

Legislative Council Panel on Manpower

Establishment of a Qualifications Framework and its associated Quality Assurance Mechanism

Introduction

The Chief Executive announced in the Policy Address 2004 the establishment of a qualifications framework (QF) to provide learners with a clear articulation ladder. Members of the Panel were briefed on this policy initiative at the meeting held on 15 January 2004.

2. The Executive Council at its meeting held on 10 February 2004 endorsed the establishment of a seven-level cross-sectoral QF and its associated quality assurance mechanism. This paper gives a detailed account of the QF and the way forward to implement the framework.

Background

3. The advent of globalisation and rapid advances in technologies have triggered fundamental changes to the economic structure of Hong Kong. Hong Kong is transforming into a knowledge-based economy in order to maintain its competitiveness.

4. However, according to the population census conducted in 2001, 37% of our working population have educational attainment at or below junior secondary level. The Manpower Projection Study carried out in 2002 also revealed that by 2007, there will be a sizeable mismatch between job requirements and the qualifications of workers. More specifically, there will be an estimated shortage of manpower supply at “post-secondary” and “first degree and above” levels amounting to about 102 000 persons; and an estimated surplus of manpower supply at the “upper secondary” and “lower secondary and below” levels amounting to about 232 000 persons. Clearly, there is a need to upgrade the quality of our human capital and provide individuals with opportunities to optimise

their potential, if we are to meet the changing demands of the economy.

5. The existing education and training system in Hong Kong is, however, inadequate in fostering a vibrant, flexible and responsive environment that promotes lifelong learning. There is a proliferation of qualifications in the market, which lack common benchmarks of quality. Both learners and industry are uncertain about the outcomes of education and training and whether their needs are adequately met. Progression ladders are unclear, thus making it difficult for learners to draw up their own roadmaps to upgrade themselves and acquire higher qualifications. Whilst there may be articulation between courses, these are mainly bilateral arrangements between institutions within the same sector and the scope of articulation is limited. This effectively limits the room for learners to pursue different pathways that suit their changing needs.

6. To address these inadequacies and foster an environment conducive to lifelong learning, we need a framework that will enable the development of flexible and diverse progression pathways with multiple entry and exit points. There should be common benchmarks for quality assurance of qualifications. The framework should also be a platform that facilitates articulation to maximize flexibility of learning. Through their active participation in developing Industry Training Specifications (ITSs) under the framework, the industry can ensure that the skills and standards required of the workforce will be included in the outcomes of qualifications. With this framework in place, learners can draw up their own road maps to acquire qualifications to upgrade themselves and pursue lifelong learning at different stages and through different channels.

One single, seven-level QF for all sectors

7. At its simplest, a QF is a hierarchy of qualifications. It provides the destinations for learners and employers by outlining clearly what a holder of a certain qualification knows and can do. It also provides the pathways between qualifications, so that learners can understand how to reach their destinations. The QF has been a common feature in overseas education and training systems, including Australia, New Zealand and the United Kingdom. It has been recognised as an effective tool to promote

quality and relevance of education and training.

Annex

8. The QF is a seven-level hierarchy of qualifications. It is designed to be applicable to all sectors to facilitate the interface between academic and vocational sectors. Each level is characterised by its generic level descriptors (at Annex) which describe the common features of qualifications at the same level. These level descriptors are not an exact science, but are used comparatively to locate a qualification at a particular level on the framework.

9. To make the QF simple and easy to understand, we need to avoid creating a complicated QF structure with too many sub-levels. In proposing a seven-level QF, we have taken into account local qualifications and overseas experience. The QF is broadly comparable to qualifications systems in other countries.

10. Qualifications encompassed in the QF are outcome-based and are not confined to academic attainment. In the case of the academic sector, the outcome standard of qualifications is mainly the knowledge and skills a person possesses. Generally, these standards are set by scholars. On the other hand, the outcome standard of qualifications in the vocational sector are in the form of competencies set by the industry. In this connection, we have tested out the proposed levels of the QF in Accountancy, Chinese Catering, Electrical & Mechanical Services and Watch & Clock sectors. We are satisfied that the seven-level structure can be applied in different industry settings.

Industry Training Specifications

11. To identify the specific outcome standards required for different levels of qualifications, an industry sector needs to develop ITSs. The ITSs comprise three components, namely, competency standards, qualifications and assessment guidelines. The competency standards embodied in the ITS represent the industry benchmarks for the skills, knowledge and attributes required to perform a job at a certain level. The competency standards will be grouped together to form a qualification at a particular level.

12. With the establishment of ITSs, training providers can design training programmes that would help the learners to achieve the specified competency standards. As the competency standards were developed by industry, the relevance of the training programmes to the requirements of the industry would be ensured. At the same time, training providers will have flexibility over the design of learning pathways to meet different needs of students.

13. To examine the suitability of ITSs in local industry settings, we have carried out a pilot study on the development of ITSs for Retail and Information Technology industries. Industry representatives were consulted throughout the pilot study. The experience with the pilot study confirms that it is feasible to develop ITSs for different industries in Hong Kong.

Impact on workers

14. The QF is not a mandatory system. It is essentially an infrastructure to give recognition to the knowledge, skills and experience of the holder of the qualification. If a worker possesses sophisticated skills, his qualification could be classified at a high level under the QF regardless of his educational attainment.

15. Apart from giving recognition to workers, the QF can also help identify the training needs of workers and provide clear progression pathways for aspiring workers to upgrade themselves. For new entrants to the industry, a formal qualification under the QF will enable them to demonstrate to their prospective employers that they possess the skills and knowledge required to perform the tasks expected of them.

16. With better quality of workers, the industry and the economy as a whole would benefit from improved productivity and competitiveness.

Recognition of Prior Learning

17. A Recognition of Prior Learning (RPL) mechanism will be put in place under the QF. It is a clearly defined arrangement to recognise the workers' skills, knowledge and experience that were acquired through

previous training, work or life experience. It is intended that the RPL should be conducted on the basis of competency standards and objective assessment guidelines adopted by the industry.

18. There may be different forms of RPL. Workers may undergo an actual or a simulated workplace assessment to be conducted by a qualified assessor. They may present evidence of years of working experience. The crux of the RPL mechanism is to enable workers to demonstrate that they possess a particular level of knowledge and skills through presentation of evidence or practical assessment. The RPL mechanism will not only confer recognition and qualification to workers, but can also be used to give exemption to workers from certain modules of courses, or assist workers to gain acceptance into courses for higher level qualifications in situations where they do not possess the required academic attainment for enrolment.

19. The mode of RPL may vary depending on the needs and characteristics of the respective industries. To ensure credibility of qualifications obtained through the RPL mechanism, the industry must be actively involved in the process of developing the assessment guidelines for the qualifications.

Credit Accumulation and Transfer

20. To facilitate lifelong learning, workers require flexibility in the mode and pattern of learning to cater for their work and family responsibilities. A credit accumulation and transfer (CAT) system will provide the flexibility to suit individual circumstances and minimize duplication in training. With a CAT system, learners can systematically accumulate the credits of learning and training gained from various courses with a view to converting the accumulated credits into a recognised qualification.

21. The development of the QF will facilitate CAT arrangement between sectors and training providers by providing a common platform and benchmarks. However, the successful implementation of a CAT system will rely on the willingness and readiness of the training providers to formulate a mutually acceptable and transparent arrangement. We

shall explore the possibility of developing a CAT system under the QF with training providers.

Industry Training Advisory Committees

22. For the vocational sector, the development of ITSs is an important first step in implementing the QF. The industry will have to play a pivotal role in the process. In this regard, we shall set up Industry Training Advisory Committees (ITACs) in different industry sectors. They will be a key conduit of advice and information between Government and the industry.

23. Specifically, ITACs will be tasked with the following main functions:

- (a) to assess the manpower requirement of respective industry sector through regular labour market analyses;
- (b) to advise on the strategy for the development of manpower for respective industry sector;
- (c) to help implement the QF in the respective industry sector by developing, maintaining and updating ITSs, as well as formulating a RPL mechanism; and
- (d) to promote the QF within the industry sector.

24. Given the importance of its work, it will be crucial for the ITACs to receive the full backing of the industry sectors concerned. They should encompass a wide spectrum of views from within the respective industry sectors and be led by a respectable chairman who will champion the cause. Major stakeholders such as employers, employees, professional bodies, Government, education and training providers should be represented on the ITACs. The exact composition and modus operandi of individual ITACs will be subject to discussion and agreement with the respective industry sector.

25. Whilst most industry sectors can reap the benefits of forming ITACs, we shall adopt a phased approach for the formation of ITACs. We intend to start with industry sectors which have carried out some preparatory work in respect of the QF; and have shown interest and readiness to participate in the exercise. The phased approach will allow time for us to build up expertise and experience in developing ITSs and RPL. We shall reach out to other industry sectors as we accumulate experience and work within available resources.

26. At the initial stage, Government should help individual ITACs to build up their capacity to develop, maintain and update ITSs. We shall provide secretariat support to the ITACs and may engage external consultants for producing the draft ITSs for discussion by the ITAC and for conducting wide consultation within the industry sector. We expect that resources will be more intensive in the first couple of years of operation for each ITAC when the ITS is being developed. In the longer run (i.e. after the first ITS has been developed for the industry), ITACs should take on and finance the work of maintaining and updating ITSs on their own. The costs of maintenance and updating should be lower than the cost required for initial, full-scale development.

Quality Assurance Mechanism

27. The establishment of the QF should lead to a vibrant, responsive and efficient education and training market. To ensure credibility of qualifications awarded by wide-ranging education and training providers under the QF, we need a quality assurance mechanism to underpin the QF. In view of its experience in quality assurance and its independent status as a statutory body, we consider that the Hong Kong Council for Academic Accreditation (HKCAA) is best placed to take on the role of assuring the quality of qualifications under the QF.

28. HKCAA was set up in 1990 as a statutory body to conduct academic accreditation for higher education institutions in Hong Kong that are not self-accrediting, and their degree-level programmes. The existing criteria and procedures of accreditation, as well as the set-up have been academically oriented. Therefore, in order to discharge its

functions under the QF, the scope of HKCAA has to be expanded so as to meet the needs of a much wider clientele and a more diverse range of courses. To this end, HKCAA conducted a self-review in conjunction with an external consultant in 2003 to evaluate its current practices and performance, and to assess the Council's readiness for the expanded role under the QF.

29. In essence, the review suggests that HKCAA should adopt revised criteria for quality assurance, with a threshold standard appropriate to the level and scope of the providers and programmes seeking quality assurance. The criteria should become more output-focused and open-ended to accommodate all types of provision. The ultimate objective of the reform is to encourage a more diverse and vibrant education and training market while the value of quality assurance is upheld and appreciated.

30. HKCAA is deliberating on the proposed changes arising from the self-review and will present the outcome of its deliberation to Government in a couple of months. Furthermore, to empower HKCAA to perform the proposed quality assurance role under the QF, legislative amendments to the HKCAA Ordinance (Chapter 1150) will be required.

Qualifications Register

31. The public face of the QF will be a Qualifications Register which will operate as a web-based database of information on qualifications, courses and institutions that are recognized under the QF. The Register will be an information source for students, employers, professions, education and training institutions, and the public.

32. Whilst the ownership of the QF should remain with Government, we see advantage in identifying a suitable agent to administer the Register on behalf of Government. As it will be a pre-requisite for most courses to have been quality assured by HKCAA for gaining recognition under the QF, we shall entrust HKCAA with the responsibility of administering and maintaining the Qualifications Register.

Benefits of the QF

33. The QF will provide clear information on standard of courses, qualifications and providers. There will be more flexible and diversified progression pathways to suit individual needs. With the QF in place, there will be greater recognition and portability of qualifications, especially for those skilled workers who have low educational attainment.

34. The useful information on standard of courses and qualifications provided under the QF will enable employers to recruit or promote staff with the right skills and knowledge. The QF and the ITS can also help employees to identify their skill gap and training needs. Employers and industry will benefit from improved productivity of workers as a result of more relevant and quality training.

35. With the introduction of the QF and the ITS, the training market should become more vibrant and training will be more relevant to the industry needs. The education and training outcomes specified under the framework give providers more flexibility of curriculum design and implementation to meet learners' needs. With clear guidance on the outcomes to be achieved, providers may save costs in extensive industry research.

36. In sum, the establishment of a QF will help promote lifelong learning, hence enhancing the capability and competitiveness of Hong Kong's human resources in the long run. Availability of diverse progression pathways will enable individuals to find their ways to maximize their capability and work potential, which will be of material benefit to the individuals themselves and to the establishments they serve. This will collectively help reduce mismatches between manpower requirement and supply, thereby improving the overall productive capacity of our economy.

The Way Forward

37. We are reaching out to key stakeholders including employers, employees and professional bodies to promote the QF, dispel possible misconceptions and encourage them to form ITACs for the industry sectors. It is our plan to set up around seven ITACs in 2004. Initially, we shall help the individual ITACs to build up their capacity to discharge their functions (in particular, to develop ITSs) by providing secretariat support.

38. We shall work closely with HKCAA to assist the Council to undertake the reform in preparation for its expanded role under the QF, and to develop the Qualifications Register. We also aim to introduce legislative amendments to the HKCAA Ordinance (Chapter 1150) in the 2004/05 legislative session.

39. Having formed a number of ITACs, we shall proceed to launch a publicity and public education campaign targeting schools, training providers, parents, employers and the general public to promote the QF. We shall also explore the possibility of developing a CAT system with training providers.

Advice Sought

40. Members are invited to comment on the contents of this paper, in particular, on the way forward to implement the QF.

Education and Manpower Bureau
March 2004

GENERIC LEVEL DESCRIPTORS OF THE QUALIFICATIONS FRAMEWORK

Level	Generic Level Descriptors			
	Knowledge & Intellectual Skills	Processes	Application, Autonomy & Accountability	Communications, IT & Numeracy
7	<ul style="list-style-type: none"> ● Demonstrate and work with a critical overview of a subject or discipline, including an evaluative understanding of principal theories and concepts, and of its broad relationships with other disciplines ● Identify, conceptualise and offer original and creative insights into new, complex and abstract ideas and information ● Deal with very complex and/or new issues and make informed judgements in the absence of complete or consistent data/information ● Make a significant and original contribution to a specialised field of inquiry, or to broader interdisciplinary relationships. 	<ul style="list-style-type: none"> ● Demonstrate command of research and methodological issues and engage in critical dialogue ● Develop creative and original responses to problems and issues in the context of new circumstances. 	<ul style="list-style-type: none"> ● Apply knowledge and skills in a broad range of complex and professional work activities, including new and unforeseen circumstances ● Demonstrate leadership and originality in tackling and solving problems ● Accept accountability in related decision making ● High degree of autonomy, with full responsibility for own work, and significant responsibility for others ● Deal with complex ethical and professional issues. 	<ul style="list-style-type: none"> ● Strategically use communication skills, adapting context and purpose to a range of audiences ● Communicate at the standard of published academic work and/or critical dialogue ● Monitor, review and reflect on own work and skill development, and change and adapt in the light of new demands ● Use a range of software and specify software requirements to enhance work, anticipating future requirements ● Critically evaluate numerical and graphical data, and employ such data extensively.

Level	Generic Level Descriptors			
	Knowledge & Intellectual Skills	Processes	Application, Autonomy & Accountability	Communications, IT & Numeracy
6	<ul style="list-style-type: none"> ● Critically review, consolidate, and extend a systematic, coherent body of knowledge ● Utilise highly specialised technical research or scholastic skills across an area of study ● Critically evaluate new information, concepts and evidence from a range of sources and develop creative responses ● Critically review, consolidate and extend knowledge, skills practices and thinking in a subject/discipline ● Deal with complex issues and make informed judgements in the absence of complete or consistent data/information. 	<ul style="list-style-type: none"> ● Transfer and apply diagnostic and creative skills in a range of situations ● Exercise appropriate judgement in complex planning, design, technical and/or management functions related to products, services, operations or processes, including resourcing and evaluation ● Conduct research, and/or advanced technical or professional activity ● Design and apply appropriate research methodologies. 	<ul style="list-style-type: none"> ● Apply knowledge and skills in a broad range of professional work activities ● Practice significant autonomy in determining and achieving personal and/or group outcomes ● Accept accountability in related decision making including use of supervision ● Demonstrate leadership and /or make an identifiable contribution to change and development. 	<ul style="list-style-type: none"> ● Communicate, using appropriate methods, to a range of audiences including peers, senior colleagues, specialists ● Use a wide range of software to support and enhance work; identify refinements to existing software to increase effectiveness or specify new software ● Undertake critical evaluations of a wide range of numerical and graphical data, and use calculations at various stages of the work.

Level	Generic Level Descriptors			
	Knowledge & Intellectual Skills	Processes	Application, Autonomy & Accountability	Communications, IT & Numeracy
5	<ul style="list-style-type: none"> ● Generate ideas through the analysis of abstract information and concepts ● Command wide ranging, specialised technical, creative and/or conceptual skills ● Identify and analyse both routine and abstract professional problems and issues, and formulate evidence-based responses ● Analyse, reformat and evaluate a wide range of information ● Critically analyse, evaluate and/or synthesise ideas, concepts, information and issues ● Draw on a range of sources in making judgments. 	<ul style="list-style-type: none"> ● Utilise diagnostic and creative skills in a range of technical, professional or management functions ● Exercise appropriate judgement in planning, design, technical and/or supervisory functions related to products, services, operations or processes. 	<ul style="list-style-type: none"> ● Perform tasks involving planning, design, and technical skills, and involving some management functions ● Accept responsibility and accountability within broad parameters for determining and achieving personal and/or group outcomes ● Work under the mentoring of senior qualified practitioners ● Deal with ethical issues, seeking guidance of others where appropriate. 	<ul style="list-style-type: none"> ● Use a range of routine skills and some advanced and specialized skills in support of established practices in a subject/discipline, for example: ● Make formal and informal presentations on standard/mainstream topics in the subject/discipline to a range of audiences ● Participate in group discussions about complex subjects; create opportunities for others to contribute ● Use a range of IT applications to support and enhance work ● Interpret, use and evaluate numerical and graphical data to achieve goals/targets.

Level	Generic Level Descriptors			
	Knowledge & Intellectual Skills	Processes	Application, Autonomy & Accountability	Communications, IT & Numeracy
4	<ul style="list-style-type: none"> • Develop a rigorous approach to the acquisition of a broad knowledge base, with some specialist knowledge in selected areas • Present and evaluate information, using it to plan and develop investigative strategies • Deal with well defined issues within largely familiar contexts, but extend this to some unfamiliar problems • Employ a range of specialised skills and approaches to generate a range of responses. 	<ul style="list-style-type: none"> • Operate in a range of varied and specific contexts involving some creative and non-routine activities • Exercise appropriate judgement in planning, selecting or presenting information, methods or resources • Carry out routine lines of enquiry, development of investigation into professional level issues and problems. 	<ul style="list-style-type: none"> • The ability to perform skilled tasks requiring some discretion and judgement, and undertake a supervisory role • Undertake self-directed and a some directive activity • Operate within broad general guidelines or functions • Take responsibility for the nature and quantity of own outputs • Meet specified quality standards • Accept some responsibility for the quantity and quality of the output of others. 	<ul style="list-style-type: none"> • Use a wide range of routine skills and some advanced skills associated with the subject/discipline — for example: • Present using a range of techniques to engage the audience in both familiar and some new contexts • Read and synthesise extended information from subject documents; organise information coherently, convey complex ideas in well-structured form • Use a range of IT applications to support and enhance work • Plan approaches to obtaining and using information, choose appropriate methods and data to justify results & choices • Carry out multi-stage calculations.

Level	Generic Level Descriptors			
	Knowledge & Intellectual Skills	Processes	Application, Autonomy & Accountability	Communications, IT & Numeracy
3	<ul style="list-style-type: none"> ● Apply knowledge and skills in a range of activities, demonstrating comprehension of relevant theories ● Access, organise and evaluate information independently and make reasoned judgements in relation to a subject or discipline ● Employ a range of responses to well defined, but sometimes unfamiliar or unpredictable, problems ● Make generalisations and predictions in familiar contexts. 	<ul style="list-style-type: none"> ● Operate in a variety of familiar and some unfamiliar contexts, using a known range of technical or learning skills ● Select from a considerable choice of predetermined procedures ● Give presentations to an audience 	<ul style="list-style-type: none"> ● The ability to perform tasks in a broad range of predictable and structured contexts which may also involve some non-routine activities requiring a degree of individual responsibility ● Engage in self-directed activity with guidance/evaluation ● Accept responsibility for quantity and quality of output ● Accept well defined but limited responsibility for the quantity and quality of the output of others 	<ul style="list-style-type: none"> ● Use a wide range of largely routine and well practiced skills — for example: ● Produce and respond to detailed and complex written and oral communication in familiar contexts, and use a suitable structure and style when writing extended documents. ● Select and use standard applications to obtain, process and combine information ● Use a wide range of numerical and graphical data in routine contexts, which may have some non-routine elements.

Level	Generic Level Descriptors			
	Knowledge & Intellectual Skills	Processes	Application, Autonomy & Accountability	Communications, IT & Numeracy
2	<ul style="list-style-type: none"> ● Apply knowledge based on an underpinning comprehension in a selected number of areas ● Make comparisons with some evaluation and interpret available information ● Apply basic tools and materials and use rehearsed stages for solving problems. ● Operate in familiar, personal and/or everyday contexts ● Take account the identified consequences of actions. 	<ul style="list-style-type: none"> ● Choose from a range of procedures performed in a number of contexts, a few of which may be non-routine ● Co-ordinate with others to achieve common goals. 	<ul style="list-style-type: none"> ● The ability to perform a range of tasks in predictable and structured contexts ● Undertake directed activity with a degree of autonomy ● Achieve outcomes within time constraints ● Accept defined responsibility for quantity and quality of output subject to external quality checking. 	<ul style="list-style-type: none"> ● Use skills with some assistance — for example: ● Take active part in discussions about identified subjects ● Identify the main points and ideas from documents and reproduce them in other contexts ● Produce and respond to a specified range of written and oral communications, in familiar/routine contexts ● Carry out a defined range of tasks to process data and access information ● Use a limited range of familiar numerical and graphical data in everyday contexts ● Carry out calculations, using percentages and graphical data to given levels of accuracy.

Level	Generic Level Descriptors			
	Knowledge & Intellectual Skills	Processes	Application, Autonomy & Accountability	Communications, IT & Numeracy
1	<ul style="list-style-type: none"> ● Employ recall and demonstrate elementary comprehension in a narrow range of areas with dependency on ideas of others ● Exercise basic skills ● Receive and pass on information ● Use, under supervision or prompting, basic tools and materials. ● Apply learnt responses to solve problems ● Operate in familiar, personal and/or everyday contexts ● Take some account, with prompting, of identified consequences of actions. 	<ul style="list-style-type: none"> ● Operate mainly in closely defined and highly structured contexts ● Carry out processes that are repetitive and predictable ● Undertake the performance of clearly defined tasks ● Assume a strictly limited range of roles. 	<ul style="list-style-type: none"> ● The ability to perform tasks of routine and repetitive nature given clear direction ● Carry out directed activity under close supervision ● Rely entirely on external monitoring of output and quality 	<ul style="list-style-type: none"> ● Use very simple skills with assistance — for example: ● Take some part in discussions about straightforward subjects ● Read and identify the main points and ideas from documents about straightforward subjects ● Produce and respond to a limited range of simple, written and oral communications, in familiar/routine contexts ● Carry out a limited range of simple tasks to process data and access information ● Use a limited range of very simple and familiar numerical and pictorial data ● Carry out calculations, using whole numbers and simple decimals to given levels of accuracy.