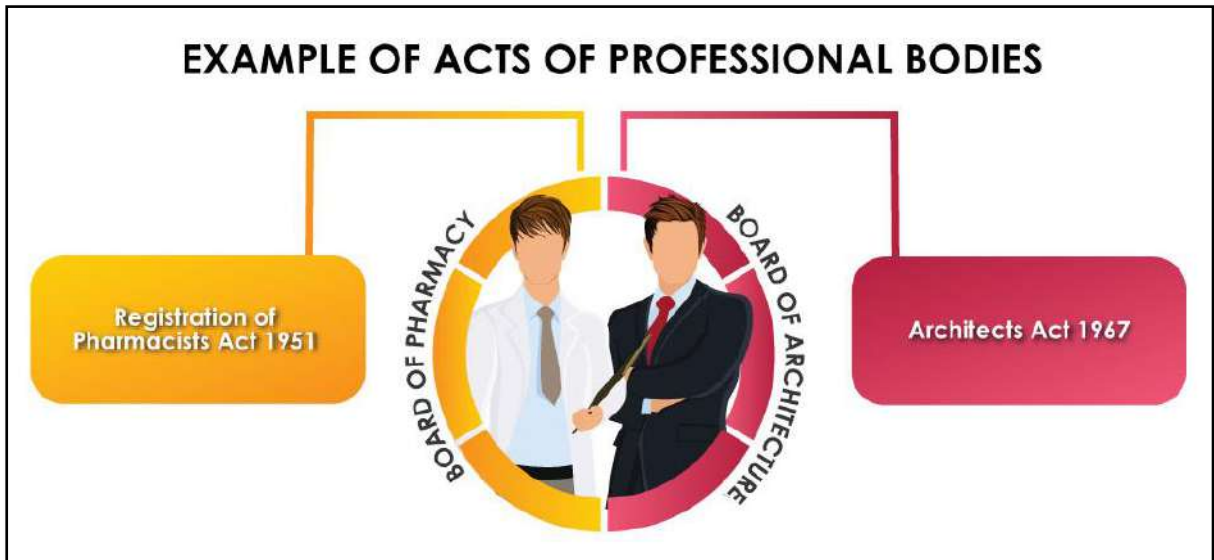


Figure 14: Examples of Legislations Establishing Professional Bodies

Despite the variations in these laws on the evaluation and assessment of programmes and qualifications, the MQA Act, 2007 provides coordination in terms of collaborations and engagements with regard to accreditation of programmes and qualifications. Three key provisions that provide this coordination are as follows:

- i. Sections 48 and 49 of the MQA Act, 2007 state that the MQA shall collaborate and coordinate with relevant professional bodies and skills authority for the purpose of considering provisional accreditation for professional and skills programmes or qualifications;
- ii. Sections 50 to 55 of the MQA Act, 2007 describe the joint accreditation involving the MQA and relevant professional bodies through the joint technical committees;
- iii. Sections 65 and 66 of the MQA Act, 2007 describe the coordination and collaboration on the accreditation of skills programmes.

6.4.3 Autonomy for Decision Making

All professional bodies, which are linked to the implementation of and compliance to the MQF, have similar autonomous responsibility for their operations and their decision making processes so that their judgments are free from undue influences. There are varying laws that establish these bodies, provide their mandates and shape their governance. Nonetheless, the similarities are generally on the existence of boards as apex bodies that provide policy directions and monitor their performance and expert/technical committees that decide on QA results. Examples of a few bodies are shown in Figure 16.



Figure 15: Examples of Decision Making Committees of Professional Bodies

6.4.4 Appointment of Board Members

All the professional bodies which are involved in accreditation have governing councils or boards comprising key stakeholders to their respective profession and practice. Two examples are provided in Table 14.

Table 14: Examples of Appointment Criteria of Board Members of Professional Bodies

No.	Requirements to form Board of Counsellors Malaysia in accordance with Counsellors Act 1998
1.	a President who must be a registered counsellor
2.	one representative from the Department of Social Welfare
3.	one representative from the Ministry of Education
4.	one representative from the Ministry of Health
5.	one representative from the Department of Islamic Development
6.	one representative from the Public Service Department
7.	one representative from the Ministry of Home Affairs
8.	three representatives from the Higher Education Institutions
9.	six registered counsellor
No.	Requirements to form Malaysian Dental Council in accordance to Dental Act 1971
1.	Director General of Health
2.	Director of Dental Services
3.	six dental surgeons from among the staff of the dental faculties of the higher educational institutions in Malaysia
4.	six dental surgeons to be appointed by the Minister of Health
5.	six dental surgeons resident in Peninsular Malaysia to be elected by the dental surgeons resident in Peninsular Malaysia
6.	one dental surgeon resident in Sabah to be elected by the dental surgeons resident in Sabah;
7.	one dental surgeon resident in Sarawak to be elected by the dental surgeons resident in Sarawak;
8.	one dentist resident in Peninsular Malaysia to be elected by the dentists resident in Peninsular Malaysia; and
9.	one dentist resident in Sabah or Sarawak to be elected by the dentists resident in Sabah or Sarawak.

6.4.5 Policies and Management Practices

All professional bodies are structured and governed based on their respective Acts of Parliament. The management committees to the board/council and a secretariat are typically headed by either a chief executive officer, executive director or secretary to support the council or board of the professional body. The secretariat supports the board or council on matters pertaining to, among others, registration, accreditation, administration and finance, and information technology.

6.4.6 New Developments and Innovations in Quality Assurance

Professional bodies in Malaysia always keep abreast new developments and innovations in their field of work. They actively engage their counterparts in other countries and are active with regional and international associations and networks.

Many professional bodies publish bulletins, organises dialogues and seminars which includes discussions on the latest trends of their fields.

6.4.7 Resources

As all professional bodies are public organisations, they are normally associated with related government divisions, which may provide support for its operation. For example, the Malaysian Dental Council is associated with the Oral Service Division of the Ministry of Health, the Board of Counsellors, Malaysia is under the patronage of the Ministry of Women, Family and Community Development and the Board of Architects Malaysia is associated with the Public Works Department. All professional bodies impose a fee for their professional registration services. Some of these bodies also have powers to determine and collect fees for programme accreditation. Those which do not have such powers, follow the MQA rates or use other sources of funds.

6.4.8 Collaboration with Key National and International Stakeholders

Professional bodies in Malaysia are well connected with their respective local, regional and international counterparts. Each professional body has a local counterpart in the form of learned society of the professional community and this counterpart normally is a non-profit-organisation. For example, the learned society for medical professionals is the Malaysian Medical Association while learned society for architects is the Malaysian Architects Association. All professional bodies are well connected with regional and international organisations of their professional community. For example, the Board of Engineers Malaysia (BEM) has signed several agreements and accords under the International Engineering Alliance. The BEM has also together with the Institution of Engineers Malaysia (IEM) and the Association of Consulting Engineers Malaysia (ACEM) formed the National Monitoring Committee to keep abreast with the industry. This Committee represents the Board at forum/conferences related to International Professional Engineering Practices, the International Engineering Alliance, the ASEAN Mutual Recognition Agreement and other matters related to engineering best practices.

6.4.9 Control, Audit and Assessment of Operations

As public organisations, professional bodies in Malaysia also implement government requirements on governance and this includes continuous monitoring and reviewing

their systems and activities. Some professional bodies are also certified to MS ISO 9001: 2008 (or its latest version of 2015) which provide another level of external review of its operation.

6.4.10 Dissemination of Information

All professional bodies which have joint-accreditation exercises with the MQA provide, maintain and update their rules, standards, procedures and guidelines on their respective websites. They also publish their registers or lists of accredited qualifications as well as other information, announcements, activities and news. Examples of these websites are as follows:

- i. Board of Land Surveyors Malaysia: <http://www.ljt.org.my/>
- ii. Pharmacy Board Malaysia:
<https://www.pharmacy.gov.my/v2/en/content/pharmacy-board.html>
- iii. Malaysia Board of Technologists: <http://www.mbot.org.my/>

6.5 Department of Skills Development

6.5.1 The Vision, Mission and Common Goals Statements

The vision of the DSD is ‘to be a World Class Leader in the Development of Skilled Human Resources’. In pursuit of the vision, the DSD has in place its mission “to develop Knowledge Workers (K-Workers) with a Competitive Edge”. The vision serves as a guide for the Department to move forward its long term aspirations. The mission statement reflects the Department’s desire and ultimate goals to become a leading agency in skills training and to produce skilled and competitive human resource at the national level and recognised internationally. The DSD has set two main objectives in order to achieve its strategic aspirations:

- i. Coordinate and regulate the implementation of skills training to produce knowledgeable workers to meet the needs of the job market and be recognised at national and international level and
- ii. Conduct research on standards, skills training system and development of expertise among youths to improve the quality of the skilled workforce that can contribute to the economic growth of the country.

The implementation of the DSD's strategic initiatives is guided by the Master Plan for Occupational Skills Development (2008 – 2020) and the Ministry of Human Resources Strategic Plan (2016 – 2020).

6.5.2 Legal Mandate

The DSD, under the Ministry of Human Resources, was established in May 1989 and was known as the National Vocational Training Council (NVTC). The NVTC was changed to the Department of Skills Development under the National Skills Development Act, 2006 (NASDA) or Act 652 on 1st September 2006. The NASDA provides for the DSD to carry out the functions of formulating, promoting and coordinating Malaysia's vocational and industrial training in meeting the country's needs for technological and economic development. The Act specifically assigns the DSD with responsibilities to:

- i. accredit skills training programme based on National Occupational Skills Standards (NOSS);
- ii. coordinate, regulate and promote the implementation of the Malaysian Skills Certification System;
- iii. develop, review and regulate NOSS according to industry requirements;
- iv. promote skills training for the development and improvement of the abilities of a person needed for vocation.

As stated in S. 22 of the NASDA (2006), NOSS is used to develop a national curriculum for skills training programmes, which must be complied by all accredited skills programmes and used as a measure of proficiency leading to the Malaysian Skills Certificate. The NASDA (2006) also outlines other key provisions, among others, on the National Skills Development Council, accreditation, certification and recognition, appeal, inspections of providers, enforcement as well as offences and penalties.

6.5.3 Autonomy for Decision Making

The DSD derives many of its powers, roles and responsibilities from the NASDA, 2006. In carrying out its various affairs, key decision-making units in the DSD are listed in Table 15.

Table 15: Key Decision Making Committees of DSD

No.	Committees
1.	National Skills Development Council is an apex body that approves the National Occupational Skills Standard (NOSS) and advises the Minister of Human Resources on matters relating to skills development. The Council is made up of a non-executive Chairman and 21 members representing various industries, industry associations and government agencies as well as skills experts appointed by the Minister. The Director General of the DSD is one of the members of the Council.
2.	Technical Committee is responsible for receiving accreditation reports prepared by assessors and decides on the accreditation of skills centres. The committee also decides on personnel recognition as well as policy and procedures of the Malaysian Skills Certification System.
3.	Skills Development Advisory Committee/Industry Lead Body consisting of industry representatives were established to provide technical advice based on the current technology development and needs of the industry.
4.	Skills Qualifications Evaluation and Recognition Committee is responsible for the evaluation and recognition of any skills qualifications issued by other organisations within and outside Malaysia.
5.	Standards Technical Committee (STC) and Standards Technical Evaluation Committee (STEC) were set up to verify the NOSS for the sector or industries. The committee consists of members who have substantial knowledge and expertise in primary sector industries.

6.5.4 Appointment of Council Members

The National Skills Development Council (NSDC) is an apex body that approves NOSS and advises the Minister of Human Resources on matters relating to skills development. The Council is made up of a Chairman, the Director General of the DSD and 19 other members representing various organisations. The Council members are appointed by the Minister of Human Resources for a period of not more than three years in accordance with criteria set out by the NASDA, 2006 as shown in Table 16:

Table 16: The Composition of the National Skills Development Council

1.	Chairman
2.	Director General, Department of Skills Development
3.	nine other members of whom: (i). one is a member representing the Economic Planning Unit in the Prime Minister's Department; (ii). one is a member representing the Public Services Department;

	<ul style="list-style-type: none"> (iii) one is a member representing the Ministry responsible for education; (iv) one is a member representing the Ministry responsible for higher education; (v) one is a member representing the Ministry responsible for human resources; (vi) one is a member representing the Ministry responsible for youth and sports; (vii) one is a member representing the Ministry responsible for entrepreneur development; (viii) one is a member representing the Ministry responsible for agriculture; and (ix) one is a member representing the Ministry responsible for public works;
4.	<ul style="list-style-type: none"> ten other members of whom— (i) six are members representing the private sector; (ii) one is a member representing private skills training providers; (iii) one is a member representing women’s organisations; and (iv) two are members who possess, in the opinion of the Minister, special knowledge or experience in skills training.

6.5.5 Governance Structure and Management System

The organisational structure of DSD (see Figure 17) shows the functional division, the chain of command and communication in the Department. In summary, the operation of the DSD covers nine divisions at the Department’s headquarters (in Putrajaya and Cyberjaya), six regional offices (north, south, east and central of Peninsular Malaysia as well as one each in Sabah and Sarawak) and one Center for Advanced Instructor and Skills Training (CIAST). A director heads each division, regional office and the training centre.

The top management of the DSD is led by the Director General of Skills Development to achieve its vision, mission and objectives. The Director-General is assisted by two (2) Deputy Director General of Operations and Development. Deputy Director General (Operation) is responsible for activities related to accreditation, certification, assessment, NOSS development and QA. The Deputy Director General (Development) is responsible for matters relating to the formulation and establishment of policies, regulations, inspections and enforcement, regional offices, strategic cooperation and promotion of skills training.

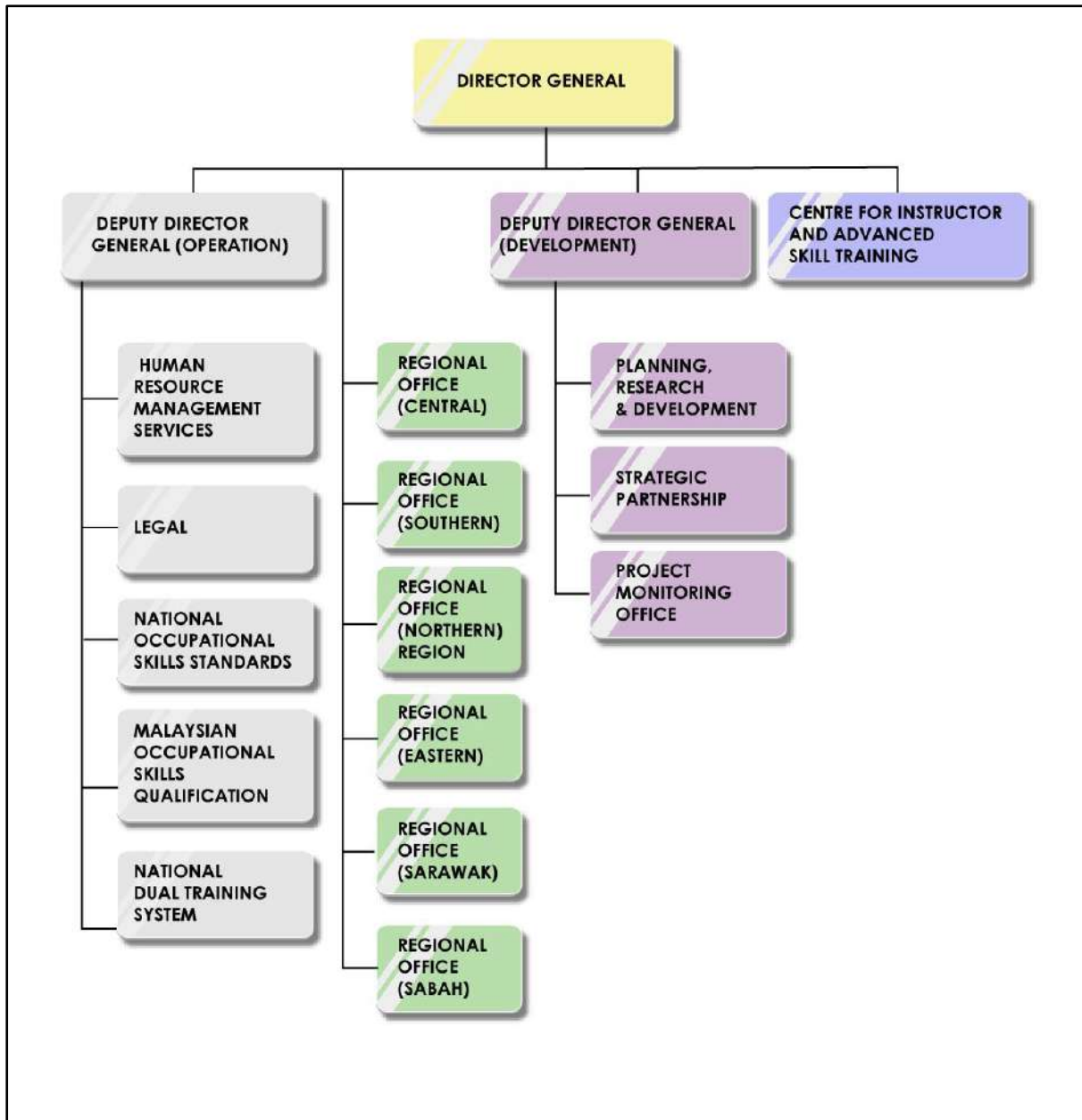


Figure 16: Organisational Chart of DSD

In order to maintain its QA process and good practices, the DSD is certified to MS ISO 9001:2015 for four main activities namely (i) accreditation of training providers, (ii) National Dual Training System, (iii) development of NOSS and (iv) enforcement and monitoring. DSD has also been accredited to ISO/IEC 17024:2012 and ISO 9712:2012 by the Department of Standards Malaysia as a body operating certification of personnel for the scope of Non-Destructive Testing since 2012.

The DSD has developed various policy documents such as manuals and guidelines for skills training implementation, assessment, personnel, external verifier, and fees and charges regulation.

6.5.6 New Developments and Innovations in Quality Assurance

The DSD actively collaborate with the Industry Lead Bodies (ILB) in the analysis of the current needs of the industry and this includes undertaking research to identify supply versus demand, emerging technologies, as well as job creation and job enrichment opportunities.

Continuous and professional staff development is an important commitment of the DSD. This has helped the Department to improve productivity, enhance its customer services, acquire new skills and knowledge relating to skills training for its staff, policies and practice as well as to keep abreast with QA related matters. The staff also undergoes various forms of training such as workshops, seminars, and induction courses on government regulations and policies. There are many short and long courses offered by the Public Service Department and various agencies. The staff can apply for training and skills upgrading in generic and functional competency areas as identified through annual performance appraisal.

Since QA is the DSD's main objective, all staff especially those who are involved in accreditation and certification tasks require specific QA training. In addition, the DSD also offers industrial internship programmes for industrial exposure and skills upgrading.

6.5.7 Resources

The DSD has 630 staff recruited and managed by the Public Service Department (PSD). This workforce supports the Department's operations and activities at the headquarter as well as seven offices nationwide including CIAST.

As a federal government department, the DSD's operations and activities are largely funded by government grants provided through the annual budgetary allocations. The DSD also imposes a fee for its accreditation services on skills centres.

The DSD has continuously enhanced its operations and administration through the expansion of its IT system and infrastructure. Thus far, the DSD has developed eight online support systems for internal use which includes, among others, e-Kursus System (for training management), myMesyuarat System (for management of meetings), HRMIS (for human resource management, SPA system (for asset management), eMASA (for staff attendance) and Knowledge Bank System (for records management). Various online systems are also available to clients such as eSPKM (for accreditation of skills centres and certification) and Sistem Daftar Perantis SLDN (for apprentice registration).

6.5.8 Collaboration with Key National and International Stakeholders

The DSD has established strategic partnerships with various organisations, particularly employers and the industries, aimed at supporting the development of training, innovative implementation, peer learning and active exchange of expertise.

The Industry Lead Body (ILB) is the main body representing a specific industry sector appointed by the MoHR as a strategic partner in determining the industry's needs for the development of skilled workers, enhancing the acceptance of the skills-testing industry and becoming the driver of skilled worker development and training.

The DSD has also signed MoUs and joint statements with local and international organisations. Thus far, the DSD has signed MOUs with 24 organizations with the aims, among others, of promoting the Malaysian Skills Certification System locally and abroad, sharing and exchanging expertise in training, standards and accreditation, joint research and analysis as well as promoting mobility and recognition of skills graduates.

The DSD has actively been involved in many international activities and has hosted the ASEAN Skills Competition in 2011 and 2016 in Kuala Lumpur.

6.5.9 Control, Audit and Assessment of Operations

As a government department, the DSD is committed to ensuring that the policies, processes and procedures implemented by the Department comply with government regulations. It is common for all government departments to have this planned

implementation system which is regularly reviewed in terms of governance and finance effectiveness through internal audit mechanisms and external audits carried out by the National Audit Department.

The DSD is also audited periodically by SIRIM and Department of Standards Malaysia (DSM) to ensure compliance with accreditation requirements.

6.5.10 Dissemination of Information

To ensure easy and timely access, all the DSD's publications and information are available on the [DSD's portal](#). This information includes (i) standards, procedures, circulars and announcements relating to accreditation of skills programmes and Malaysian Skills Certification System (e.g., NOSS registration, KAPPK), (ii) services such as student registration, and (iii) news and activities related to skills such as skills competitions, the DSD's activities, annual achievements and reports, online services as well as customer feedback and complaints.

The DSD continually engages stakeholders through dialogues and town hall sessions to get their feedback in drafting new policies, standards and guidelines. Once the new policies, standards and guidelines are finalised, the DSD organises public engagement programmes through roadshows and exhibitions.

The DSD also embarked on the Skills Malaysia programme, a campaign to raise public awareness on the opportunities provided by skills training and the job prospect for various groups of the society. The campaigns also highlight the contribution of the skills training sectors to enable Malaysia to become a high-income nation.

The DSD also uses the following social media platform to disseminate information:

<https://twitter.com/dsdmohr>

<https://www.facebook.com/jpkksm/>

6.5.11 Student and Society-Focused Quality Assurance

The most important objective of the DSD's QA principles and procedures is to ensure that assessment of the qualifications is sufficient, valid and reliable i.e., that only candidates who have demonstrated the competencies required by a qualification

receive certification. The development and revision of NOSS ensure that skills needed by the industries and society are available for economic growth.

6.5.12 Overview of Quality Assurance Process in the Skills Sector

The DSD has a clear mission in implementing its function as a QA body through established strategic action plan. As a competent body, the DSD must ensure that its QA elements and principle are streamlined to the MQF through the MOSQF. The DSD is committed to quality assured its qualifications to ensure public recognition locally and internationally. In general, the DSD's QA is based upon the following principles such as governance, accountability, transparency, independence, confidence and standards, continuous improvement, proportionality, flexibility of services and collaboration.

DSD has made available all information on the official DSD portal to ensure the public is informed and aware of news, information and services which relates to the latest NOSS registry, accreditation and implementation of the Malaysian Skills Certification System, student's registration, skills competitions, all of the DSD's activities, achievements and annual reports, online service offerings as well as customers' feedback and complaints. In addition, stakeholder consultations are always conducted to obtain their feedback before a new guideline or policy is drafted and published. Once the guideline or policy comes into effect, roadshows are carried out for stakeholders' awareness.

Accreditation is a procedure by which the Director General of the DSD evaluates and approves a skills training programme. It was established under Part V (Accreditation) in Act 652. Training providers must be accredited by the DSD to enable certification to be awarded to their student. An accredited centre is a skills training provider which has been authorised by the Director General of the DSD to conduct accredited programme (NOSS-based programme) leading to the award of a certificate.

The accreditation process involves several stages as follows:

- i. The Training Provider (TP) submits the relevant documents for programme accreditation to the DSD for evaluation.

- ii. The application must be accompanied by the required fee in order to be considered for the accreditation process.
- iii. The DSD scrutinises the documents to ensure that they are complete.
- iv. The DSD appoints a Panel of Accreditation Assessors (PPPPK) from a pool of Accreditation Assessors (POAA) who have been endorsed by the Technical Committee to perform an evaluation exercise at accredited training centres based in stipulated timeline and process.
- v. The POAA produces a report stating the appropriate recommendation of accreditation upon completion of the assessment visit. Preliminary results of the evaluation will be given to the relevant DSD officer. Any reported deficiencies must be corrected by the training provider within a specific date. The recommendation of accreditation will be presented to and endorsed by the Technical Committee.
- vi. For successful applications, the training providers will be awarded the accreditation approval letter and certificate for a particular programme. The accredited programme, upon completion of specified requirements, will be listed in the accredited centre's registry which is available on the DSD portal and also linked to MQR at <http://www2.mqa.gov.my/mqr/>.

6.5.13 Monitoring of Accredited Centres

All accredited centres must establish an Assessment Panel (PPPB) and Technical Advisory Committee (TAC) as part of their Internal Quality Assurance System. To ensure the quality of the Malaysian Skills Certification System is maintained, the DSD has a structured monitoring process as listed below.

- i. Enforcement and inspection visits will be carried out on any accredited centres if it fails to comply with stipulated QA requirements under Act 652.
- ii. Regular monitoring and inspection visit to ensure the accredited centres complies with all requirements.
- iii. Verification visit by external verifier for student verification.
- iv. Programme rating is conducted every two years as an effort to enhance the culture of continuous quality improvement in the accredited centres, which complements the QA process of the DSD.

- v. Programme renewal for every three years of accreditation allows re-evaluation of the AC performance.

6.5.13.1 Verification of Trainee Competencies

For the purpose of student certification, the DSD sets a mechanism to conduct verification of trainee competencies for the purposes of verifying students' competencies at the end of the training. The verification of trainee competencies is a procedure by which the DSD evaluates and verifies that a student meets all the NOSS and other certification requirements, whichever appropriate. The DSD appoints a qualified external assessor to verify a student's competencies for the purpose of certification. No person shall be awarded a certificate unless he/she satisfies the requirements set by the DSD under the Malaysian Skills Certification System as stated below.

- i. Registered in the programme
- ii. Competent in all assessment component for all Competency Units in that NOSS
- iii. Pass in National Competency Standard Core Abilities
- iv. Completed the training duration as stipulated by the DSD
- v. Verified by appointed External Verifier

6.5.13.2 External Verifier and Verification Visit

A qualified external verifier is appointed from a pool of assessors by the DSD to evaluate the candidate for certification. To be a qualified verifier, the assessor must meet all criteria, such as he/she must be approved and registered as an expert in any sector or subsector (a candidate will be limited to only one sector of expertise), passed the prescribed examination and course, and possess at least the same level of skills certificate in the field to be assigned. An external verifier validates and endorses the candidate's competencies and to recommend certification.

6.5.14 Commitment to Timeliness and Transparency

The DSD has client charters as a reference in delivering service to customers and every customer complaint is processed through the established procedures to ensure an optimum level of customer service satisfaction. The DSD's client charters related to its core business are as follows:

- i. accreditation process within three months from the acceptance date of each application with a minimum of 90% completion
- ii. to process all completed applications for Recognition of Personnel Accreditation and National Industry Experts within 50 days from the acceptance date
- iii. respond to the public complaint within three days from the date the complaint is received.

6.5.15 Training, Professionalism and Ethical Conduct of Assessors

The DSD ensures the appointment of an accreditation appraisal panel takes into account their background and professional expertise covering industry/teaching experience, curriculum development and community relations.

The DSD also monitors the performance of assessors on an ongoing basis based on the assignments completed. For every assignment, an assessor is required to declare any form of conflict of interest with regard to the applicant to be evaluated. The DSD will not give the assessor any assignments and also will not renew their registration if it is found that they did not maintain professionalism and ethics in conducting their assignments.

6.5.16 Appeal Mechanism

S. 31 of the NASDA, 2006 also provides for accredited training centres to appeal against any decision of the DSD to refuse, suspend or revoke an accreditation.

Criterion 7: Acceptance and Endorsement

The process of referencing has been devised by the main public authority and has been endorsed by the main stakeholders in the qualifications system

As noted in Criterion 2, the referencing exercise is the responsibility of the MyAQRf which represents various government agencies responsible for education, training, employment and trade. The MyAQRf also comprises representatives of higher education and skills providers as well as representatives of industry, employers and employees.

The development of the referencing report was the task of the Malaysian AQRf Working Committee comprising senior quality assurance officers from the MQA and the DSD, QA reviewers and QA experts.

The report has been progressively endorsed by the MyAQRf as two earlier incomplete reports have been tabled in AQRf Workshops for feedback. A face to face stakeholder consultation session was held on the 19th October 2018 to present the key elements of the report to major stakeholders. In addition, an online consultation mechanism was created to ensure widest possible engagement of all interested parties.

The final report was submitted for endorsement by the MyAQRf on 19th March 2019 after addressing the comments from the AQRf Committee, consultants, partners, international reviewers and the feedback from the stakeholder's consultation³⁸. The members of MyAQRf comprising representatives of regulatory and related ministries, QA agencies, private HEPs, skills training centres, employers, and employees have unanimously approved the complete and final AQRf referencing report. Both the MQA Council and MOE have also been briefed on the contents of the final report.

³⁸ Higher Education & Training Providers (47), Association of Higher Education and Training Providers (25), Representatives of workers, industries & employers (22), Assessors & Professional Bodies (17), MQA and DSD Officers (23) and Government Agencies (18).

Criterion 8: International Reviewers and Observers

People from other countries who are experienced in the field of qualifications are involved in the referencing process and its reporting.

8.1 International Experts

As required by the AQRF referencing guideline, two international experts were invited to review the report for clarity and adequacy. The two international experts have good knowledge of the Malaysian quality assurance and qualifications systems to act as critical friends. Although a variety of roles can be played by the international experts in the referencing process, Dr. Bryan Maguire and Dorte Kristofferson were tasked with reviewing the report in terms of the referencing guidelines.

Dorte Kristoffersen is an experienced quality assurance professional with a strong international profile having held senior executive positions in quality assurance bodies around the world. She was Executive Director of Hong Kong Council for Accreditation of Academic and Vocational Qualifications (HKCAAVQ) from November 2015 to January 2018 and previously deputy executive director of HKCAAVQ from October 2007 to December 2009 and from October 2014 to October 2015. Kristoffersen was one of the inaugural Commissioners of the Tertiary Education Quality and Standards Agency (TEQSA) in Australia from 2011 to 2014. Prior to this appointment, she was Vice President for Policy and Research of the Accreditation Commission for Community and Junior Colleges (ACCJC) under the Western Association of Schools and Colleges (WASC) in California. She was an audit director with the Australian Universities Quality Agency from 2004 to 2007. She started her career in quality assurance in the national Danish Evaluation Institute in 1992. She was Deputy Director and Director of Development at the time of her departure in 2004. Kristoffersen has been involved in a range of international projects such as the establishment of the European Association of Quality Assurance in Higher Education (ENQA) and the Asia Pacific Quality Network (APQN) and she was an inaugural member of the European Quality Assurance Register Committee (EQAR). She has chaired and been a panel

member of numerous panels reviewing quality assurance agencies and higher education institutions.

Dr. Bryan Maguire is Director of Quality Assurance at Quality and Qualifications Ireland (QQI). He had served from 2005 as Director of Academic Affairs at the Higher Education and Training Awards Council, one of QQI's predecessor bodies. He previously served as Lecturer in Psychology with University of Wales, Bangor and as Development Officer in the preparation of Ireland's National Framework of Qualifications. He has written and consulted extensively on qualifications frameworks in Ireland and throughout the world. He is a member of the Dental Council of Ireland and the Apprenticeship Council of Ireland.

Both of these experts were chosen because of their expertise and in-depth knowledge in various aspects of qualifications framework and quality assurance in terms of system development, operation and improvement as well as external reviewers of which all are carried out at national, regional and international levels.

Both experts are familiar with the implementation of qualifications framework and quality assurance in Malaysia as external reviewers for the MQA alignment process with the International Network for Quality Assurance Agencies in Higher Education (INQAAHE) Guidelines of Good Practice (Dorte Kristoffersen) and two comparability exercises between the MQA and the NZQA (Dr. Bryan Maguire).

Key Observations by Experts

Kristofferson noted that the report was comprehensive and thorough, the analyses are transparent and well argued (in reference to criterion 4) and overall it “leaves little room for improvement”. For further improvement, she suggested that more information be provided on the MQR as the public face of the MQF; include pathways diagram showing Skills, Technical-Vocational and Academic progression and provides links to quality assurance documents at the MQA, the DSD and professional bodies. Most of the suggestions have paralleled similar suggestions in the AQRF workshops and have been addressed.

Dr. Bryan notes that the report is highly analytical and seeks to show compliance with the referencing criteria. He called for basic demographic information to be included in Criterion 1 to better appreciate the context of education and training in Malaysia; to consider incorporating information on the MQF, 2017 and harmonization of quality assurance system in Criterion 1; noted the absence of students in the AQRF consultation and suggested that some basic information on the AQAF be included in Criterion 6.

Demographic information has been added in Criterion 1 as suggested. Other suggestions have also been addressed within the context of the AQRF guidelines about the organisation of the report.

The reports of the experts with the responses are noted in Appendix 12 for further reference.

8.2 Observers

The AQRF referencing process involves two observers from Brunei Darussalam and Indonesia. They are;

- i. Ms. Jaayah Tuah, Senior Education Officer, Secretariat of Brunei Darussalam National Accreditation Council (BDNAC)
- ii. Dr. Hj. Rd. Funny Mustikasari Elita, M.Si, Kepala Satuan Penjaminan Mutu, Universitas Padjadjaran (UNPAD), Sumedang, Bandung, Indonesia

Observers participated in the stakeholder engagements held on 19th October 2018. Both observers are from ASEAN member states which have not started their referencing process. Their involvement provided options which they can consider when carrying out their respective consultation sessions in the future. The observers generally provided very encouraging feedback on the interaction in the stakeholder sessions. They were particularly interested in the online part of the consultation which provided more access to the process by interested groups which could not be present in the face to face session.

The observers were also pleased with the arrangements, presentation and exchanges that took place at the stakeholder consultation session. They liked the inclusivity afforded by the online consultation arrangements to reach a wider national audience. The Indonesian observer, however, noted the preponderance of urban stakeholders, on-site provision of report documents and large group consultation as limitation of the session. The preponderance of urban-based stakeholders is inevitable given the national HE concentration and, reports and other related documents were available online prior to the consultation session.

Criterion 9: Publication of the Referencing Report

One comprehensive report, setting out the referencing and the evidence supporting it shall be published by the competent national bodies and shall address separately and in order of each of the referencing criteria

A single and comprehensive referencing report addressing each of the criteria was prepared by MyAQRf Committee and received the support of key stakeholders. This report will be published within **four weeks** of receiving official notification of the endorsement of the AQRf Referencing Report by the AQRf Committee and after duly notifying the Malaysian Cabinet of the same.

The AQRf Committee endorsed referencing report will be published on the Malaysian Qualifications Agency website with links provided in all stakeholders' website for communication and access.

Criterion 10: Publication of Report

The outcome of referencing is published by the ASEAN Secretariat and by the main national public body

The AQRF Committee endorsed referencing report will be published by the MyAQRF/MQA for public knowledge and reference as noted in Criterion 9.

Criterion 11: AQRF Reference in Malaysian Qualifications

Following the referencing process all certification and awarding bodies are encouraged to indicate a clear reference to the appropriate AQRF level on new qualifications certificates, diplomas issued

MQA introduced the Malaysian Qualification Statement (MQS) in 2015 for voluntary adoption by HEPs. The MQS describes the qualifications in detail using a standard format designed to be easily understood. The MQS is a document-aimed at improving international transparency and facilitating the academic and professional recognition of Malaysian graduates for talent and student mobility.

The MQS requires the HEPs to indicate the MQF level of the qualification. This requirement will be expanded to include the corresponding AQRF level. This will enable the stakeholders to make informed and accurate judgements about Malaysian qualifications for employment, further studies and credit recognition.

The AQRF referencing will also be appropriately stated in the Malaysian Qualifications Register.

HEPs will also be encouraged to mention the appropriate AQRF level in their promotion or else any communication of their MQF-accredited qualifications.

Future Plans and Next Steps

12.1 On-going Higher Education Initiatives

Although there are many initiatives underway for higher education in Malaysia, the following three changes are significantly related to the referencing exercise. The first two changes do not involve structural changes. They mostly represent attempts to update, improve and align the MQF and COPPA for a more robust national qualifications system. The third initiative enhances the unified and national nature of the MQF through greater harmonisation between the MQA and DSD for accreditation of technical-vocational and skills qualifications.

The ultimate purpose of these changes is to enhance international comparability of the MQF and accredited qualifications, and the quality of Malaysian higher education and training. These enhancements were part of the MQA's strategic directions and a result of lessons learned from benchmarking exercises.

12.2 Malaysian Qualifications Framework, 2017

The first edition of the MQF is slightly more than a decade old. In this period, the MQA has learnt a lot from its implementation and also realised the need to refresh it to be responsive to the changes taking place in and around the region. This led to the revised second edition of the MQF called MQF, 2017.

The MQF, 2017 was approved by the Council of MQA in December 2017 and will be implemented from 1st April 2019. In the interim, the MQA is holding workshops and roadshows to inform, educate and train higher education providers (HEPs) on the implementation of the revised framework.

MQF, 2017 retains the same structural features of the MQF i.e., eight levels of descriptors, learning outcomes for each level and a credit-based framework. Its key new features are as follows:

- i. It is a unified and single framework of qualifications which recognises the qualifications progression routes across the academic, TVET and skills sectors and consolidating them into 2 sectors i.e. academic and TVET. This

feature highlights the unified nature of the framework that caters to work and study at all levels.

- ii. It sets generic learning outcomes descriptors for each level (including levels 1 to 2 that were grouped together in MQF, 2007). These descriptors are applicable to academic and TVET type qualifications described in the context of “study and/or work”.
- iii. The eight learning outcome domains (with 16 subdomains) of the MQF 2007 have been clustered, re-profiled and retained to resonate with and align to the National Education Philosophy (1961), the Malaysian Education Blueprint (2013-2025) and the Malaysian Education Blueprint (2015-2025) (Higher Education). The five clusters of learning outcomes featured in the MQF, 2017 are closely aligned with the two domains (knowledge and skills & responsibility and application) and 4 competency typology (cognitive, functional, personal and ethical competencies) of the AQR. The clusters are:
 - a. Knowledge and understanding;
 - b. Cognitive skills;
 - c. Functional skills;
 - practical skills,
 - interpersonal skills,
 - communication skills,
 - digital skills,
 - numeracy skills,
 - leadership, autonomy and responsibility
 - d. Personal and entrepreneurial skills;
 - e. Ethics and professionalism.
- iv. It provides flexibility and option for variants within specific qualifications, for example, bachelors programmes that may have academic and professional orientations.

- v. It enhances the coherence between qualification levels across the academic and the TVET sectors, improves efficiency on articulation, clarifies learning pathways and better supports lifelong learning.

The revised MQF 2017 is aimed at strengthening the qualifications at all levels, reflecting the new needs for an agile workforce and citizenship.

12.3 Code of Practice for Programme Accreditation, 2018

The COPPA was introduced in 2008 to guide all submissions by HEPs for provisional and full accreditation by the MQA. The 2008 version had 100 benchmarked standards and 59 enhanced standards covering nine areas of evaluation. For successful accreditation, HEPs must meet all benchmark standards at least a satisfactory level.

The revised COPPA, 2018 has a single tier of 98 standards covering seven areas of evaluation. The reclassification of the areas of evaluation from nine to seven was achieved through the merging of two pairs of areas which have strong affinity and natural connectivity. The 7 areas of evaluations are:

- i. Programme development and delivery
- ii. Assessment of student learning
- iii. Student selection and support services
- iv. Academic staff
- v. Educational resources
- vi. Programme management
- vii. Programme monitoring, review and continual quality improvement

Although the enhanced standards have been removed from the COPPA, the GGPs continue to offer guides to good practices which all HEPs are expected to aspire to over time and which will be important in nominating providers for self-accreditation status.

12.3 Single Quality Assurance System for TVET

Malaysia has two major agencies which carry out accreditation of higher education qualifications, namely, the MQA under the MQA Act, 2007 and the DSD under the NASDA, 2006. The scope, powers, approach and processes are provided in their respective Acts. To further enhance the single and unified nature of the MQF, an initiative to harmonise the processes and procedures in quality assuring skills and technical and vocational qualifications was started under the aegis of Economic Planning Unit of the then Prime Minister's Department. The initiative called for the establishment of a common and generic TVET standard and a harmonised process with mutual recognition of the accreditation outcomes by both agencies.

A team of experts comprising representatives from the MQA, the DSD and other providers of skills and TVET training have worked for a year on the standard which has already gone through public consultation and review. The final draft has been endorsed by the councils of both agencies and is ready for endorsement together with several related policy issues that need higher level consideration and decision.

The proposed generic TVET standard, with strong emphasis on industry component, defines and provides operational guidance on the design, structure, content, entry requirements, credits, pedagogy, teaching staff and assessment for all TVET programmes within which industry and other occupational standards can be embedded. This standard only addresses TVET programmes from Levels 1 through to 5 consistent with the NASDA, 2006.

Another team of the MQA and the DSD staff has developed a proposal to harmonise the process from application to registration of qualifications from levels 1 through to 5. This involves common application forms, fees, shared assessors' pool, using respective decision channels but with cross-membership from both agencies to enhance transparency and confidence in each other's processes.

12.4 Keeping Abreast with the Industrial Revolution (IR) 4.0 and Beyond

There is a broad-based initiative to re-examine national framework, accreditation, standards and guidelines used by accreditation and professional bodies in assuring high-quality programmes, qualifications and graduates. The imperatives of the IR 4.0 and its implication have become a part of the Malaysian Higher Education 4.0 Blueprint. The blueprint calls for curricular and pedagogical changes in response to the impending changes forecasted by the World Economic Forum.

The techno-economic changes require new knowledge and skills, hence new programmes, qualifications and even micro-qualifications/credentials. It also calls for more cross-cutting and pervasive changes in higher education and training relating to digital skills, creativity, innovation and big data capabilities.

This will require a constant review on quality assurance system, validation of achievement and awarding qualification to suit the future discoveries on new forms of knowledge, learning and learners. There will be continuous effort to publish appropriate guides to balance between promoting and facilitating innovations and quality risk on the learners.

**Appendix 1: List of Legislations under the Responsibility of Government
Agencies as Represented in the MyAQRF Committee**

No.	Organisations	Legislations
1.	Malaysian Qualifications Agency	<ul style="list-style-type: none"> ● Malaysian Qualifications Agency Act 2007
2.	Ministry of Education	<ul style="list-style-type: none"> ● Malaysian Examinations Council Act 1980 ● Universities and University Colleges Act 1971 ● Private Higher Educational Institutions Act 1996 ● National Council on Higher Education Act 1996 ● National Higher Education Fund Corporation Act 1997 ● Malaysian Qualifications Agency Act 2007 ● Educational Institutions (Discipline) Act 1976 ● Education Act 1996
3.	Ministry of Human Resources	<ul style="list-style-type: none"> ● Employment Act 1955 ● Trade Union Act 1959 ● Human Resources Development Act 2001 ● Skills Development Fund Act 2004 ● National Skills Development Act 2006
4.	Ministry of Foreign Affairs	<ul style="list-style-type: none"> ● No specific legislation
5.	Ministry of International Trade and Industry	<ul style="list-style-type: none"> ● Industrial Coordination Act 1975 ● Promotion of Investments Act 1986 ● Malaysian Industrial Development Authority (Incorporation) Act 1965 ● Malaysia External Trade Development Corporation Act 1992 ● National Productivity Corporation (Incorporation) Act 1966
6.	Ministry of Tourism, Arts and Culture	<ul style="list-style-type: none"> ● Tourism Industry Act 1992 ● Malaysia Tourism Promotion Board Act 1992

Appendix 2: MyAQRf Working Committee

1. Prof. Dr. Hazman Shah Abdullah, Deputy Chief Executive Officer (Quality Assurance) (retired on May 2018 and appointed as MQA Expert Fellow on 1 September 2018), MQA
2. Zita Mohd Fahmi, Fellow Consultant (Quality Assurance)
3. Soo Sit Chuan, Senior Director, Subsector Policy and Expertise Development (retired), MQA
4. Lilian Kek Siew Yick, Senior Director, Subsector Accreditation, MQA
5. Mohamad Dzafir Mustafa, Senior Director, Subsector Policy and Expertise Development, MQA
6. Norasikin Yahya, Director, MQA Training Centre, MQA
7. Syahrizan Shamsuddin, Senior Principal Assistant Director, Standards Division, MQA
8. Zabib Bakar, Head, Public and International Affairs Unit, MQA
9. Dr. Mohd Rashid Buyong Hamzah, Deputy Director General, Department of Skills Development, Ministry of Human Resources
10. Shamsida Zainal Abidin, Deputy Director, Department of Skills Development, Ministry of Human Resources
11. Dr. Alina Abdul Rahman, Principal Assistant Director, Department of Skills Development, Ministry of Human Resources
12. Dr. Zool Hilmi Mohamed Ashari, Principal Assistant Director, Department of Skills Development, Ministry of Human Resources
13. Prof. Dr. Ir. Shahrir Abdullah, Universiti Kebangsaan Malaysia
14. Wendy Chang, Swinburne University of Technology Sarawak Campus

Contributors

1. Dato' Dr. Rahmah Mohamed, Chief Executive Officer, MQA and Chair of MyAQRf Committee
2. Mazlinawati Mohamed, Director, Standards Division, MQA
3. Nabisah K. Kunheen, Director, Accreditation (Engineering and Technology) Division, MQA
4. Siti Elija Jamaluddin, Senior Assistant Director, Accreditation (Social Sciences) Division, MQA

5. Suhartini Samsudin, Senior Assistant Director, Public and International Affairs, MQA
6. Fairul Nahar Baharuddin, Assistant Director, Public and International Affairs, MQA
7. Nagaletchumy A/P Sittamparam, Assistant Director, Public and International Affairs, MQA
8. Annurul Asyiqin Md. Yusop, Assistant Director, Public and International Affairs, MQA
9. Meena Ramalingam, Director, Department of Skills Development, Ministry of Human Resources
10. Molinda Abdul Rahman, Director, Department of Skills Development, Ministry of Human Resources
11. Nurhida Shahrudin, Principal Assistant Director, Department of Skills Development, Ministry of Human Resources
12. Dr Wan Nasarudin Wan Jalal, Principal Assistant Director, Department of Skills Development, Ministry of Human Resources
13. Yuslan Yasok, Principal Assistant Director, Department of Skills Development, Ministry of Human Resources
14. Suhaila Abdul Samad, Principal Assistant Director, Department of Skills Development, Ministry of Human Resources
15. Zaidah Rakon, Senior Assistant Director, Department of Skills Development, Ministry of Human Resources
16. Muhammad Shawwal Mohamad Rawi, Assistant Director, Department of Skills Development, Ministry of Human Resources

**Appendix 3-1: A Typical Format in Describing the Learning Outcomes Mapping
and Alignment in a Programme Submission**

**(extracted from the MQA-01 Form - programme submission for provisional
accreditation)**

- 1.1.3 a) State the educational objectives, learning outcomes, teaching and learning strategies, and assessment of the programme.
- b) Map the programme learning outcomes (PLO) against the programme educational objectives (PEO). (Provide information in Table 1).

Table 1: Matrix of Programme Learning Outcomes (PLO) against the Programme Educational Objectives (PEO).

Programme Learning Outcomes (PLO)	Programme Educational Objectives (PEO)			
	PEO1	PEO2	PEO3	PEO4
PLO 1				
PLO 2				
PLO 3				
PLO 4				
PLO 5				

- c) Describe the strategies for the attainment of PLOs in term of teaching and learning strategies and assessment.
- 1.1.4 Map the programme learning outcomes to MQF level descriptors and the eight MQF learning outcomes domains.

1.2.4 ...

- c) Provide a brief description for each course offered in the programme.
Please arrange the courses by year and semester as in Table 3.

No.	Semester/ Year Offered	Name and Code of Course	Classification (Compulsory Major/Minor/ Elective)	Credit Value	Programme Learning Outcomes (PLO)					Prerequisite/ co-requisite	Name(s) of Academic Staff
					PLO1	PLO2	PLO3	PLO4	PLO5		
1.											
2.											
3.											
4.											
5.											

- d) Provide information for each course, where applicable in Table 4.

Table 4: Course information

1.	Name and Code of Course:											
2.	Synopsis:											
3.	Name(s) of academic staff:											
4.	Semester and year offered:											
5.	Credit value:											
6.	Prerequisite/co-requisite (if any):											
7.	Course learning outcomes (CLO): CLO 1 - CLO 2 - CLO 3 -											
8.	Mapping of the Course Learning Outcomes to the Programme Learning Outcomes, Teaching Methods and Assessment:											
	Course Learning Outcomes (CLO)	Programme Learning Outcomes (PLO)									Teaching Methods	Assessment
PLO 1		PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7	PLO 8	PLO 9			

CLO 1											
CLO 2											
CLO 3											

Indicate the primary causal link between the CLO and PLO by ticking “✓” the appropriate box.

9. Distribution of Student Learning Time (SLT):

Course Content Outline	CLO*	Teaching and Learning Activities						Total SLT
		Guided Learning (F2F)				Guided Learning (NF2F) e.g. e-Learning	Independent Learning (NF2F)	
		L	T	P	O			
1								
2								
3								
4								
Continuous Assessment		Percentage (%)	F2F		NF2F		Total SLT	
1								
2								
Final Assessment		Percentage (%)	F2F		NF2F		Total SLT	
1								
2								
GRAND TOTAL SLT								

L = Lecture, T = Tutorial, P = Practical, O = Others, F2F = Face to Face, NF2F = Non Face to Face

*Indicate the CLO based on the CLO's numbering in Item 8.

10. Identify special requirement or resources to deliver the course e.g., software, nursery, computer lab, simulation room):

11. References (include required and further readings, and should be the most current):

12. Other additional information:

13. Other additional information:

Appendix 3-2: A Sample of Mapping of Courses to MQF Learning Outcome Domains of a Typical Diploma Programme in Event Management

No.	Course	MQF Learning Outcome Domains							
		Knowledge	Practical skills	Social skills and responsibilities	Values, attitudes and professionalism	Communication, leadership and team skills	Problem-solving and scientific skills	Information management and lifelong learning skills	Managerial and entrepreneurial skills
1	<i>Bahasa Melayu Komunikasi</i>	✓		✓	✓	✓		✓	
2	<i>Pengajian Malaysia</i>	✓		✓	✓	✓		✓	
3	English 1	✓		✓	✓	✓		✓	
4	English 2	✓		✓	✓	✓		✓	
5	English 3	✓		✓	✓	✓		✓	
6	Skill Enhancement	✓		✓	✓	✓		✓	
7	Social Entrepreneurship	✓		✓	✓	✓		✓	
8	Community Service	✓		✓					✓
9	Introduction to Event Management	✓						✓	✓
10	Introduction to Tourism Industry	✓						✓	✓
11	Food and Beverage Service Operation	✓	✓						
12	Event Protocol and Ethics	✓		✓	✓			✓	
13	Customer Service	✓		✓	✓			✓	
14	Volunteers Management for Events	✓							
15	Introduction to Management	✓							
16	Introduction to Accounting	✓			✓		✓		
17	Customer Relationship Management	✓		✓	✓			✓	

No.	Course	MQF Learning Outcome Domains							
		Knowledge	Practical skills	Social skills and responsibilities	Values, attitudes and professionalism	Communication, leadership and team skills	Problem-solving and scientific skills	Information management and lifelong learning skills	Managerial and entrepreneurial skills
18	Event Marketing	✓			✓	✓		✓	
19	Introduction to Human Resource	✓				✓		✓	
20	Sports Event Management	✓		✓	✓			✓	
21	Corporate and Special Event Management	✓		✓	✓			✓	
22	Event Planning	✓						✓	
23	Crowd Safety Management	✓			✓	✓			
24	Purchasing & Cost Control	✓					✓		
25	Event Facilities Management	✓			✓			✓	
26	Convention Management	✓		✓		✓		✓	
27	Legal Aspects in Hospitality Industry	✓			✓			✓	
28	Event Project	✓	✓	✓		✓	✓	✓	
29	Industrial Training	✓	✓	✓		✓	✓	✓	

Appendix 4: Malaysian Qualifications Register

(<http://www2.mqa.gov.my/mqr/>)

mqr@mqa.gov.my

MALYSIAN QUALIFICATIONS REGISTER
Malaysian Qualifications Agency



* Starting from 2007, MQA's accreditation is perpetual unless stated otherwise. All accredited qualifications are subject to periodic maintenance audit to ensure continuous improvement. If the accreditation of a qualification is revoked, the cessation date will be displayed in the Malaysian Qualifications Register. Qualifications previously accredited under National Accreditation Board of (Lembaga Akreditasi Negara, LAN) have a validity period of 5 years and this information is stated in the MQR for reference purposes.

* The verification of accreditation status of a programme will not be performed by MQA. This printed statement is sufficient for any related business.

Bachelor of Computer Science (Computer Networking) with Honours



Reference Number : MQA/FA1890
Certificate Number : 07048
Name of Qualification : Bachelor of Computer Science (Computer Networking) with Honours
Date of Accreditation* (dd/mm/yyyy) : Starting 09/01/2012
Compliance Audit :
Name of Institution : Universiti Teknikal Malaysia Melaka (UTeM)
Address : Hang Tuah Jaya
 76100 Durian Tunggal
 Malacca
Telephone Number : 06-270 1000
Fax Number : 06-270 1022
E-mail : webmaster@utem.edu.my
Website : www.utem.edu.my
Type : Bachelors Degree
MQF Level : 6
NEC Field (National Education Code) : 481 (Computer Science)
Number of Credits : 122
Mode of Study : Full Time

		Weeks/Semester	Semesters	Duration
Duration of Study (years) :	Long	17	7	3.5 year/s
	Short	-	-	

Remark(s) : NA

*NA : Not Available

Appendix 5: A Typical Format and Content of Curriculum of Competency Unit (CoCU) in the National Occupational Skills Standard (NOSS)

CURRICULUM of COMPETENCY UNIT (CoCU)

SECTOR	MACHINERY & EQUIPMENT						
SUB SECTOR	METAL MACHINING TECHNOLOGY						
JOB AREA	MACHINING						
NOSS TITLE	MACHINING OPERATION						
COMPETENCY UNIT TITLE	CNC MILLING MACHINE OPERATION						
PRE-REQUISITE (If applicable)	-						
LEARNING OUTCOME	<p>The person who is competent in CNC Milling Machine Operation shall be able to machine out component or part accurately by CNC programming as per product specifications and requirements.</p> <p>Upon completion of this competency unit, trainee will be able to :-</p> <ul style="list-style-type: none"> • Study detail drawing • Select CNC milling machine • Setup workpiece • Retrieve CNC program • Setup cutting tool • Execute CNC milling machine operation • Inspect finished product • Prepare product inspection report 						
COMPETENCY UNIT ID	MC-050-3-2015-C01	LEVEL	03	TRAINING DURATION	180 Hours	SKILLS CREDIT	18

Work Activities	Related Knowledge	Related Skills	Attitude / Safety / Environmental	Training Hours	Delivery Mode	Assessment Criteria
3. Setup workpiece	3.1 Work clamping device 3.2 Workpiece orientation 3.3 Workpiece alignment <ul style="list-style-type: none"> • Flatness • Squareness • Parallelism 	3.1 Identify work holding device 3.2 Identify workpiece orientation 3.3 Carryout workpiece alignment	<u>Attitude:</u> <ul style="list-style-type: none"> • Careful when handling hand tools <u>Safety:</u> <ul style="list-style-type: none"> • Ensure Personal 	<u>Related Knowledge</u> 4 hours <u>Related skills</u>	<u>Related Knowledge</u> Lecture	3.1 Work clamping device selected 3.2 Workpiece orientation confirmed 3.3 Workpiece alignment

Employability Skills

Core Abilities	Social Skills
01.07 Utilize database applications to locate and process information 01.08 Utilize spreadsheets applications to locate and process information 01.10 Apply a variety of mathematical techniques 01.11 Apply thinking skills and creativity 02.09 Prepare flowcharts 02.10 Prepare reports and instructions 02.11 Convey information and ideas to people 03.09 Manage and improve performance of individuals 03.10 Provide consultation and counseling 03.11 Monitor and evaluate performance of human resources 03.12 Provide coaching / on-the job training 03.13 Develop and maintain team harmony and resolve conflicts 03.14 Facilitate and coordinate teams and ideas 03.15 Liaise to achieve identified outcomes 03.16 Identify and assess client / customer needs 03.17 Identify staff training needs and facilitate access to training 04.06 Allocate work 04.07 Negotiate acceptance and support for objectives and strategies 05.01 Implement project / work plans 05.02 Inspect and monitor work done and / or in progress 06.07 Develop and maintain networks	1. Communication skills 2. Conceptual skills 3. Interpersonal skills 4. Learning skills 5. Leadership skills 6. Multitasking and prioritizing 7. Self-discipline 8. Teamwork

Appendix 6: Technical Matching of Level to Level Descriptors

This report explains the horizontal comparison to determine the technical matching at each level by the corresponding level and their level descriptors.

The statutory definition of 'Learning outcomes' (MQA Act, 2007) is 'standard to be achieved from an educational or skill training programme or qualification as determined by the Framework'. The MQF refers to statements on what students should know, understand and can do upon successful completion of a period of study. It is similar to the AQRF learning outcomes as 'clear statements of what a learner can be expected to know, understand and /or do as a result of learning'. The MQF serves national needs and goals. The MQA began to develop Programme Standards once the MQF was launched, seen as a sub-qualifications framework by specific disciplines which sets and guides the learning outcomes and level descriptors in the contexts of the specific discipline as well as the relevant quality assurance standards. Another useful document for HEPs reference in the curriculum design is the Guidelines to Good Practice (GGPs): Programme Design and Delivery.

The following table examines, compares and analyses the level descriptors between each level of frameworks using the AQRF level descriptors in the middle column as the reference point in critically examining the similarities and differences. The analysis column shows similarities, differences, assumptions and findings. The MQF statements are in italics.

The findings are recommended at each level as excellent or good fit or similar or do not fit.

MQF	AQRF	Analysis
<p>Level 1</p> <p><i>The MQF did not explicitly provide the learning outcomes for this level. Level 1 refers to Skills certification by the Department of Skills Development, Ministry of Human Resources.</i></p> <p><i>Skills training has knowledge, skills and attitude components with the incorporation of units from National Occupational Skills Standards (NOSS) at Level 1. The tasks and processes are clearly defined. It involves some simple information and structured simple routine processes in performing task(s) manually mainly with close guidance. Learner/trainees will be able to progress to Level 2 along the Skills pathways.</i></p> <p>Note: The MQF 2017 in principle provides simple basic knowledge of a subject for study or task performance with close supervision and ability to reflect on the performance of the task.</p>	<p>Level 1</p> <p>Demonstrate knowledge and skills:</p> <ul style="list-style-type: none"> ▪ is basic and general ▪ involve simple, straightforward and routine actions <p>Application, responsibility and context</p> <ul style="list-style-type: none"> ▪ involve structured routine processes ▪ involve close levels of support and supervision 	<p>Similarities</p> <p>Knowledge and Skills</p> <p>The AQRF requires demonstration of knowledge and skills, which is basic and general, applied in straightforward simple structured routine processes.</p> <p><i>In the MQF - the skills training at Level 1 involves knowledge, skill and attitude to enable the trainees' performance of basic and simple tasks subject to the NOSS requirements. The components are described in the Training Curriculum materials.</i></p> <p><u>It is arguably comparable to the learning outcomes of the AQRF, which requires the demonstration of basic and general knowledge and simple straightforward and routine actions and processes. However, issue of support and supervision in MQF is unclear.</u></p> <p>Findings: <u>The outcomes are similar and there is a good fit between the MQF and the AQRF descriptors.</u></p>

MQF	AQRF	Analysis
<p>Level 2</p> <p><i>The MQF did not provide explicitly the learning outcomes for this level as well. This level 2 refers to skills certification by the Department of Skills Development, Ministry of Human Resources.</i></p> <p><i>Skills training has knowledge, skills and attitude component with incorporation of units from National Occupational Skills Standards (NOSS) at Level 2.</i></p> <p><i>It involves basic information / highly routine processes and performing task(s) using manual dexterity as prescribed by the NOSS and training curriculum of the DSD. The task(s) and duties are well defined, structured, and applied in assessment by expert assessors.</i></p> <p><i>The tasks are subject to supervision.</i></p> <p>Note: The MQF (2017) in principle sets similar learning outcomes -basic knowledge of a subject for study or task performance with supervision and ability to reflect on the performance of the task.</p>	<p>Level 2</p> <p>Demonstrate knowledge and skills:</p> <ul style="list-style-type: none"> ▪ is general and factual ▪ involve use of standard actions ▪ involve structured processes <p>Application, responsibility and context</p> <ul style="list-style-type: none"> ▪ involve supervision and some discretion for judgment on resolving familiar issues 	<p>Similarities</p> <p>Knowledge and Skills</p> <p>The AQRF requires demonstration of knowledge and skills, which is general and factual, applied in standard actions (normal routine matters) and structured processes.</p> <p><i>In the MQF -The skills training at Level 2 involves knowledge, skill and attitude to enable the trainees' performance of basic tasks subject to the NOSS requirements set at Level 2. The components are described in the Training Curriculum materials. Trainees must demonstrate mastery of the set skills.</i></p> <p><u>It is arguably similar to the learning outcomes of the AQRF, which requires the demonstration of general and factual knowledge as well as straightforward and structured processes.</u></p> <p>In the MQF, the extent of the ability to resolve familiar issues/ problem solving is unclear. However, this is a minor point of divergence, which arguably</p>

MQF	AQRF	Analysis
		<p>does not materially affect the levels' comparison.</p> <p>Findings: <u>The levels descriptors are comparable although the element of discretion in dealing with familiar issues is not explicitly mentioned in the MQF as compared to the AQRF. A good fit conclusion is submitted here.</u></p>
<p>Level 3</p> <p><i>The MQF at Level 3 includes Higher Education, Vocational and Technical, and Skills certificate. The focus is on TVET. The Vocational Technical certificates prepare students for specific technical tasks and are the beginning of further training in the selected field. It must have 25% vocational/technical contents.</i></p> <p><i>The certificate is conferred on students who are able to:</i></p> <ol style="list-style-type: none"> a. <i>Interpret and use technical information</i> b. <i>Assist and use the scientific work processes and techniques of designing;</i> c. <i>Identify the impact of regulations, laws and contract upon work process;</i> 	<p>Level 3</p> <p>Demonstrate knowledge and skills:</p> <ul style="list-style-type: none"> ▪ includes <u>general principles</u> and <u>some conceptual</u> aspects ▪ involve selecting and applying <u>basic methods, tools, materials and information</u> <p>Application, responsibility and context</p> <ul style="list-style-type: none"> ▪ are stable with some aspects subject to change ▪ involve general guidance and require judgment and planning to resolve some issues independently 	<p>Similarities</p> <p>Knowledge and Skills</p> <p>The AQRF requires demonstration of general principles and some conceptual aspects as knowledge as well as ability to select basic tools, methods, and material and information and operationalizing them. The learning outcomes are generic in nature.</p> <p><i>The MQF refers to comprehending and applying a range of technical information, laws, regulations and contract. This would include key principles and understanding ideas in a specific area.</i></p> <p><i>Skills capabilities in terms of; executing processes and techniques of designing and search and use of data for work,</i></p>

MQF	AQRF	Analysis
<p>d. Prepare the estimated cost of work process and its operations;</p> <p>e. Utilize techniques and capabilities to search for and use data in decision making, having considered social, scientific, and relevant ethical issues;</p> <p>f. Communicate effectively and convey information, ideas, problems and resolutions to the experts and non-expert;</p> <p>g. Attain team and interpersonal skills that are appropriate to employment;</p> <p>h. Be responsible members of society; and</p> <p>i. Use independent learning skills in further education</p>		<p>processes and techniques involve using and selecting tools, material and even technologies in executing tasks.</p> <p>Other skills include effective communication, team and interpersonal skills for employment as well as acquiring independent learning skills.</p> <p><u>The technical knowledge and skills in the MQF Level 3 clearly fulfil the knowledge demonstration the required 'principles and some conceptual aspects' -interpretation, application and design, making estimates, impact assessments and using data. It is comparable with skill application-tools, material, and so forth.</u></p> <p>Application, responsibility and context</p> <p>The AQRF refers to performance of skills subject to general guidance and the ability to resolve some issues independently particularly in stable environment and which can sometimes change (<i>interpreted as predictable, familiar and routine</i>).</p> <p><i>The MQF Level 3 descriptors set capabilities to perform a series of</i></p>

MQF	AQRF	Analysis
		<p><i>activities in the course of work - apply, assess, design, estimates, identify and undertake some research for new data to support decision making. This arguably indicates capabilities to manage key processes as well as make decision with consideration of other external factors accordingly. This requires adjustment in routine, in changing circumstances and solving some issues.</i></p> <p>MQF Level 3 in these aspects more than addresses the <u>AQRF application and responsibilities context</u>.</p> <p>However, the MQF is silent on guidance or supervision and appears to recognize decision-making capacity and implicitly a significant level of responsibility. The MQF is silent on autonomy or on the need for guidance/ independence but it is arguable that learning outcomes indicate that the person is capable of making decisions and solve problems by using the abilities to interpret, use of work processes, techniques, use of data and consideration of social, scientific, and relevant ethical issues.</p> <p>Personal and Ethical Skills</p>

MQF	AQRF	Analysis
		<p>The AQRF does not provide personal and ethical skills. This is to be completed in the NQF.</p> <p><i>The MQF clearly addresses the above by requiring the person to consider social, scientific, and relevant ethical issues, responsibility as a member of society, broad statements encompassing wider scope of responsibility as well as requiring lifelong learning.</i></p> <p><u>Findings:</u> <u>The descriptors in Level 3 of the MQF appears to be more complex and demanding in the field of TVET than Level 3 of the AQRF, although issues of autonomy and application context are not explicit in the MQF. Overall, there is a good fit between the two levels.</u></p>
<p>Level 4</p> <p><i>Encompass capabilities and responsibilities that are wide-ranging and will lead to employment and career in various fields. Diploma level education balances theory and practice or practical, and stresses on the instillation of values, ethics and attitudes to enable student to:</i></p>	<p>Level 4</p> <p>Demonstrate Knowledge and Skills</p> <ul style="list-style-type: none"> ▪ is <u>technical and theoretical</u> with <u>general coverage</u> of a field ▪ involve adapting processes <p>Application, responsibility and context</p>	<p>Similarities</p> <p>Knowledge and Skills</p> <p>The AQRF refers to comprehension of technical and theoretical knowledge and general coverage of a field.</p> <p><i>The MQF refers to comprehension of knowledge and practical skills for work in various fields leading to employment</i></p>

MQF	AQRF	Analysis
<p>a. Use knowledge, comprehension and practical skills at work;</p> <p>b. Assess and decide, taking into account social, scientific and ethical issues with moderate autonomy;</p> <p>c. Be confident and entrepreneurial in pursuing their own careers;</p> <p>d. Be responsible members of society</p> <p>e. Possess study skills in adapting to ideas processes and new procedures for career development;</p> <p>f. Acquire team and interpersonal skills that are appropriate to employment; and</p> <p>g. Communicate effectively and to transmit information, ideas, problems and solutions cogently to experts and non-experts</p>	<ul style="list-style-type: none"> ▪ are generally predictable but subject to change ▪ involve broad guidance ▪ requiring some self-direction and coordination to resolve unfamiliar issues 	<p><i>or further studies. The assumption here is that it includes technical knowledge and practical/ technical skills and professional practice relevant to perform various work processes.</i></p> <p><u>The knowledge and skills requirements are comparable</u></p> <p>The AQRF's learning outcomes provides skills to perform general processes but also the ability to improvise/ adapt processes as the context or situation of application, which are generally predictable and can be subject to change (unpredictable).</p> <p><i>In the MQF, the cognitive capabilities to applying knowledge and skills for work, assess and decide, adapt ideas and processes and develop/improvise new procedures for career development.</i></p> <p><i>The MQF refers to practical skills, which are work-related as well as practice-oriented (more professional capacity). There are generic or specialized skills, work processes, using tools, methods and material indicated.</i></p> <p><u>Both skills requirement in the AQRF and the MQF are comparable.</u></p>

MQF	AQRF	Analysis
		<p>Application, Responsibilities and Context</p> <p>The AQRF states that the competency to apply knowledge and skills in predictable situations generally as well in some changing (can be unfamiliar or unpredictable) situations.</p> <p><i>The MQF does not refer to situations where knowledge and skills are applied. However, the assumption here is that the ability to use, assess and decide with ethical/social issues in mind as well as the ability to adopt and adapt/create new processes enables dealing with predictable and some unpredictable circumstances.</i></p> <p><i>Problem-solving is indirectly inferred in the learning outcomes (ii), (v) and (vii).</i></p> <p>The AQRF states that some autonomy to take relevant actions to solve predictable and some unpredictable issues. However, it is still subject to general guidance.</p> <p><i>The MQF is silent on the matter of general guidance but explicitly states moderate autonomy in decision-</i></p>

MQF	AQRF	Analysis
		<p><i>making. This arguably implies that there is still an element of responsibility and being subject to some supervision/guidance.</i></p> <p><u>Although the descriptors are differently explained, the elements of problem-solving and some autonomy implies independence in a limited manner.</u></p> <p>Other skills, personal and ethical skills</p> <p>The AQRF is silent on personal and ethical requirement as well as other functional skills.</p> <p><i>The MQF strongly addresses other functional skills as well as requirement of values, ethics, attitudes and social responsibility. It clearly insists on the consideration of social, scientific and ethical issues and being responsible members of society.</i></p> <p><u>On the above matter, the AQRF and the MQF understandably differ.</u></p> <p>Findings: <u>There are some differences, which arguably are not structural. It can be argued that these differences are present in the MQF in an implicit</u></p>

MQF	AQRF	Analysis
		<p><u>manner. The MQF has more requirements than the AQRF to function effectively. Overall, there is a good fit between the two levels.</u></p>
<p>Level 5</p> <p><i>A specific qualification, which identifies an individual who has knowledge, practical skills, managerial abilities and more complex and higher responsibilities than those expected at the diploma level. Conferred to graduates who are able to:</i></p> <ol style="list-style-type: none"> a. <i>use <u>knowledge, comprehension and practical skills at work</u></i> b. <i>assess and decide, taking into account social, scientific and ethical issues with autonomy</i> c. <i>Possess study skills in adapting to ideas processes and new procedures for career development;</i> d. <i>Acquire team and interpersonal skills that are appropriate to employment;</i> e. <i>Communicate effectively and to transmit information, ideas, problems and solutions cogently to experts and non-experts: and</i> 	<p>Demonstrate knowledge and skill</p> <ul style="list-style-type: none"> ▪ <i>is <u>detailed technical and theoretical knowledge</u> of a general field</i> ▪ <i>involve analytical thinking</i> <p>Application, responsibility and context</p> <ul style="list-style-type: none"> ▪ <i>are often subject to change</i> ▪ <i>involve independent evaluation of activities to resolve complex and sometimes abstract issues</i> 	<p>Similarities</p> <p>Knowledge and Skills</p> <p>The AQRF refers to detailed technical and theoretical knowledge and skills in a general field.</p> <p><i>The MQF refers to comprehension of knowledge and practical work-related skills higher than diploma. Arguably, it is more specialized, detailed theoretical and technical knowledge and skills are admitted after completion of a diploma in a similar field.</i></p> <p>The AQRF applies analytical thinking skills.</p> <p><i>The MQF informs cognitive capabilities - to do assessments, ability to adapt ideas, processes and new procedures in work environment. (application, evaluation and creativity).</i></p>

MQF	AQRF	Analysis
<p>f. <i>Identify problems in their field of study</i></p>		<p>The <u>knowledge and critical thinking outcomes in the AQRF and the MQF is highly comparable.</u></p> <p>Application, context and responsibility</p> <p>The AQRF indicates the ability to deal with situation/ context that is often subject to changes.</p> <p>The AQRF also indicates the problem context, which involves independent evaluation of activities to resolve complex and sometimes abstract issues.</p> <p><i>The MQF does not specifically indicate the complexity of application. However, it indicates that it is more complex than those at diploma level.</i></p> <p><i>It can also be inferred from the need to consider external factors, which may change from time to time.</i></p> <p><i>Independence in decision-making is provided by the autonomy in decision-making (ii).</i></p> <p><u>In comparing the MQF to the AQRF, the MQF does not clearly indicate level of</u></p>

MQF	AQRF	Analysis
		<p><u>complexity (and sometimes abstract issues) of problems. However, it can be arguably inferred that the capabilities to assess and decide, to adapt, and innovate processes to suit the situation/problem faced implicitly refers to the level of complexity.</u></p> <p><u>Findings:</u> <u>Similar and comparable in terms of knowledge and skills and therefore a good fit between the two levels is appropriate.</u></p>
<p>Level 6</p> <p><i>This level prepares students for general employment, entry to postgraduate studies and research, as well as for highly skilled careers. There are responsibilities and autonomy in decision-making.</i></p> <p>Note: <i>The MQF Level 6 has multiple purposes - capabilities for continuing education, for employment and professional career.</i></p> <p><i>At the bachelor's degree level, the expected outcome is a graduate who is able to:</i></p>	<p>Level 6</p> <p>Demonstrate knowledge and skill</p> <ul style="list-style-type: none"> ▪ is <u>specialised technical and theoretical</u> within a specific field ▪ involve critical and analytical thinking <p>Application, responsibility and context</p> <ul style="list-style-type: none"> ▪ are complex and changing ▪ require initiative and adaptability as well as strategies to improve activities and to solve complex and abstract issues 	<p>Similarities</p> <p>Knowledge and Skills</p> <p>The AQRF describes the knowledge components as specialised technical and theoretical in a specific field. This implies specialised theory and practice/technical components.</p> <p><i>In the MQF, graduates are capable of comprehending fundamental principles of a field of study. The principles may be from more than one field of study. Fundamental principles from advanced textbooks indicate a higher level of knowledge—principles, theories and concepts as well as knowledge of methods, techniques and research</i></p>

MQF	AQRF	Analysis
<p>a. demonstrate knowledge and comprehension on fundamental principles of a field of study, acquired from advanced textbooks;</p> <p>b. use the knowledge and comprehension through methods that indicate professionalism in employment;</p> <p>c. argue and solve problems in their field of study;</p> <p>d. show techniques and capabilities to search and use data to make decision having considered social, scientific and relevant ethical issues;</p> <p>e. communicate effectively and convey information, ideas, problems and solutions to experts and non-experts;</p> <p>f. apply team and interpersonal skills which are suitable for employment and</p> <p>g. possess independent study skills to continue further study with a high degree of autonomy.</p>		<p><i>skills related to the field of study and/or practice.</i></p> <p><u>The MQF and the AQRF are strongly comparable in the knowledge aspects.</u></p> <p>The MQF learning outcomes are generic to include academic and operational/work requirements. Level 6 implies more advanced and specialised knowledge.</p> <p>The AQRF describes critical and analytical thinking only.</p> <p><i>The MQF sets thinking abilities that reflect comprehension, application of knowledge and methods, critical and analytical thinking skill with the ability to argue and solve problems; ability to search and use data for decision-making and effective communication -- this demands a critical and analytical mind and resourcefulness.</i></p> <p><i>The MQF also sets other learning outcomes/skills of the graduates to enable effective performance and professionalism in work or practice or to support further study.</i></p>

MQF	AQRF	Analysis
		<p data-bbox="1331 237 1892 451"><u>In terms of knowledge and skills requirement, and critical thinking, the MQF Level 6 descriptors sets higher and demanding more intellectual skills in comparison to the AQRF. Overall, they are comparable in these aspects.</u></p> <p data-bbox="1331 492 1892 558">Application, Responsibilities and Context</p> <p data-bbox="1331 602 1892 927">The AQRF at this level requires demonstration of application of knowledge and skills to deal with situations, which are complex and changing. This implies that capabilities required include ability to initiate, adapt as well as set strategies to solve problems, which are complex and abstract, and make improvements.</p> <p data-bbox="1331 971 1892 1365"><i>The MQF does not describe explicitly the context in which knowledge and skills are to be applied. It only provides that knowledge and skills demonstrated are at the level of professionalism expected in employment, and with the ability to argue, employ techniques and deliberation to social, scientific and ethical issues. Arguably, it implies ability to solve complex and sometimes unpredictable problems.</i></p>

MQF	AQRF	Analysis
		<p><u>Although the MQF did not use similar terms as in the AQRF, the learning outcomes are comparable to the AQRF by analogy. The other MQF capabilities include strong communication skill to experts and non-experts, leadership and managerial skill with teams in working environment. In addition, the learning outcomes also promote continuous learning for further professional / career and self-development.</u></p> <p>Findings: <u>The outcomes are highly comparable and similar even though the MQF requires more capabilities of the learners. A good fit is concluded.</u></p>
<p>Level 7</p> <p><i>Master's degrees fall into level 7 of the MQF. Provides for the furtherance of knowledge, skills and abilities obtained at Bachelor level. Entrance is based on proven capabilities to pursue postgraduate studies.</i></p> <p><i>Within the Master's degree profile, there are 3 types - Master's by research, mixed-mode and coursework/taught Master.</i></p>	<p>Level 7</p> <p>Demonstrate knowledge and skills:</p> <ul style="list-style-type: none"> ▪ is at the <u>forefront</u> of a field and show <u>mastery</u> of a body of knowledge ▪ involve <u>critical</u> and <u>independent</u> thinking as the basis for <u>research</u> to extend or redefine knowledge or practice <p>Application, responsibility and context</p>	<p>Similarities</p> <p>Knowledge and Skills</p> <p>The AQRF refers to knowledge which is at the forefront and has mastery of a body of knowledge. (Forefront and/or mastery implies possessing comprehensive, up to date specialised knowledge or as an expert/specialist to a body of knowledge).</p> <p><i>The MQF points to comprehension of advanced knowledge, which is beyond</i></p>

MQF	AQRF	Analysis
<p><i>The learning outcomes are the same for the 3 modalities. A master's degree is conferred on students who are able to:</i></p> <ol style="list-style-type: none"> a. <i>demonstrate continuing and additional knowledge and <u>comprehension above that of the Bachelor's degree</u> and have <u>capabilities to develop or use ideas, usually in the context of research</u>;</i> b. <i>use the knowledge and comprehension to <u>solve problems</u> related to the field of study in <u>new situations and multi-disciplinary context</u>;</i> c. <i>integrate knowledge and manage complex matters</i> d. <i>evaluate and make decision in the situations without or with limited information by considering social responsibilities and related ethics;</i> e. <i>deliver clearly the conclusion, knowledge and the rationale to experts and non-experts and</i> f. <i>demonstrate study skills to continuously progress on</i> 	<ul style="list-style-type: none"> ▪ <i>are <u>complex and unpredictable</u> and involve the development and testing of <u>innovative solutions to resolve issues</u></i> ▪ <i>require expert judgment and significant responsibility for professional knowledge, practice and management</i> 	<p><i>Bachelor's programme. It also indicates mastery of knowledge in a relevant field, which can be applied to new situations, and in multidisciplinary context research.</i></p> <p><i>It includes capabilities to undertake research.</i></p> <p><u>The level of knowledge (mastery and at forefront) in the AQRF and the MQF are comparable.</u></p> <p>Intellectual skills in AQRF are application of knowledge, which involves critical and independent thinking, which leads to extension or redefinition of knowledge or practice. This is via development and testing of innovative solutions to resolve issues.</p> <p><i>In the MQF, intellectual capabilities include ability to integrate knowledge and manage complex matters; apply knowledge to solve problems in new situations and multidisciplinary context. This arguably involves analytical, critical and evaluative thinking skills, and scientific skills and providing solutions even where there is none or limited information.</i></p>

MQF	AQRF	Analysis
<p><i>their own with a high degree of autonomy to do so.</i></p> <p><i>Master's and Doctoral Degree (2015) Graduates must be able to demonstrate:</i></p> <ul style="list-style-type: none"> <i>a. demonstrate <u>mastery of knowledge</u> in a relevant field</i> <i>b. apply practical skills in a relevant field</i> <i>c. relates ideas to societal issues in the field</i> <i>d. conduct research with minimal supervision and adhere to legal, ethical and professional code of practice</i> <i>e. demonstrate leadership qualities with peers and stakeholders and working effectively with peers and stakeholders</i> <i>f. generate solutions to problem using scientific and critical thinking skills and</i> <i>g. manage information for lifelong learning</i> <p><i>Note: the learning outcomes are the same for the different types of Master's programme.</i></p>		<p><i>The independent thinking is through research undertaking with minimal supervision. The output is in the form of solutions.</i></p> <p><i>Arguable 'Mastery' implies in-depth, comprehensive and up to date knowledge of a subject or field of study.</i></p> <p><u>The intellectual skills of Level 7 in the AQRF and the MQF are comparable.</u></p> <p>Context of Application - Problem-solving</p> <p>The AQRF requires demonstration of application of knowledge and skills to resolve issues in complex and unpredictable situations which are normally managed through research.</p> <p><i>The MQF on the other hand, also indicates the capabilities to solve problems/generate solution in new situations, deal with complex matters, includes in a multidisciplinary approach and by using scientific and critical thinking skills. New situations can also mean unpredictable situations.</i></p>

MQF	AQRF	Analysis
		<p><u>The intellectual rigour and capabilities in the MQF and the AQRF is highly comparable.</u></p> <p>The AQRF refers to expert/professional judgment and significant level of responsibility and autonomy.</p> <p><i>On the other hand, the MQF Level 7 includes capabilities to evaluate and make decisions in the situations without or with limited information by considering social responsibilities and related ethics. This arguably underpins the notion of having authority and responsibility for professional judgment, decision and practice.</i></p> <p><u>The MQF stresses the need to work with societal issues, conscious of social responsibility as well as work within the legal, professional and ethical code of practice. The AQRF is silent on these matters.</u></p> <p><u>Findings:</u> There is a good fit between the two levels as the outcomes are <u>highly similar.</u></p>
Level 8	Level 8	<p>Similarities</p> <p>Knowledge and Skills</p>

MQF	AQRF	Analysis
<p><i>The preamble indicates highest level of learning/ qualification, provides further enhancement of knowledge, skills and abilities after Masters level with emphasis on abilities to conduct independent research. Within Level 8, the profile for doctorate programmes includes PhD by Research, by Mixed-Mode and by Coursework/ taught courses.</i></p> <p><i>At the end of the programme, graduates must be able to:</i></p> <p>a. <i>show a systematic comprehension and in-depth understanding of a discipline and mastery of skills and research methods related to the field of study</i></p> <p>b. <i>contribute to original research that has broaden the boundary of knowledge through an in-depth dissertation, which has been presented and defended according to the international standards including writing in internationally refereed publications</i></p>	<p>Demonstration of knowledge and skills:</p> <ul style="list-style-type: none"> ▪ Is at the most advanced and specialized level and at the frontier of a field ▪ Involved independent and original thinking and research, resulting in the creation of new knowledge or practice <p>Application, responsibility and context</p> <ul style="list-style-type: none"> ▪ are highly specialised and complex involving development and testing of new theories and new solutions to resolve complex abstract issues ▪ require <u>authoritative</u> and <u>expert judgment</u> in <u>management</u> of <u>research</u> or <u>an organisation</u> and ▪ <u>significant responsibility</u> for <u>extending</u> professional knowledge and practice and <u>creation of new</u> ideas and/or processes. 	<p>The AQRF level descriptors demonstrate most advanced and specialised new knowledge, which is at the frontier of a field and/or practice.</p> <p>Leads to creation of <i>new knowledge/ practice</i>.</p> <p>The MQF at Level 8 states the intellectual capabilities including systematic comprehension and mastery of skill and research methods. The outcomes provide new knowledge /solutions.</p> <p><i>The advanced knowledge and scholarly nature is also measured and compared against international standards and recognised through internationally refereed publications.</i></p> <p><i>The output is in various forms of theses - new knowledge, new practice, advanced innovative solution or creation of artefact or performance (refer to programme standards/Standards: Masters and Doctoral Degree, 2015).</i></p> <p>Findings: Both level descriptors have similar outcomes as both demand</p>

MQF	AQRF	Analysis
<p>c. <i>show capabilities to generate, design, implement and adopt the integral part of research process with scholarly strength</i></p> <p>d. <i>make critical analysis, evaluation and synthesis of new and complex ideas;</i></p> <p>e. <i>communicate with peers, scholarly communities and society at large concerning the field of expertise; and</i></p> <p>f. <i>promote the field of technology, social and cultural progress in a knowledge-based society in the academic and professional context</i></p> <p>Standard: Masters and Doctoral Degree (2015) <i>Doctorates Level 8</i> <i>Purpose</i> <i>The scope of learning outcomes must reflect the competencies that the candidates should have upon completion of the programme. At the end of the programme, graduates must be able to:</i></p> <p>a. <i>synthesis knowledge and contribute to original</i></p>		<p><u>advanced, specialised new at the forefront of the field and/or new practice, solution and artefact.</u></p> <p>Independent and Original Thinking/ Research</p> <p>The AQRF – refers to independent thinking and original research, which are normally paired together.</p> <p><i>The MQF refers to graduates must be able to:</i> <i>‘conduct research independently and adhere to legal, ethical and professional codes of practice;’ (Standards: Masters and Doctoral Degree (2015)).</i></p> <p><i>The various programmes regulations, guidelines, thesis examinations and requirements ensure independence and, originality of research as well as the quality of the output. Supported by external publication in refereed journals and adherence to legal, ethical and professional codes of ethics.</i></p> <p><i>There are different types/models of doctoral degrees in Malaysia and they include the traditional doctorates and others such as industry and</i></p>

MQF	AQRF	Analysis
<p><i>research that broadens the frontier of knowledge in the relevant field;</i></p> <p><i>b. adapt practical skills leading to innovative ideas in the relevant field;</i></p> <p><i>c. provide expert advice to society in the relevant field</i></p> <p><i>d. conduct research independently and adhere to legal, ethical and professional codes of practice;</i></p> <p><i>e. display leadership qualities through communicating and working effectively with peers and stakeholders;</i></p> <p><i>f. appraise problems in the relevant field critically using scientific skills; and</i></p> <p><i>g. integrate information for lifelong learning</i></p>		<p><i>professional doctorate programmes and by publication.</i></p> <p><u>Findings:</u> <u>The intended outputs in both levels descriptors are a result of independent, original and advanced research. However, the MQF has more safeguards than the AQRF.</u></p> <p>Application: Research Skills and Problem-solving</p> <p>The AQRF refers to highly specialised and complex research skill development and testing new theories and solutions for complex abstract issues.</p> <p><i>The MQF refers to cognitive strength and highly advanced research skills as it:</i></p> <p><i>a. emphasises the depth and complexity of the cognitive competency critical analysis, evaluation and synthesis of new and complex ideas (innovative ideas) expected to be demonstrated at level 8;</i></p> <p><i>b. requires demonstration of high research skills standards with the ability to generate,</i></p>

MQF	AQRF	Analysis
		<p><i>design, implement and adopt the integral part of research process with scholarly strength and</i></p> <p>c. <i>ability to appraise problems critically using scientific skills and adapt practical skills for innovative ideas.</i></p> <p><i>It is arguable that the research activities include the testing of new theories and developing new solutions to solve complex and novel problems.</i></p> <p><i>The output is in various forms of thesis-new knowledge, new practice, advanced innovative solution or creation of artefacts or performance. (refer to programme standards and Standards: Masters and Doctoral Degree (2015)).</i></p> <p><u>Findings:</u> <u>The MQF has more specific descriptors to explain the high cognitive skills required at Level 8. This is also supported by the programme standards and Standards: Masters and Doctoral Degree (2015).</u></p> <p>Autonomy, Responsibility and Context</p>

MQF	AQRF	Analysis
		<p>The AQRF demands the person to demonstrate authoritative/expert judgment and skill and responsibility in the management of the research or organisation. This indicates expertise, substantial autonomy in decision-making, responsibility and leadership. It is normal/ expected for the individual to lead his research project with a team of assistant researchers without implying lack of originality/independence.</p> <p><u>However, it is unclear with regards to require authoritative and expert judgment in management of or an organisation' as it seems unrelated to the doctoral programme but more with leadership and managerial competency in R and D in organisation.</u></p> <p>MQF</p> <p><i>The learning outcomes in Level 8 of the MQF overall indicates independence and management of advanced research; establishes expertise and authority in the specific field of study beyond managing the research project.</i></p> <p><i>It follows consequently that the graduates are able to demonstrate leadership qualities through</i></p>

MQF	AQRF	Analysis
		<p><i>communicating and working effectively with peers and stakeholders (Standards: Masters and Doctorate Degree (2015)).</i></p> <p><i>It is arguable 'working effectively with peers, 'experts' and stakeholders indicate expertise, authority and responsibility/accountability in the subject.</i></p> <p><i>Working with experts requires leadership, managing relationship, communication skills as well as taking responsibility.</i></p> <p><i>This leadership, managerial skills and interpersonal skills and being accountable are important in leading and managing future research and organisations. In addition, the MQF clearly emphasises that they must observe legal, ethical and professional codes of practice, while this is not directly stated in the AQRF.</i></p> <p><u>Findings:</u> <u>The MQF demands more specific capabilities than the AQRF</u></p> <p>Responsibilities</p>

MQF	AQRF	Analysis
		<p>Level 8 of the AQRF can be interpreted as follows:</p> <ul style="list-style-type: none"> a. The person must undertake the responsibility to actively share the professional knowledge/expertise and practices with others as required by circumstances; and b. must be able to continue to conduct research to develop new knowledge, ideas and processes in the context of lifelong learning. <p>MQF</p> <p><i>In reference to the above the AQRF interpretation, the MQF learning outcomes of 'responsibilities' indicates that the graduates are capable of providing expert advice to the society in the relevant field.</i></p> <p><i>They must be able to address new and complex problems and to share new ideas, innovations and solutions. Overall they must continue to contribute in the field of technology, social and cultural progress in academic and</i></p>

MQF	AQRF	Analysis
		<p><i>professional context and in the context of lifelong learning.</i></p> <p>Findings: Overall, there is a good fit between the two levels descriptors notwithstanding the observation that the MQF has more outcomes than the AQRF.</p>

Appendix 7: List of Programme Standards

NO.	FIELDS OF STUDY	YEAR OF PUBLICATION	YEAR OF REVISION
1.	Accounting	2013	2016 (on entry requirements)
2.	Art and Design	2013	2016 (on entry requirements)
3.	Biotechnology	2010	2018
4.	Building Surveying	2013	2016 (on entry requirements)
5.	Business Studies	2014	2016 (on entry requirements)
6.	Computing	2010	2015 2016 (on entry requirements)
7.	Creative Multimedia	2011	2015
8.	Diploma in Dental Surgery Assistance	2018	-
9.	Engineering and Engineering Technology	2011	2016 (on entry requirements)
10.	Early Childhood Education	2014	2016 (on entry requirements)
11.	Education	2014	-
12.	Finance	2016	-
13.	Hospitality and Tourism	2013	2016 (on entry requirements) 2018
14.	Information Science	2013	2016 (on entry requirements)
15.	Islamic Studies	2012	-
16.	Law and Shariah	2008	2015 2016 (on entry requirements)
17.	Media and Communication Studies	2013	2016 (on entry requirements)
18.	Medical and Health Science	2009	2012 2016

			2018 (on entry requirements)
19.	Muamalat and Islamic Finance	2013	2016 (on entry requirements) 2018
20.	Performing Arts	2013	-
21.	Psychology	2013	2016 (on entry requirements)
22.	Traditional and Complementary Medicine	2010	-

Appendix 8: Minimum Graduating Credits and Percentage of Components

BACHELOR'S DEGREE		
Minimum Graduating Credits - 120		
Components	Percentage (%)	Credits
Compulsory Modules (General and HEPs modules) *	10 -12	12-15
Core	40 -60	48-72
Specialisation	25 -45	30-54
Electives	10 -15	12-18
Industrial Training**	0 -10	0 -12
Total	100	120
MASTER'S DEGREE by COURSEWORK		
Minimum Graduating Credits - 40		
Components	Percentage (%)	Credits
Core	20 -40	8-16
Specialisation	25 -45	14-18
Electives	10 -15	4-6
Research Projects*	15-35	6-14
Total	100	40
DOCTORAL DEGREE by COURSEWORK		
Minimum Graduating Credits - 80		
Components	Percentage (%)	Credits
Core	30-51	24-41
Specialisation	0 -25	0 -20
Elective	0-15	0-12
Dissertation	30-49	24 -40
Total	100	80

Minimum graduating credits and percentage of components for business programmes at Bachelors, Masters and Doctoral levels.

Appendix 9: List of MQA Guidelines to Good Practices

1. [Academic Staff \(Published 2014\)](#)
2. [Academic Staff Workload \(Published 2014\)](#)
3. [Accreditation of Prior Experiential Learning \(Published 2013\)](#)
4. [Accreditation of Prior Experiential Learning for Credit Awards \(Published 2016\)](#)
5. [Assessment of Students \(Published 2013\)](#)
6. [Credit Transfer for MOOC \(Published 2016\)](#)
7. [Curriculum Design and Delivery \(Published 2011\)](#)
8. [Monitoring, Reviewing and Continually Improving Institutional Quality \(Published 2014\)](#)
9. [Malaysian Qualification Statement \(Published 2015\)](#)
10. [Guidelines on Terms Used for External Examiner, External Advisor and Advisory Board \(Published 2015\)](#)
11. [Work-Based Learning \(Published 2016\)](#)

**Appendix 10: Sample of Portfolio, Assessment Rubric and Self-Assessment Form
for APEL(C) Application**

Course code and name	<i>Microcomputer Applications in Business (Windows)</i>		
Course synopsis	XXX		
Course learning outcomes	<i>Learning statements</i>	<i>Origin of learning</i>	<i>Supporting documentation</i>
<i>Editing in Word</i>	<p><i>Identify and use the various editing functions in Word to edit documents in paragraph and table format.</i></p> <p><i>Explain the main editing functions in Word to a learner audience, in order to clearly convey how these functions relate to preparing a document for publication.</i></p> <p><i>Prepare and deliver presentations on issues related to editing functions in Word to be identified and resolved.</i></p>	<p><i>Applied Business Sdn. Bhd. Administrative Assistant 1992-1994</i></p> <p><i>Disted College Course Assistant 1995-1996</i></p>	<p><i>Appendix 1: Letter of Attestation (from Manager XXX)</i></p> <p><i>Appendix 2: Letter of Attestation (Principal)</i></p> <p><i>Appendix 3: Lesson Plans, Editing Functions in Word - 1, 2 and 3</i></p>

DECLARATION:

I hereby declare that all the information/documents provided to support this application are authentic, true and accurate. I fully understand that the HEP reserves the right to reject my application if proven otherwise.

Signature :
Date :

Course Name: Business Communication						
Sample of Course Learning Outcomes (CLO)	Scale					
	0 None	1 Poor	2 Fair	3 Average	4 Good	5 Excellent
CLO1: Apply future technology of business communication	Not shown	Demonstrates awareness of some available technology for business communication	Demonstrates awareness of all available technology for business communication	Demonstrates awareness of the use of available technology for business communication	Demonstrates the ability to show examples of technology usage in business communication	Demonstrates the ability to compare and propose the best set of technology to be used in business communication
CLO1: (Score)				√		
CLO5: Produce proposals for business reports and various purposes	Not shown	Able to describe some elements in a business report	Shows some elements in an acceptable sample of business report	Shows an acceptable sample of business report	Shows comprehensive sample of business report	Shows comprehensive sample of business report and is able to defend it
CLO5: (Score)				√		

APEL(C) SELF-ASSESSMENT FORM FOR LEARNERS

PART A: PERSONAL PARTICULARS

Name	
Identity Card No.	
Name of Programme	
Course Code & Course Title	
No. of Credits of the Course	

PART B: SELF-ASSESSMENT EXERCISE

Course Learning Outcomes (CLO) <i>On completion of this course, the learner should be able to...</i>	I have learned this through my former studies or working career and can provide paper evidence/ documents/ certificates	I know most of this but I have no paper evidence	I am willing to complete a task/ assignment or any form of relevant assessment to show I have learned this	I really need to take the module
1. CLO1				
2. CLO2				
3. CLO3				
4. CLO4				
5. CLO5				

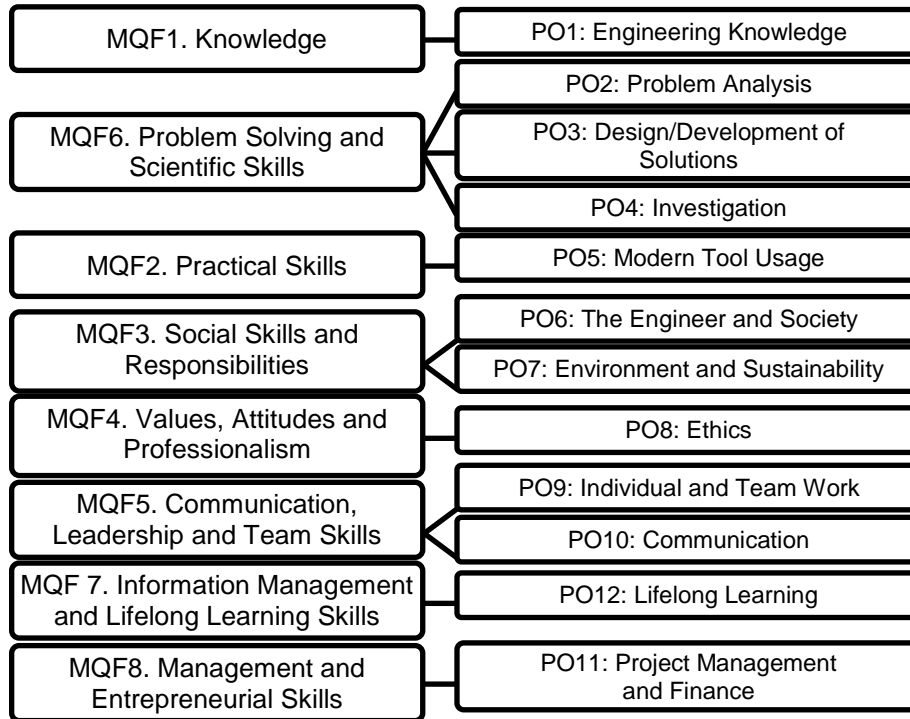
PART C: REPORT SUBMISSION

Write and submit a **minimum of 500-word report** based on the headings below within the stipulated time:

Report Title: XXXXX

I confirm that all the details on this form are correct to the best of my knowledge. All work submitted in this report are mine.	
Submitted by:	
Date :	
<i>For office use only:</i>	
Received by:	Recommendation:
Date :	

**Appendix 11-1: Relationship between MQF Eight Learning Outcomes Domains
and EAC/ETAC Programme Outcomes (POs)**



Appendix 11-2: Relationship between MQF and BEM/EAC Qualification Descriptors

In Malaysia, the registration of graduate engineers, engineering technologists, engineering technicians and professional engineers in Malaysia is mandated under Act 138 (Registration of Engineers Act 1967 (Revised 2015)) and is regulated by the Board of Engineers Malaysia (BEM). Under the Act, registration of graduate engineers, engineering technologists and engineering technicians or inspector of works with BEM is possible if the person has a bachelor degree or a diploma recognised by the BEM through an accreditation process.

The BEM has set up the Engineering Accreditation Council (EAC) in 1999 and Engineering Technology Accreditation Council (ETAC) in 2011 to accredit engineering and engineering related programmes, which are adjudged as adequate in preparing their graduates for registration. Both councils consist of four parties, namely the BEM as chair, the Malaysian Qualifications Agency (MQA), the Ministry of Education (MOE) and the Public Service Department (PSD). The Engineering Accreditation Department (EAD) headed by a director, functions as the secretariat for both councils. The BEM-EAC has been a full signatory for the Washington Accord (WA) since 2009 for engineering programmes, while the BEM-ETAC has been accepted as provisional signatory of the Sydney Accord (SA) and the Dublin Accord (DA) in 2017 for engineering technology and engineering technician programmes, respectively.

The EAC and ETAC have developed accreditation manuals for engineering and engineering technology programmes, respectively, which comprises processes, procedures and standards. The applicable manuals are EAC's Engineering Programme Accreditation Manual 2017 (EAC Manual 2017), ETAC's Engineering Technology Programme Accreditation Manual 2015 (ETAC Manual, 2015) and ETAC's Engineering Technician Programme Accreditation Manual 2016 (ET Manual, 2016). All the manuals were developed taking into consideration the requirements stipulated by MQF and quality assurance policies of the MQA. Conformity to the general principles of the MQF includes:

- **MQF Clause 13 on Qualification Levels:** The programme outcomes for both engineering and engineering technology programmes are higher than or comparable with the qualification descriptors for MQF Level 6 for a bachelor's degree, whereas the engineering

technician programme is comparable with the qualification descriptors for MQF Level 4 for a diploma;

- **MQF Clause 15 on Learning Outcome Domains:** The programme outcomes for engineering, engineering technology and engineering technician programmes fully conformed to the WA, SA and DA graduate attributes, respectively. The programme outcomes can also be mapped explicitly to the eight MQF domains of learning outcomes (as depicted in Appendix 11-1) as well as to the AQRF competencies and learning outcomes.
- **MQF Clause 17 on Qualification Nomenclature:** The BEM Policy on Naming Engineering Programme at Bachelor Level approved on 27th June 2016 are in line with the MQF Programme Naming convention.
- **MQF Clause 19-20 on Credit and Academic Load:** Both EAC and ETAC define credit based on student learning time, including self-learning as well as preparing and sitting for an examination, where one credit is equal to 40 hours of notional student learning time. The minimum credit for the engineering and engineering technology programmes are 135 and 140 credits, respectively. These are above 120 of minimum credit for a bachelor's degree specified by the MQF, while the engineering technician programme adopts a minimum credit of 90 as stipulated by the MQF for a diploma programme.
- **MQF Clause 24 on Credit Transfer:** Both EAC and ETAC support the credit transfer policy for up to 30% vertical credit transfer from diploma to bachelors and up to 50% horizontal credit transfer for bachelors to bachelors programmes. This is consistent with credit transfer policy of the MQA.

In carrying out accreditation, both EAC and ETAC use accreditation criteria and the self-assessment report for the purpose of programme evaluation. The accreditation criteria cover all the COPPA standards as illustrated in Appendix 11-3.

Source: Accreditation Manual 2017 (EAC Manual 2017), ETAC's Engineering Technology Programme Accreditation Manual 2015 (ETAC Manual, 2015) and ETAC's Engineering Technician Programme Accreditation Manual 2016 (ET Manual, 2016).

Appendix 11-3: Mapping between COPPA and EAC/ETAC Accreditation Criteria

		EAC 2017/ETAC 2015 Accreditation Criteria						
		1. Programme Educational Objectives (PEOs)	2. Programme Outcomes (POs)	3. Academic Curriculum	4. Students	5. Academic and Support Staff	6. Facilities	7. Quality Management Systems
COPPA Areas of Evaluation	1. Vision Mission, Educational Goals and Learning Outcomes	x	x					
	2. Curriculum Design & Delivery			x				
	3. Assessment of Student			x	x			
	4. Student Selection and Support Services				x		x	
	5. Academic Staff					x		
	6. Educational Resources					x	x	
	7. Programme Monitoring and Review							x
	8. Leadership, Governance and Administration					x		x
	9. Continual Quality Improvement							x

Appendix 12: Reports of International Expert Reviewers

1. Report by International expert Dr Bryan Maguire

The Malaysian Qualifications Framework (MQF) is a well developed and implemented national qualifications framework (NQF). It is a worthy candidate for referencing to the AQRF. The AQRF itself will be well served by becoming populated with working NQFs. The draft report presents detailed analysis of the MQF against 11 criteria and overall it makes a convincing case that these have been satisfied. This commentary begins with some observations on the referencing processes in general and then addresses some particular points in the MQF report.

“Referencing is a process that establishes the relationship between the eight-level AQRF and NQF or qualifications system of participating AMS” <https://asean.org/asean-economic-community/sectoral-bodies-under-the-purview-of-aem/services/asean-qualifications-reference-framework/> .Those charged with drafting a report of referencing an NQF to a regional qualifications (reference) framework are pulled in two directions. On the one hand, the report must be analytical and confirmatory /regulatory in style to fulfil the purpose of referencing. It needs to demonstrate that rigorous steps have been gone through to compliance with the criteria as thoroughly as possible. On the other hand, it also needs to serve a descriptive and communicative purpose precisely to enhance the understanding of the member state’s NQF to those from outside. It serves as a succinct presentation of the NQF using the RF as a neutral tool to aid understanding and mutual trust. The former is more likely to appeal to the technical specialists in qualifications policy and NQF administration, the latter is more useful for wider stakeholder audiences. Both groups have to be satisfied. This tension between analysis and description or between compliance and understanding is not unique to the ASEAN process. One can see similar dynamics at play in the referencing and compatibility processes for the European Qualifications Framework and the related but distinct Qualifications Framework of the European Higher Education Area. The international peer community’s reception of or reaction to the succession of individual country reports over time forms a kind of jurisprudence regarding the balance between these two emphases. The balance can also be heavily influenced by the internal national dynamics at play in the governance, resourcing and timing of the referencing process.

The MQF report leans quite heavily towards the analytical and compliance end of the spectrum. As one of the early states to embark on the AQRF referencing process this is perhaps to be expected. There is little established local precedent to follow and thoroughness probably seems like the safest option. Indeed there is a strong temptation for external commentators such as myself to ask for a little more evidence here or a more detailed explanation there (see below). However, there comes a point where such elaboration can work against understandability in various ways. Firstly is the sheer length of the document with the main body of the report running to 137 pages, followed by 60 pages of appendices. This is mitigated by the detailed table of contents and logical structure dictated by the referencing criteria.

There is repetition between sections, particularly sections 5 and 6. For example Figure 2 and Table 8 both show the MQF, though as this is the central construct this may be forgiven. Indeed it might be a useful design feature to incorporate into any printed version of the report that the MQF diagram be printed on or inside the back cover to help the reader - I know I found myself several times flicking back and forth to the diagram as I followed detailed discussions elsewhere in the text.

The tension between analysis and communication came through to me most strongly in chapter 12. This seemed like a case of “burying the lead”. The most interesting aspects of the current MQF landscape - MQF 2.0 and the convergence of QA systems - appear as afterthoughts. The references to or hints of these developments that had appeared earlier in the report were much more coherent after I read this section. They could be more fully explained earlier e.g. in section 1.7. This would strengthen readability of the report as an end-to-end document rather than one to be dipped into chapter by chapter.

Chapter 1, in general, provides a good introduction to the report. In presenting a country’s education provision at a point in time I generally find it helps to have a brief summary of the overall demography - Is the population changing? What is the age structure? Is there migration? I missed any account of the language of instruction beyond school. This is particularly relevant for international audiences. Also relevant for international audiences is the place of transnational education and associated qualifications in the Malaysian system, both imported and exported, if any. The dual system (NDTS) is not mentioned in the overview but appears in Chapter 5.

Chapter 2 on the mandate is clear. I note the absence of Malaysian public universities from the MyAQRFC committee. Less surprising is the absence of representatives of civil society (e.g. employers or labour unions) or of students. Their absence does not undermine the technical competence of the referencing exercise but may be a missed opportunity to engage these wider stakeholder groups and broaden their appreciation of the international as well as domestic significance of the MQF.

Chapter 3’s account of how qualifications are included in the MQF is well illustrated by the sample form supplied in Appendix 3. The New Zealand comparability studies (and to a lesser extent the other agreements and declarations) are worth drawing attention to somewhere in the report as a prior indication of the international acceptance of MQA procedures and of the MQF but perhaps not in this chapter.

Chapter 4 is the technical heart of the referencing process. It is competently done and well summarised in 4.5.3. I agree with the overall conclusion that there is a good fit between MQF and AQRFC. In table 8, I suggest expanding on difference 1 with text such as that in bold below:

*The roles are different. MQF is a national qualification framework which is applied locally **as a regulatory and administrative instrument** while AQRFC is a regional framework for referencing or as a translational instrument to NQFs.*

In Table 9 “Recognition of prior learning” in MQF 1.0 is compared only with “Non-formal learning” in AQRFC, whereas “Informal learning” as used in AQRFC is an equally relevant construct for this comparison, a point which only strengthens the case for similarity.

Chapter 5 is heavy going and somewhat difficult to follow. I appreciate that the variety of accreditation processes is one of the features of the Malaysian system that is in transition. Section 5.5 on professional body accreditation is interesting not least because the EAC/ETAC participation in the international engineering accords regime (Washington, Sydney, Dublin). This is corroborating evidence of the good standing of Malaysian qualifications in the international sphere and the fact that the processes underpinning this recognition are incorporated into the MQF bolster its credibility.

Chapter 6 on quality assurance goes into too much detail in the QA processes of the individual sectoral agencies. It is over 50 pages long and it is hard to see the forest for the trees. The purpose of the report is not to prove compliance with the AQAF by exhaustive evidence. The AQAF is used to structure the analysis of the individual sectors but is not itself summarised. I expect the AQAF is more familiar to ASEAN readers than it is to me, and it was easy for me to find a copy online to refer to, but again I draw attention to the demands the assumption of familiarity would place on a non-specialist reader. It is interesting to see the application of the AQAF, explicitly developed for higher education sector, to the professional and TVET sectors also.

Chapters 7-11 are procedural and satisfactory.

2. Report by International Expert - Mrs Dorte Kristofferson

AQRF Referencing Report of Malaysia

(received 21 September 2018)

The AQRF Referencing Report of Malaysia sets out how the Malaysian Qualifications Framework and its support structures compare to the ASEAN Qualifications Reference Framework (AQRF). It follows the structure provided for the Referencing process to those ASEAN member countries that have embarked on a referencing process.

The Malaysian AQRF Committee should be commended for having prepared a comprehensive and thorough report that clearly presents the Malaysian situation. The report is well structured, clearly written and makes effective use of graphics, statistics and appendices. The Report addresses all aspects of the referencing criteria effectively and at a high level of detail. I note, however, that due to the nature of some of the Referencing Criteria, i.e. criterion 7, and criteria 9-11, these sections can only be completed at a later stage of the referencing process.

Every ASEAN country is different and at various levels of achievement when it comes to the development, introduction or implementation of qualifications frameworks (QFs), as well as regulatory and quality assurance processes. Malaysia is one of the ASEAN countries with the longest established QF and the Referencing Report does not only include a presentation of the MQF against the AQRF referencing criteria, but it also provides an analysis of the development MQF, the experiences gained since its inception in 2007 and full implementation in 2011. Furthermore, the Report concludes with reflections on future initiatives and developments. This thorough analysis is likely to not only be useful in the Malaysian context but also to provide other countries with less experience with useful practices that can shape their expectations to the development process for a national QF.

Although the Referencing Criteria are interrelated, Criterion 4 is particularly important as it is the criterion that requires there be a clear and demonstrable link between the qualifications levels in the national QF or system and the level descriptors of the AQRF. The methodology used in the analysis of the MQF against AQRF and the rationale for choosing this approach is well-explained and the analysis and outcomes of the analysis are transparent and well-argued. This clarity and rigour filter down to the comparison of the level/qualification descriptors of the two frameworks and facilitates the reading and understanding of the analysis and the outcomes.

The Referencing Report as a whole leaves little room for improvement. However, observations are listed below for the AQR Committee's consideration for further clarification of some aspects of the Report.

1. The Referencing Report provides the reader with a comprehensive presentation of the MQF. However, the Malaysian Qualifications Register that is the public face of approved qualifications is only mentioned as a fact. There is no description of the characteristics of the MQF included in the Report. Due to the importance of the MQR, I would recommend that an introduction to the Register be included.
2. P. 17 and p. 28 #3.2.1 include the following statement: *'The descriptors at Level 1 to 5 of MQF provide for both TVET and academic (general) learning pathways and use the same qualification titles'*. Examples of a TVET and academic learning pathway respectively would be useful to support the understanding of this statement.
3. P. 31, #3.3 includes the statement: *'The procedures for accreditation of programmes or qualifications, i.e., that it meets the minimum requirements of the MQF, relevant standards and other requirements of MQA, DSD, and professional bodies, are well documented and accessible to all stakeholders'*. It would be useful if some examples or links to where such information is available were provided.
4. The Referencing Report includes a comprehensive presentation of the roles, responsibilities and processes of the bodies responsible for quality assurance, i.e. MQA, DSD and professional bodies. The report also mentions that some of the professional bodies and MQA conduct collaborative quality assurance processes. Some more information about the characteristics of these processes would be interesting, including an explanation of the relationship between the quality assurance processes of MQA and the professional bodies with which MQA does not conduct collaborative processes.

Dorte Kristoffersen

October 2018

Glossary of Terms

Accreditation	An assessment exercise to ascertain that the teaching and learning and all other related activities of a programme provided by a higher education and training provider have met the quality standards and in compliance with the Malaysian Qualifications Framework.
Approval	An authorisation to the HEP by the Ministry of Education to conduct a programme for any programme to be conducted by a higher education provider. The report from the successful Provisional Accreditation is one of the requirements to seek approval from the Ministry.
ASEAN Qualifications Reference Framework	A common reference framework which functions as a device to enable comparisons of qualifications across ASEAN Member States.
Course	An identifiable module or unit with credits, learning outcomes, content, assessment and other related matters which contribute to the attainment of one or more programme learning outcomes.
Credits	A quantitative measurement that represents the learning volume of academic load to achieve the respective learning outcomes. One credit is equivalent to 40 notional hours of learning.
Full Accreditation	MQA evaluation of a programme that has received Provisional Accreditation and is usually conducted when the first cohort of students is in the final year. Full accreditation entails the evaluation of the delivery of a provisionally accredited programme by examining all evidence of teaching, learning and assessment and achievement of learning outcomes to determine compliance with all standards.
Guidelines to Good Practices	MQA publications that provide guidelines to HEPs in developing and conducting their programmes. Most of these GGPs are an extension of, and complementary to, requirements of the Code of Practice for Programme Accreditation with focus on specific areas of evaluation.
Higher education provider	Means “ a body corporate, organisations or other body of persons which conduct higher education or training programmes including skills training programmes leading to the award of a higher education qualification or which awards a higher education qualification and includes the public and private higher education providers, examination or certification bodies or their branches (S. 2(1), MQA Act, 2007)
Learning Outcomes	Statements that explain what students should know, understand and can do upon the completion of a period of study or training.
Learning Outcomes Domains	Learning domains that provide an organising scheme for the development of learning outcomes of the qualification.

Level Descriptor	A general statement that explains the main learning outcomes for qualifications at a particular level within MQF.
Malaysian Occupational Skills Qualifications Framework	Skills Qualification Framework which was developed to articulate skills competencies within the MQF from Levels 1 to 5.
Malaysian Qualifications Framework	A national instrument, which develops and classifies qualifications based on a set of criteria that is nationally agreed and internationally benchmarked, and which clarifies the academic levels, learning outcomes and credit system based on student academic load.
Malaysian Qualifications Register	A national register that carries records of all qualifications with full accreditation status
National Occupational Skills Standard	A national document of occupational skills standard, which outlines a specification of the competencies, expected of a skilled worker who is gainfully employed in Malaysia for an occupational area, level and pathway, to achieve the competencies.
Professional Body	A body established under any written law for the purposes of regulating a profession and its qualifications or any other body recognised by the Government
Programme	An arrangement of modules that are structured for a specified duration and learning volume to achieve the stated learning outcomes, which usually leads to an award of a qualification.
Programme	Is a combination or arrangement of courses leading to an award or qualification.
Programme Standards	MQA publication that articulates generic learning outcomes in the MQF into discipline learning outcomes, specify the body of knowledge, the minimum graduating credits and programme components such as core, specialisation or electives for all levels of qualifications.
Provisional Accreditation	An assessment exercise to determine whether a proposed programme meets the minimum quality requirements before Full Accreditation.
Qualification	A certificate, diploma or degree, which is awarded by higher education or training providers or any party that is authorised to confer or to award the qualification and to confirm the earned learning outcomes.

Qualification Level	Is an award level described with generic outcomes or qualification descriptor, which characterises a typical qualification.
Quality Assurance	Planned and systematic actions (policies, strategies, attitudes, procedures and activities) to provide adequate demonstration that quality is being achieved, maintained and enhanced, and meets the specified standards of teaching, scholarship and research as well as student learning experience.
Recognition of Experiential Learning	A verification process of an individual's achievement of set learning outcomes acquired through formal, non-formal or informal learning, irrespective of time and place.

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