

# Compliance of IQF towards AQRF: Challenges and Opportunities of the Referencing to Regional Qualification Framework

A. Setiawan

Department of Mechanical Engineering Education  
Universitas Pendidikan Indonesia  
Jl. Dr. Setiabudhi 229 Bandung 40154, Indonesia  
agus\_setiawan@upi.edu

**Abstract**— Recently, TVET (Technical and Vocational Education and Training) has attracted more attention because of its important role to the regional and global economic development. To enter the global market, as well as ASEAN Economic Community 2015, standardization and harmonization in TVET sector become crucial issue to overcome. Some efforts have been taken by government level and regional TVET agencies to formulate standardization of TVET sector. This paper addresses current status of National Qualification frameworks (NQFs) in the Association of Southeast Asian Nations (ASEAN) countries and efforts, challenges and opportunities to the referencing to the regional qualification framework. At present, some ASEAN countries already have their NQF. Since 2012, Indonesia has the Indonesian Qualifications Framework (IQF). The stages of the IQF's implementation are currently being designed and partially applied. The IQF consists of nine levels characterized by both learning outcomes and job-specific competencies. In other sides, The ASEAN Qualifications Reference Framework (AQRF), a common reference framework, will function as a translation device to enable comparisons of qualifications across participating ASEAN countries. The AQRF will support and enhance each country's national qualifications framework or qualifications system while providing a mechanism to facilitate comparison and transparency. Therefore, it is good challenges and opportunities for referencing process from NQFs towards AQRF.

**Keywords**—qualification framework, TVET, referencing process

## I. INTRODUCTION

In the last decade, TVET has attracted much attention because of its strategic role to the regional and global economic development. Therefore, standardization and harmonization in TVET sector are crucial issue to overcome. Some significant TVET initiatives have been discussed at various regional meetings such as those organized by ASEAN, ASEAN+3, ASEAN+6, the Southeast Asian Ministers of Education Organization (SEAMEO), International Labor Organization (ILO), United Nations Educational, Scientific, and Cultural Organization (UNESCO), Colombo Plan Staff College (CPSC), Regional Cooperation Platform (RCP), East Asia

Summit, Asia-Pacific Economic Cooperation (APEC), and Asia Europe Meeting (ASEM). This map of TVET initiatives will provide a picture of what has been addressed nationally, regionally, and internationally to be used as a reference and simultaneously stimulate ideas and collaboration for improving TVET policies and practices [1].

To develop TVET sector in the region, SEAMEO VOCHTECH identified 10 trends and issues in TVET, which include (1) TVET quality assurance, (2) qualification framework, (3) relevancy of curriculum to incorporate green technology, employability skills, including entrepreneurship and high-order thinking skills, (4) articulation, (5) authentic teaching-learning and assessment, (6) ICT in TVET, (7) research and development, (8) access and equity, (9) lifelong learning, and (10) graduate employability [2].

Among these issues, issue on the qualification framework is the most vital issue. At the current stage, some countries have established comprehensive National Qualifications Frameworks (NQFs), while others have a well-established sectoral framework, and others are yet to develop or implement qualification frameworks.

Complementary to the ASEAN Integration initiative, an intensive discussion has started in the ASEAN Member States on the qualification framework in general, with a number of national frameworks for educational and training systems drafted or are currently being drafted. As a document, the AQRF has been endorsed by both the Education and Economic sector in September 2014. However, the subsequent challenges revolve around NQFs can be oriented towards the AQRF, cognizant that they have their own structures, their own definitions of descriptors, their own number of levels, and they are interpreted in their own ways. Varying properties of NQF existing in the respective member country lead to a tough process of referencing the framework towards the AQRF.

## II. GENERAL OVERVIEW NATIONAL QUALIFICATION FRAMEWORK (NQF)

NQF is a vital device to be used as a means for promoting the development, implementing and facilitating of a transparent mechanism used in the assessment, certification, and

recognition of skills. A comprehensive NQF has the potential to recognize any learning regardless of the site (where the learning takes place), the form of provision (formal, informal, and non-formal), and the type of pedagogy and curriculum used. NQFs are necessary to overcome the barriers between different national subsystems of education and training, notably between vocational education and training and higher education and between initial and continuing education and training [3]

TABLE I. COMPARISON OF NQFs IN SELECTED ASEAN COUNTRIES

Indonesia		Malaysia	Philippines		Recognition of Prior Learning
Level	Credential	Level	Level	Level	
9	Specialist/Doctor	8	Doctoral degree	8	Doctoral & Post Doctoral
8	Master	7	Master/Postgraduate Certificate & Diploma	7	Post Baccalaureate
7	Professional				
6	Baccalaureate/DIV	6	Baccalaureate/Graduate Certificate & Diploma	6	Baccalaureate
5	DIII	5	Advanced Diploma	5	Diploma
4	DII	4	Diploma	4	NC4
3	DI	3	Skills Certificate 3	3	NC3
2	HS	2	Skills Certificate 2	2	NC2/Grade 12
1	Elementary/Primary	1	Skills Certificate 1	1	NC1/Grade 10

From Table 1, we can see great similarity between the three NQFs. The noticeable differences are that Indonesia has nine levels whereas the other two have eight and use different terms and qualifications to describe diploma and certificate levels [2].

Thailand, for instance, has a NQF for Higher Education. It has 6 levels: Level 1 (Associate Degree), Level 2 (Bachelor), Level 3 (Graduate Diploma), Level 4 (Master), Level 5 (Higher Graduate Diploma), Level 6 (Doctorate). The Office for Vocational Education Commission (OVEC) of Thailand has also developed a qualification framework consisting of seven levels: Level 1 (semi-skilled), Level 2 (Craftsman/ skilled), Level 3 (highly skilled), Level 4(technician), Level 5 (senior technician), Level 6 (specialist), and Level 7 (senior specialist). Some developments combine the two to create a “comprehensive” NQF.

The Singapore Workforce Development Agency (SWDA) developed the Singapore Workforce Skills Qualification that is more associated with a TVET Qualification Framework. It is made up of 8 levels: Level 1 (pre-beginning), Level 2 (beginning/certificate), Level 3 (high beginning/higher certificate), Level 4 (low intermediate/advanced certificate), Level 5 (high intermediate/diploma), Level 6 (advanced/specialist diploma), Level 7 (high advanced/ graduate certificate), and Level 8 (proficient/graduate diploma). The higher-education qualifications have yet to be integrated in the framework.

Other countries like Brunei Darussalam, Lao PDR, and Vietnam are still in the process of developing their NQFs. To a certain degree, the differing status of NQF development among ASEAN member countries affects the progress of the Regional Qualification Framework, even though it is not the pre-requisites [2].

### III. DEVELOPMENT OF THE INDONESIAN QUALIFICATION FRAMEWORK (IQF)

Since 2012, Indonesia has established the Indonesian Qualifications Framework (IQF). The IQF holds a legal endorsement in the form of Presidential Decree no. 8/2012, and addresses schooling from year 9 to Vocational Education and Training (VET) and Higher Education. The stages of the IQF’s implementation are currently being designed and partially implemented.

The IQF is one of the national standards in the education sector from which graduates, education and training institutions under the authority of the Ministry of Education and Culture could assess their learning outcomes or certificates proficiency in conjunction with one of the relevant qualification levels specified in the IQF [4].

To implement the IQF, Government of Indonesia has established law no.12/2012 regarding higher education. In addition, The Minister of Education and Culture (MoEC) of Republic of Indonesia has also established regulation no. 73/2013 regarding Implementation of the IQF in higher education, regulation no. 49/2014 regarding national Standard of higher education, and regulation no. 154/2014 regarding clump of science and technology and graduate degree of higher education. The Government of Indonesia sees the legal endorsement of the IQF in the context of other laws and regulations: for example, Law no. 13/2003 pertaining to Manpower development, Government Regulation no. 31/2006 regarding the National Job Training System, and Law no. 20/2003 concerning the National Education System. The IQF is also in line with existing regulations endorsed by other ministries and authorized institutions, concerning manpower quality and development and competence certification [5].

The development of IQF was stimulated by the fact that at present, education and training provision in Indonesia is fragmented and often poor in quality [6]. The IQF is intended to address this issue in order to meet the demands of an increasingly mobile and globalized higher-education market. The IQF will raise the quality of qualifications and clarify their levels, allowing manpower to be deployed more effectively in both formal and informal sectors of the economy. It will specify equivalencies between Indonesian and foreign qualifications, thus improving Indonesia’s international competitiveness and making the country more open to global trade.

The IQF is intended to provide a unified reference point for all education and training providers in Indonesia, especially those engaged in efforts to direct the unemployed towards appropriate job opportunities. At present, it is difficult for employees to upgrade their qualifications. The IQF will address this by setting out qualification's levels against which employees can be assessed. Those who fail to attain the expected level will be encouraged to enroll in education or training in order to attain an IQF-approved qualification. In addition, education or training providers whose learning outcomes or certificate statements do not accord with IQF descriptors will be able to carry out internal quality improvements in order to bring their qualifications into line with IQF requirements.

The IQF consists of nine levels characterized by both learning outcomes and job-specific competencies. Descriptors at each level specify the learning outcomes or competencies that can be demonstrated by 3 an individual at that level. Descriptors are divided into two categories: general and specific. The general descriptors cover personality, working attitude and ethics, and are applicable to every Indonesian citizen at every level. The specific descriptors describe the knowledge and skills mastered by the individual and are level-specific.

Table 2 illustrates the referencing scheme between the learning outcomes of different education streams and IQF qualification levels. This scheme will make it easier to ensure that graduates of educational programmers possess the right competencies at the right level.

TABLE II. EQUIVALENCIES BETWEEN LEARNING OUTCOMES FROM DIFFERENT TYPES OF EDUCATION [5]

Academic Qualification		IQF	Technical and Vocational Education and Training	
S3		9	S3 (Applied)	Specialist
S2		8	S2 (Applied)	
		7		Profession
S1		6	D4	
		5	D3	
		4	D2	
		3	D1	
General School	High	2	Vocational High School Junior High School	
Junior School	High	1		

Regarding recognition and validation of non-formal and in formal learning, The Ministry of Education and Culture defines Recognition of Prior Learning as the process by which learning outcomes acquired through non-formal or informal education or life experiences are recognized in the formal education sector. In addition, a credit transfer scheme has been designed to improve mobility across the different educational streams with the aim of developing learners' expertise in specific fields. In built into the scheme are bridging programs which aim to boost the performance of individuals who fail to meet the minimum requirements of the institution conferring their credits.

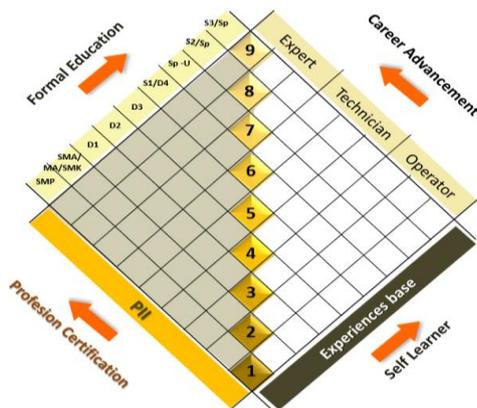


Fig. 1. Improving IQF through various pathways

Leveling in IQF is based on learning outcomes that can be acquired through formal education, professional certification, non formal learning and career development, as shown in Figure 1. Thus one can reach a certain level by a variety of pathways.

The main policy objectives of the IQF are to: (a) increase the quantity and quality of Indonesian manpower in order to grant greater access to both national and international job markets; (b) increase the contribution of all learning outcomes to national economic growth, whether achieved through formal, non-formal or informal education or work experience; (c) increase educational mobility in order to foster mutual understanding and collaboration between higher education institutions across the world; (d) increase Indonesia's recognition both regionally and internationally, without losing sight of its national identity and character [4].

Development of the IQF has been organized by two ministries: the Ministry of Education and Culture and the Ministry of Manpower and Transmigration. The Indonesian Qualifications Board (IQB) manages the development and implementation of the IQF. The Board is expected to oversee matters such as regulations, descriptors, guidelines, standards-setting documents, and other support work, including coordination with institutions or other parties relevant to IQF implementation and international public relations.

The stakeholders consider that the IQF should be a basis for the development of National Standards of Education and Professional (Vocational) Competency Standards. These will then provide a point of reference for accreditation, assessment and certification by bodies such the National Accreditation Board (NAB) and the National Professional Certification Board (NPCB), as well as professional and occupational competence certification boards and private accreditation bodies.

The Ministry of Education and Culture has already referenced existing learning outcomes in higher education to qualifications levels in the IQF. In the process, it analyzed learning outcome descriptions from more than 1000 study programs within 97 higher education institutions all over Indonesia (A and B accreditation category). Institutions were selected which had implemented an appropriate Internal Quality Assurance System, and which held a good track record in international collaborations. The referencing process was enriched by comparative studies carried out by qualifications agencies in various countries, as well as through rigorous discussions with professional associations, scientific colleagues, and employers and recruiters of university graduates in Indonesia [4]. For study programs of TVET teacher education, The Indonesian Association of Technology and Vocational Education (APTEKINDO) already facilitated the formulation of learning outcomes for 10 study programs of TVET teacher education. In addition, there is also an agreement on a draft of National Standar of Higher Education for TVET Teacher Education.

The Ministry of Education and Culture acknowledges that a quality assurance system is needed if the IQF is to be trusted nationally and internationally. It is envisaged that the National Standards of Education Board will adopt IQF level descriptors

in designing National Standards of Education and associated assessment procedures. In addition, educational institutions will ensure the quality of graduates through their own internal quality assurance systems. Moreover, the National Accreditation Board is expected to expand its current external quality assurance procedures by taking into account learning outcomes as described in the IQF.

#### IV. DEVELOPMENT OF AQRF

The basis for an ARQF is the following agreement. These are the ASEAN Framework Agreement on Services (AFAS), Mutual Recognition Arrangements (MRAs) for qualifications in major professional services, the ASEAN Economic Blueprint, Asia-Pacific Economic Cooperation (APEC) and the Asia-Pacific Quality Network (APQN). The initial draft of the concept proposal for the AQRF was developed through the project on Education and Training Governance: Capacity Building for National Qualifications Frameworks which was part of the ASEAN-Australia-New Zealand Free Trade Area (AANZFTA) Economic Cooperation Work Programme (ECWP), specifically under ECWP's services component. This draft concept proposal was considered during the 1st AANZFTA Joint Committee Meeting in May 2010 in Manila and approved inter-seasonally in July 2010. After several stages of development, In March 2013, a workshop was convened as well as a taskforce meeting to facilitate discussion of design options within the scope of the concept paper for the AQRF and make it possible to agree to a final design by participating members. Members discussed the model AQRF and requested refinements prior to in country consultations. This draft version (April 2013) outlines the AQRF for the purposes of discussion within country and across participating countries, in preparation of final design. Then, the AQRF has been endorsed by both the Education and Economic sector in September 2014.

The AQRF is a cornerstone of the integration of the education systems in the ASEAN region. It potentially provides benefits to employers, education providers and job seekers ultimately representing a key tool in integrating the ASEAN labor market and enhancing labor mobility. The AQRF will support and enhance each country's national qualifications framework or qualifications system while providing a mechanism to facilitate comparison, transparency and higher-quality qualification systems. This is achieved through: (1) a process of peer learning across countries, for example, design and operation of qualification systems, (2) a better understanding of a country's qualification system, for example, by making it clearer to those in other countries, (3) applying quality processes used in other countries.

The AQRF, a common reference framework, will function as a translation device to enable comparisons of qualifications across participating ASEAN countries. The AQRF addresses education and training sectors and the wider objective of promoting lifelong learning [5]. The purpose of the AQRF is to enable comparison of qualifications across countries that will: (a) Support recognition of qualifications, (b) Facilitate lifelong learning, (c) Promote and encourage credit transfer and learner mobility, (d) Promote worker mobility, (e) Lead to better understand and higher-quality qualifications systems [7].

Comparison between IQF and ARQF, we find several points: (a) in terms of descriptor; ARQF accommodates informal and prior learning while IQF tends to focus on formal education only, (b) ARQF derives qualification into 8 levels of complexity of learning outcome while IQF defines 9 levels, (c) Both ARQF and IQF use learning outcome as a key feature of qualifications, (d) The level descriptors of ARQF include three domains: Knowledge and skills, application and responsibility and accountability, while the level of descriptors of IQF includes general descriptors, which cover personality, working attitude and ethics and the specific descriptors which describe the knowledge and skills.

In order to facilitate linking NQF levels against the levels in the AQRF, NQF or qualifications systems should have qualifications demonstrably based on learning outcomes. For national qualifications frameworks that are not based on learning outcomes, the referencing process and report should demonstrate progress towards a learning outcomes-based approach.

#### V. REFERENCING PROCESS

Referencing is a process that results in the establishment of a relationship between the national qualifications framework and that of a regional qualifications framework. The Referencing procedure aims: (1) to describe a common structure for linking NQFs to the AQRF, (2) to ensure that the linking process undertaken is a robust and transparent way, (3) To provide a common reporting structure for the referencing reports.

The main part of any referencing process is the description of how each national qualifications framework or qualification system links to the level structure of the AQRF. The consistency of this process as it is carried out in different countries is critically important for the integrity of the AQRF. The transparency of the process in each country is also critically important for the way people in other countries to understand and trust the outcomes of the referencing process. To help optimize consistency and to make the process of referencing transparent it, a set of criteria (11 criteria) have been agreed by the ASEAN countries. The criteria cover areas that are important for consistency and trust [7].

To promote quality assurance of education and training across the region, the AQRF is underpinned by a set of agreed quality assurance principles and broad standards related to: (1) The functions of the registering and accrediting agencies, (2) Systems for the assessment of learning and the issuing of qualifications and (3) Regulation of the issuance of certificates.

The AQRF utilizes the East Asia Summit Vocational Education and Training Quality Assurance Framework quality principles, agency quality standards and quality indicators as the basis for the agreed quality assurance standards. The East Asia TVET Quality Assurance Framework is to be used as the benchmark for evaluating the quality assurance processes (for all education and training sectors).

The referencing process will include member countries referencing their education and training quality assurance

systems against the East Asia Summit Vocational Education and Training Quality Assurance Framework.

## VI. CONCLUDING REMARKS

In order to enter ASEAN Economic Community, development of NQF and AQRF in the region are important devices and a strategic approach to improve and to assure the quality of human capital to face the global market. At the current stage, several ASEAN countries, including Indonesia, have established comprehensive NQF, while others have a well-established sectorial framework, and others are yet to develop or implement QF. The AQRF aims to accommodate different types of NQFs that are at different stages of development. Within this context, it as chalanges and opportunities for referencing NQF (including IQF) toward AQRF. This process should be transparant and consistence.

## REFERENCES

- [1] Paryono, Anticipating ASEAN Economic Community 2015: Regional initiatives on human resources development and recognition of professional qualifications. In: TVET@Asia, issue 2, 2013 1-8. Online: [http://www.tvet-online.asia/issue2/paryono\\_tv2.pdf](http://www.tvet-online.asia/issue2/paryono_tv2.pdf) (retrieved 30.12.2013).
- [2] Paryono, Mapping national and regional TVET initiatives in Southeast Asia and beyond in response to students and labour mobility. In: TVET@Asia, issue 1, 2013, 1-8. Online: [http://www.tvetonline.asia/issue1/paryono\\_tv21.pdf](http://www.tvetonline.asia/issue1/paryono_tv21.pdf) (retrieved 30.5.2013).
- [3] J. Bjornavold and M. Coles, Governing education and training; the case of qualifications frameworks. In: European Journal of Vocational Training, 42/43, 2008, 203-235.
- [4] DGHE (Directorate General of Higher Education), Indonesian Qualifications Framework (Kerangka Kualifikasi Nasional Indonesia) Presidential Decree no. 8/2012: Implication and Implementation Strategies. Jakarta, Ministry of Education and Culture. 2012.
- [5] Unesco Institute for Life Learning (UIL) . Indonesia. Online: [http://uil.unesco.org/fileadmin/keydocuments/LifelongLearning/en/UIL\\_Global\\_Inventory\\_of\\_NQFs\\_Indonesia.pdf](http://uil.unesco.org/fileadmin/keydocuments/LifelongLearning/en/UIL_Global_Inventory_of_NQFs_Indonesia.pdf). (retrieved 23.10.2015)
- [6] OECD, Reviews of National Policies for Education: Education in Indonesia, Rising to the Challenge, 2015.
- [7] ASEAN, Draft for Consultation: Specifications for The ASEAN Qualifications Reference Framework, 2013.