Globalization of Meta- Frameworks

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QF*Emirates:*
2012 vs Proposed 2018

Principal Qualifications: 2012

Level	Generic Nomenclature	Principal Qualification titles used in the QF*Emirates* (each with its own profile)		
		Vocational Education and Training (VET)	Higher Education (HE)	General Education (G 12 – GE)
10	Doctoral Degree	—	Doctoral	—
9	Master Degree	Applied Master	Master	—
8	Graduate Diploma	Applied Graduate Diploma	Postgraduate Diploma	—
7	Bachelor Degree	Applied Bachelor	Bachelor	—
6	Diploma*	Advanced Diploma	Higher Diploma	—
5	Diploma*/ Associate Degree	Diploma	Associate Degree	—
4	Certificate*	Certificate 4	—	Secondary School Certificate (G 12)
3	Certificate*	Certificate 3	—	TBA
2	Certificate*	Certificate 2	—	—
1	Certificate*	Certificate 1	—	—

Proposed qualification types and titles: 2018

Level	Principal Qualifications (Generic and specific titles)				Awards (Generic title)	Continuing Education Units (Generic title)
	Generic Nomenclature	Higher Education (HE)	Technical and Vocational Education and Training (TVET)	General Education (GE)	HE (levels 5-10) TVET (all levels) GE (levels 1-4)	HE (levels 5-10) TVET (all levels) GE (levels 1-4)
10	Doctoral Degree	Doctoral	Applied Doctorate	-	Level 10 Award	Level 10 CEU
9	Master Degree	Master	Applied Master	-	Level 9 Award	Level 9 CEU
8	Graduate Diploma	Postgraduate Diploma	Applied Graduate Diploma	-	Level 8 Award	Level 8 CEU
7	Bachelor Degree	Bachelor	Applied Bachelor	-	Level 7 Award	Level 7 CEU
6	Diploma	Higher Diploma	Advanced Diploma	-	Level 6 Award	Level 6 CEU
5	Diploma/ Associate Degree	Associate Degree	Diploma	-	Level 5 Award	Level 5 CEU
4	Certificate	-	Level 4 Certificate	General Secondary Certificate (G12)	Level 4 Award	Level 4 CEU
3	Certificate	-	Level 3 Certificate	-	Level 3 Award	Level 3 CEU
2	Certificate	-	Level 2 Certificate	-	Level 2 Award	Level 2 CEU
1	Certificate	-	Level 1 Certificate	-	Level 1 Award	Level 1 CEU

Indicative referencing:
QF*Emirates*/EQF/Bologna

QF*Emirates* level	EQF level	Bologna Framework
10	8	Third Cycle
9	7	Second Cycle
7,8	6	First Cycle
6	5	Short cycle
5	4	
4	3	
3	2	
1,2	1	

النطنية للمؤهلات الهيئة الوطنية

NATIONAL QUALIFICATIONS AUTHORITY

United Arab Emirates

النfrom arabic: الهيئة الوطنية للمؤهلات
NATIONAL QUALIFICATIONS AUTHORITY

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QF*Emirates* levels officially referenced to QCF and FHEQ levels			Levels of QCF, SCQF, NFQ and CQFW referenced to each other			Initial referencing of QF*Emirates* and NZQF		NZQF levels referenced to AQF levels	Based on initial discussions between NQA and DQR and earlier indicative referencing of QF*Emirates* to EQF	
UAE Qualifications Framework (QF*Emirates*)	Qualifications and Credit Framework England/ Northern Ireland (UK QCF)	Framework for Higher Education Qualifications in England, Wales and Northern Ireland (FHEQ)	Scottish Credit and Qualifications Framework (SCQF)	National Framework of Qualifications for Ireland (NFQ)	Credit and Qualifications Framework for Wales (CQFW)	UAE Qualifications Framework (QF*Emirates*)	New Zealand Qualifications Framework (NZQF)	Australian Qualifications Framework (AQF)	UAE Qualifications Framework (QF*Emirates*)	German Qualifications Framework for Lifelong Learning (DQR)
10	8	8	12	10	8	10	10	10	10	8
9/8	7	7	11	9	7	9	9	9	9/8	7
7	6	6	10/9	8/7	6	8	8	8	7	6
6/5	5/4	5/4	8/7	6	5/4	7	7	7	6	5
4	3		6	5	3	6	6	6	5	4
3	2		5	4	2	5	5	5	4	3
2	1		4	3	1	4	4	4	3	2
1	Entry Level 3		3	2/1	Entry Level 3	3	3	3	2/1	1
	Entry Level 2		2		Entry Level 2	2	2	2		
	Entry Level 1		1		Entry Level 1	1	1	1		

Level descriptors:
QF*Emirates* Level 3/EQF Level 2

QF level	Knowledge	Skill	Competence: Accountability & Engagement
3	basic factual, procedural and theoretical knowledge of an area of work or subject, including knowledge of basic processes, materials and terminology a range of simple facts, principles, and ideas with underpinning understanding to carry out various tasks within an area of work or subject awareness of some sources for classification and interpretation of current knowledge within an area of work or subject literacy and numeracy to form short but cohesive texts and mathematical processes	basic cognitive and practical skills to select and use necessary information, tools, and methods to solve simple problems often within predictable contexts skills to identify and apply defined retrieval information and data tools associated with an area of work or subject communication and information technology skills to present and/or explain matters within procedural or predefined parameters literacy and numeracy skills to comprehend, generate, and communicate to simple/short but cohesive texts and mathematical processes	can take responsibility to complete tasks associated with an area of work or subject within a familiar and/or predictable contexts can initiate to take limited responsibility for supervising others under guidance can demonstrate some autonomy in a defined context individually or in small groups can contribute under guidance to identify own roles and responsibilities and to set the goals of the group in work or learning can demonstrate awareness of the roles, responsibilities and requirements of others in work or learning contexts

	Knowledge	Skills	Responsibility and autonomy
Level 2 The learning outcomes relevant to Level 2 are	Basic factual knowledge of a field of work or study	Basic cognitive and practical skills required to use relevant information in order to carry out tasks and to solve routine problems using simple rules and tools	Work or study under supervision with some autonomy

Level descriptors:
QF*Emirates* Level 6/EQF Level 5

QF level	Knowledge	Skill	Competence: Accountability & Engagement
6	specialised factual knowledge and critical understanding of the boundaries of a field of work or study, encompassing the relevant principles, methods, concepts, and procedural techniques an understanding of research approaches and methods from a range of resources and an ability to assess critically the appropriate problem-solving techniques broad knowledge to analyse and synthesise data and information to formulate appropriate responses to issues at an abstract and/or unpredictable context	specialist technical, creative and conceptual skills appropriate to solving complex problems associated with a field of work or discipline a broad range of cognitive and practical skills to analyse and synthesise critically information, ideas, and issues within the field of work and study skills to apply a range of research tools and approaches to formulate evidence-based solutions to abstract and unfamiliar problems advanced communication and information technology skills to present and/or critique information and arguments in various forms to specialist and non-specialist audiences	can take responsibility to develop and/or initiate appropriate solutions/approaches to address unfamiliar and/or complex procedures and processes in the field of work or study can exercise some autonomy to lead/supervise small teams and plan in familiar and unfamiliar context can take account to assess own and others' performance against given criteria, including addressing own and others needs foe personal development and task specific achievement can manage resources within defined areas of work and study and employ interpersonal and communication skills to address various audiences

	Knowledge	Skills	Responsibility and autonomy
Level 5[1] The learning outcomes relevant to Level 5 are	Comprehensive, specialised, factual and theoretical knowledge within a field of work or study and an awareness of the boundaries of that knowledge	A comprehensive range of cognitive and practical skills required to develop creative solutions to abstract problems	Exercise management and supervision in contexts of work or study activities where there is unpredictable change; review and develop performance of self and others

Level descriptors:
QF*Emirates* Level 9/EQF Level 7

QF level	Knowledge	Skill	Competence: Accountability & Engagement
9	highly specialised knowledge in a field of work, discipline and/or professional practice, and at the interface between different fields, including contemporary concepts and recent developments

a systematic understanding and critical awareness of the current issues and/or new insights into discipline or field of work or profession

comprehensive knowledge to analyse, synthesise and evaluate qualitative and quantitative data

originality in the application of research methods and principles to evaluate current research and advanced scholarship in the discipline | advanced skills required in research, analysis, evaluation and/or innovation of complex ideas, information, concepts and/or activities

specialised cognitive and practical skills to integrate knowledge from different relevant fields so as to analyse, synthesise, and evaluate critically complex information, data, concepts, and theories and to design and apply appropriate research methodologies

expert skills to solve highly complex problems and issues with incomplete data

highly advanced terminological, communication and IT skills to transfer knowledge, skills, and ideas to specialist and non-specialist audiences | can function autonomously and/or take responsibility for managing professional practices, work, processes or systems, or learning contexts that are highly complex, unpredictable and unfamiliar, and require new strategic approaches and/or intervention or conceptual abstract solutions

can initiate and take accountability in related decision-making and supervision of teams

can demonstrate leadership and/or make distinguishable contribution to organisational change and/or development

can work pro-actively individually and/or with multiple teams to formulate solutions to highly complex problems and/or to manage implication of ethical issues

can apply personal reflection to analyse self-engagement and own actions |

	Knowledge	Skills	Responsibility and autonomy
Level 7[3]

The learning outcomes relevant to Level 7 are | Highly specialised knowledge, some of which is at the forefront of knowledge in a field of work or study, as the basis for original thinking and/or research

Critical awareness of knowledge issues in a field and at the interface between different fields | Specialised problem-solving skills required in research and/or innovation in order to develop new knowledge and procedures and to integrate knowledge from different fields | Manage and transform work or study contexts that are complex, unpredictable and require new strategic approaches; take responsibility for contributing to professional knowledge and practice and/or for reviewing the strategic performance of teams |

Future of Work:
Key points for EC's Strategic Note 13

Collaborative economy: Increasing shift from permanent 9 to 5 jobs to short-term contracts, part-time work or outsourcing – the rise of freelancing and flexibility for those unable to find a permanent job

Gig economy: Digital technologies enable teams to be assembled, often across borders, for a given project.

Hollywood model: Rise of project-focused approach to work where team of people from different professions with distinct and complementary skills come together and collaborate to accomplish the task. Once completed, team disassembles.

Sectors: Those relying heavily on routine tasks at risk (low-skill manufacturing jobs, some craft and clerical occupations); further growth in service sectors and non-routine elementary occupations with low risk of automation (personal care services)

Occupations in demand due to digital revolution: Big data specialists, social media managers, cognitive computer engineers, Internet of Things architects, and block chain developers.

Automation and artificial intelligence: Human-robot relationship partnership will transform the nature of work

Table 1: 'Hottest' Skills of 2015 LinkedIn Global

1	Cloud and Distributed Computing
2	Statistical Analysis and Data Mining
3	Marketing Campaign Management
4	SEO/SEM Marketing
5	Middleware and Integration Software
6	Mobile Development
7	Network and Information Security
8	Storage Systems and Management
9	Web Architecture and Development Frameworks
10	User Interface Design
11	Data Engineering and Data Warehousing
12	Algorithm Design
13	Perl/Python/Ruby
14	Shell Scripting Languages
15	Mac, Linux and Unix Systems
16	Channel Marketing
17	Virtualisation
18	Business Intelligence
19	Java Development
20	Electronic and Electrical Engineering
21	Database Management and Software
22	Software Modeling and Process Design
23	Software QA and User Testing
24	Economics
25	Corporate Law and Governance

Source: LinkedIn

Source: European Commission (2016). The Future of Work: Skills and Resilience for a World of Change, EPSC Strategic Notes. Issue 13: 10 June 2016.

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Lifelong learning: Skills best guarantor of social mobility and opportunity – training and reskilling through opportunities for lifelong learning
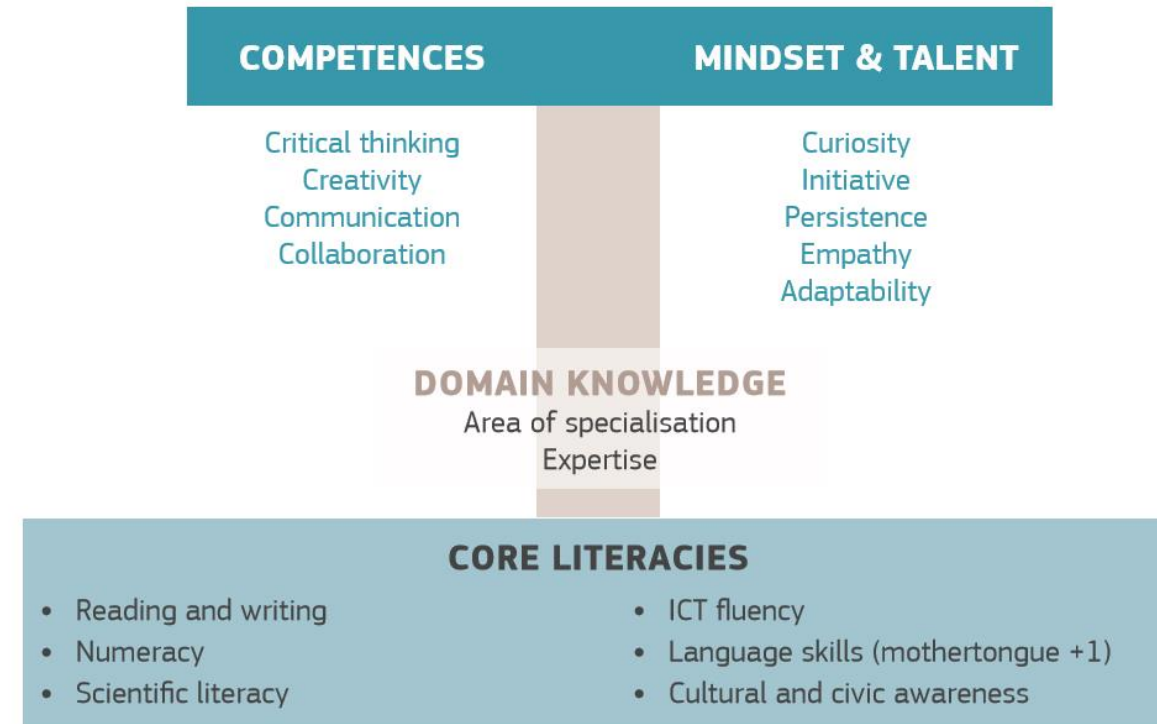
Skills and culture: Creativity, emotional intelligence and transversal (soft) skills + cultures of sharing, negotiating with others and finding compromises help to "save us" from robots.

Work-life balance: Millennials seeking more diversity and flexibility in work patterns and commitments

Big data: To track and anticipate gaps in skills, map mismatches and polarisation in the job market, and marry employers' need with employees' capabilities.

Public policy: Must reflect changing reality of work – comprehensive approach that includes refitting education, supporting firms in growth and job creation through investing in skills, customising and ensuring portability of social rights, and developing indicators for public investment to lead to effective social outcomes.

Figure 8: Skills and Resilience For a World of Change

COMPETENCES	MINDSET & TALENT
Critical thinking	Curiosity
Creativity	Initiative
Communication	Persistence
Collaboration	Empathy
	Adaptability

DOMAIN KNOWLEDGE
Area of specialisation
Expertise

CORE LITERACIES

- Reading and writing
- Numeracy
- Scientific literacy

- ICT fluency
- Language skills (mothertongue +1)
- Cultural and civic awareness

Source: European Commission (2016). The Future of Work: Skills and Resilience for a World of Change, EPSC Strategic Notes. Issue 13: 10 June 2016.

Generic Fact1: Every individual NQF is meant to serve the national needs, be they reforming education and training system, linking education outcomes to labour market needs, facilitating articulation between HE and VET, etc. However, no one individual NQA within this rapidly changing and interrelated national, regional, and global work and learning environments can work in isolation.

But

Looking at the factors that are identified as critical for implementation (legislation, stakeholder engagement, institutions and quality assurance) these are typically national arrangements.

Generic Fact 2: Meta- Framework is now a necessity rather than a luxury. However, true fulfilment of its Referencing criteria has to carefully and truly consider:

• How much are the referencing criteria achievable to all relevant countries within a logical time frame?

• To what extent can the meta- framework's learning outcomes assist Referencing Countries to ably amend/ reform their own education and training systems to shift towards learning outcomes based programs and qualifications, taking into consideration the different and variable relevant infra- structures each country enjoys?

• To what extent can the meta- framework build trust among various stakeholders with the aim of developing and implementing a transparent QA system that, by itself, facilitates mutual recognition of qualifications and mobility of workforce?

There is a level of common principles and standards that can be developed at an international, national and local level – and all three can be interlinked. It is axiomatic that there will be greater specificity occurring at the local level and less at the international level. It can be likened to a **continuum – i.e. [more specific] local ------ national ------ international [less specific]**

 Actual assessment between the continuum of national and local level permits a stronger ability to confer **"*competent performance*"** for a specific cluster of learning outcomes pertaining to a given learning/workplace/occupational outcome.

 However, at the **national to international level continuum** there can only be determined, at a macro level, an inference of equivalence or alignment for a recognized cluster of learning outcomes pertaining to a notional workplace/occupational outcome.

 It is not possible **at international to national level** – to be able to confer competent performance to an individual directly. The prospect of conferring competent performance at this level is relatively meaningless because there is insufficient specificity and the risk of conferring such is high, but the arrangement is good for inferring concordance or alignment between a given learning/workplace/occupational outcome. However, the concordance is a good indicator and is more important for trend and indicative data analysis. E.g. how many engineers, types of engineers and so on.

The lack of specificity for conferring competent performance on an individual using an international to national continuum **is more acute at the lower levels of a meta-QF than at the higher levels where less specificity applies.** The specificity typically relates to such matters as how work is governed (legally), organized and controlled within a region or nation and may vary markedly between them to the extent that there may be some alignment between say an occupation in one country and another, but at a content level there is considerable difference. It would signal the need for a mandatory training gap which will arise because of the differences.

To incorporate for various highly- developed, developed, and less- developed education and training infra- structure systems, learning outcomes that can span all so as to assure equality that incorporate such emerging issues as:

- Convergence of technology and humans

- Formally recognizing significantly increasing learning and competence that is being gained outside historical learning institutions (universities and colleges – brick and mortar institutions are becoming increasingly irrelevant and kindergartens to the future learning) – caused by point 1 above

- Changes in human demographics across nations – some very young other aging (different skill sets)

- Increasing mobility and migration

- Environmental sustainability

- Human rights and growth of democratization of nations

- Increasing understanding and consistency of learning outcome levels and use of nomenclature and titles to assure equity and quality of outcomes

 Failing to incorporate the points above will in effect render an International Qualifications Framework (IQF) as a backward looking and academic/institution controlled device to protect past learning models.

 Further, such framework must involve a cohort of broad based education, industry, nations, global companies, international government agencies, and employee stakeholders if it is to gain credibility.

Below are proposed Criteria that can be considered for future vision of what might be called a Higher Meta- Framework that can align/ reference meta- frameworks such as EQF, GQF, AQF…

Criterion 1: Clearly defined responsibilities of the relevant institutions mandated to develop, maintain, and implement their national QFs and their conventions.

Criterion 2: Clear and demonstrable link between EQF. GQF, etc. levels and national qualifications levels

Criterion 3: Clear definition of the principle of learning outcomes

Criterion 4: Transparent inclusion of qualifications in the educational and qualifications system

Criterion 5: Quality Assurance consistent with Meta- principles

Criterion 6: Agreement of the quality assurance bodies

Criterion 7: Participation of international experts

Criterion 8: Writing of the referencing report and certification

Criterion 9: Publication of the report on the web

Criterion 10: Listing of EQF/ GQF. AQF levels on all qualifications certificates

Thank you