



Australian

Qualifications *Framework*

AQF COUNCIL

**STRENGTHENING THE AQF:
A PROPOSAL**

CONSULTATION PAPER
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Australian Qualifications Framework Council
A Committee of the Ministerial Council on
Education Employment Training and Youth Affairs
www.aqf.edu.au

Table of contents

	Page
Preface	3
Introduction	4
Section 1: Strengthening the AQF	5
1.1 Background	5
1.2 Why strengthen the AQF?	6
1.3 Strengthening the objectives of the AQF	8
1.4 Strengthening the architecture of AQF qualifications	9
Section 2: Strengthening the architecture of the AQF	10
2.1 Introduction	10
2.2 A taxonomy of learning outcomes	10
2.3 Taxonomy options	11
2.4 The proposed taxonomy of learning outcomes	12
2.5 AQF qualification descriptors	13
2.6 Explicit reference levels	14
2.7 The number of levels	15
2.8 AQF level descriptors	16
2.9 An explicit reference levels-based structure	19
2.10 A measurement of the volume of learning in a qualification	21
2.11 A formula for credit points for a qualification	23
Section 3: Next steps in strengthening the AQF	24
Section 4: Glossary of terms	27
Section 5: Bibliography	28
Appendices:	30
Appendix 1: AQF Council Terms of Reference	30
Appendix 2: AQF Handbook Table 3	31
Appendix 3: AQF Handbook Table 4	33
Tables:	6
Table 1: Qualifications according to sector	6
Table 2: Examples of KSC learning outcomes taxonomy in use	11
Table 3: Taxonomy options	12
Table 4: Analysis of qualification descriptors in the current AQF	13
Table 5: Summary of levels in National Qualification Frameworks	15
Table 6: Examples of explicit reference levels summary descriptors	17
Table 7: Examples of explicit reference levels	20
Table 8: Some existing credit point measures	22
Table 9: Illustration of credit points for qualification types	23

I am pleased to recommend to you this proposal from the AQF Council for strengthening the Australian Qualifications Framework.

The AQF underpins Australia's education and training system by providing a nationally supported and internationally recognised framework of qualifications. Public and private schools, vocational education and training providers and universities, higher education providers deliver AQF qualifications across Australia and internationally.

The AQF Council was established a year ago in May 2009 by the Ministerial Councils on Education Employment Training and Youth Affairs (MCEETYA) and for Vocational and Technical Education (MCVTE).

The AQF Council's primary role is to monitor and maintain the AQF, support its users and promote AQF qualifications to the community. In addition, the AQF Council's remit is to provide strategic and authoritative advice to the Ministerial Councils on the AQF to ensure it is nationally and internationally robust and supports flexible cross sectoral linkages and pathways. This includes advice on strategic strengthening of the AQF to improve contemporary relevance and national and international portability of qualifications.

In its first year of operation, the AQF Council has deliberated on the rationale for strengthening the AQF and the aspects of the AQF that should be strengthened. It has done this in the context of changing workplace demands for skills and qualifications, ambitious targets set by governments for improved education and training attainment for all Australians, the global mobility of workers and students, and the imperative to recognise both knowledge and skills gained outside of the education and training sector and qualifications gained elsewhere.

The Council set itself the challenging goal of responding to the imperative for strengthening the AQF early in its term of office because it recognises the importance of credible and internationally recognised qualifications for Australia to achieve its goals of building the knowledge and skills of the nation. The AQF is a quality assurance mechanism of which Australia is rightly proud. Ensuring its contemporary relevance will assist Australia in maintaining its reputation for a quality education and training system.

There are many AQF stakeholders – for example the accrediting authorities in each of the education and training sectors, industry and its representative bodies, unions, professional associations and licensing authorities, governments and providers. Ultimately students and graduates, both Australian and international, and employers around the world will benefit from the quality qualifications that are built on the criteria of the AQF.

Your response to this proposal will help the AQF Council shape a strengthened AQF that can take us into the future as Australia's education and training needs continue to evolve.

Written responses can be sent to the AQF Council at aqfc@saugov.sa.gov.au or GPO Box 320, Adelaide, SA, 5001 by 12 June 2009.

As the AQF Council undertakes its work to make any agreed changes to the AQF, your ongoing involvement through consultation will be important.

I look forward to hearing your views.

John Dawkins, AO
Chair
Australian Qualifications Framework Council
18 May 2009

Introduction

The Australian Qualifications Framework Council was established in 2008 as a Committee of the Ministerial Council on Education Employment Training and Youth Affairs (MCEETYA) with responsibility for advising ministers on the maintenance and strengthening of the Australian Qualifications Framework (AQF). The AQF Council's Terms of Reference are at Appendix 1 to this paper.

This paper presents a proposal for strengthening the Australian Qualifications Framework.

The proposal consists of measures to:

- enhance the objectives of the framework (Section 1), and
- create a more contemporary AQF architecture including:
 - a common taxonomy of learning outcomes to describe the breadth and depth of each qualification in terms of the knowledge *and* skills *and* competences required for achieving the qualification (Sections 2.2 – 2.5)
 - a hierarchy of qualifications based on explicit reference levels (Section 2.6 – 2.9)
 - a measurement of the volume of learning for each qualification type at each level (Sections 2.10 – 2.11).

Following consultations, the next steps will be to further develop the other components as outlined in Section 3.

This proposal has been developed in response to the need for improved linkages and connections between qualifications and sectors as identified by MCEETYA. It takes into account the responses of the wide range of stakeholders who have participated in earlier consultations such as the Review of Australian Higher Education, the review of the AQF Advisory Board and AQF Council's development of common terminology for credit arrangements.

The AQF Council is now seeking stakeholder responses to this proposal. This will enable the AQF Council to then develop a more detailed work and consultation plan for the design and introduction of a stronger and more relevant Australian Qualifications Framework.

Section I: Strengthening the AQF

I.1 Background

The Australian Qualifications Framework is a national policy framework agreed to by all Australian education and training ministers through the national Ministerial Council on Education Employment Training and Youth Affairs (MCEETYA).

The AQF was developed in the early 1990s to create a comprehensive national system of cross sectoral educational qualifications capable of supporting the increasingly diverse needs of students in education and training. It was implemented on 1 January 1995. The AQF grew from the Register of Australian Tertiary Education (RATE) that described the nine levels of qualifications and the associated titles in tertiary education in Australia prior to 1995. As with the RATE, all state and territory accrediting authorities observe the national AQF rules and guidelines on the classification and nomenclature of Australian qualifications.

The AQF:

- describes the nomenclature and key characteristics of each and all nationally recognised and accredited educational qualifications
- provides guideline information on the linkages between different qualification types
- specifies the authority for accrediting Australian qualifications and the requirements issuance of qualifications in order to protect the reputation and authenticity of the qualifications and the issuing institutions
- describes potential cross-sector qualification linkages and pathways and recognition of prior learning
- facilitates international recognition and comparability of Australian qualifications.

The AQF is the principal quality assurance mechanism for Australia's education and training qualifications. It is the foundation upon which other quality assurance arrangements (such as accreditation of qualifications and the registration of education providers) are built. Importantly it provides the fundamental architecture necessary for creating pathways between educational sectors and between work and study through credit arrangements (articulation, credit transfer, and recognition of prior learning).

The AQF also provides a government guarantee of authenticity and quality. It has underpinned the export growth of Australian education and the high international standing of Australian qualifications.

The AQF recognises that the schools sector, the vocational education and the training sector and the higher education sector each has different industry and institutional imperatives and linkages. It connects these sectors in a coherent single Qualifications Framework incorporating qualification nomenclature and accreditation guidelines for each sector.

As shown in Table 1 the AQF currently comprises fifteen qualifications, grouped according to the sector with accreditation authority for each qualification.

Table I: Qualifications according to sector

Schools Sector Accreditation	Vocational Education and Training Sector Accreditation	Higher Education Sector Accreditation	
Senior Secondary Certificate of Education	Vocational Graduate Diploma	Doctoral Degree	
	Vocational Graduate Certificate	Masters degree	
	Advanced Diploma	Graduate Diploma	
	Diploma	Graduate Certificate	
	Certificate IV	Bachelor degree	
	Certificate III	Associate Degree, Advanced Diploma	
	Certificate II	Diploma	
	Certificate I		

Source: *AQF Implementation Handbook*, Fourth Edition, 2007, p.1

1.2 Why strengthen the AQF?

The AQF was a major achievement for its time and has given Australia an enviable international reputation as having one of the first and leading National Qualification Frameworks for education and training. There is continuing strong national support for the AQF and this needs to be maintained.

However, the workforce and the education and training environments have changed significantly since its implementation. These changes can be summarised under four main themes, as follows:

- The different and increased demands on education and training from students, enterprises and communities including the need for qualifications to keep pace with workforce developments.
- A greater emphasis on connectivity and linkages across and between qualifications to facilitate student needs, mobility and lifelong learning.
- The increasing demand for the recognition of informal and non-formal learning (including workplace and professional learning) driving the need to provide credit for these forms of learning.
- The increasing impact of globalisation both in terms of choice in the student market and the mobility of workforces.

In more recent developments, the 2009 Commonwealth budget initiatives and responses to the Bradley Review outline a vision for education and training into the future. These include reforming funding, products and services to create a more demand and client driven tertiary system, and, importantly, to ensure that human capital is maximised. The Deputy Prime Minister announced in March 2009 the ambition that by 2025, 40 percent of all 25-34 year olds will have a qualification at Bachelor level or above.

COAG recently agreed to a series of education and training measures to meet the challenge of rising unemployment including: a Compact with Young Australians to ensure that every young person is able to access an education or training place; a National Youth Participation Requirement to make participation in education, training or employment compulsory for all young people until they reach age 17; and, brought forward COAG's 90 per cent Year 12 or equivalent attainment rate target from 2020 to 2015.

Targets have also been set, through COAG, to halve the proportion of Australians aged 20-64 without qualifications at Certificate III level and above between 2009 and 2020 and to double the number of

higher qualification completions (Diploma and Advanced Diploma) between 2009 and 2020 increase the proportion of young Australians with an undergraduate degree and to substantially increase the numbers of undergraduate students from low socio-economic backgrounds.

All these drivers put increased focus on the ability of the objectives and structure of the AQF to continue to support key national policy objectives.

On the whole, stakeholders consider the AQF, in its current format, to be:

- a vital reference point for Australia's education and training system for ensuring a cross-sectoral and national approach
- a guide to industry and individuals on what qualifications mean
- a respected brand in Australia and overseas, providing a government guarantee for Australian qualifications which has underpinned export growth of Australian education.
- a platform for dialogue and development of relationships between the education sectors.

However, there are equally strong and widespread views that it is time for the AQF to be strengthened.

The AQF Council has been established by MCEETYA in response to stakeholders wanting 'a stronger custodian of a stronger AQF'. High level support for a stronger AQF is further illustrated by the recent Australian government announcement that the Australian Qualifications Framework Council is the key body able to provide advice to 'improve the articulation and connectivity between the university and VET sectors to enable competency-based and merit-based systems to become more student-focused'. (Gillard, March 2009)

While the descriptive nature of the AQF and its relative simplicity is considered its strength by some stakeholders, others argue the AQF now lags practice in other countries and that the AQF requires review and strengthening beyond the ongoing updating of qualification descriptors as has occurred to date.

Thus, some stakeholders question whether the AQF, as an early example of a National Qualifications Framework, fits well with contemporary definitions of a Qualifications Framework such as:

'...an instrument for the development, classification, and recognition of skills, knowledge, and competencies along a continuum of agreed levels. It is a way of structuring existing and new qualifications, which are defined by learning outcomes, i.e. clear statements of what the student must know or be able to do whether learned in a classroom, on-the-job, or less formally. The Qualifications Framework indicates the comparability of different qualifications and how one can progress from one level to another, within and across occupations or industrial sectors (and even across vocational and academic fields if the NQF [National Qualifications Framework] is designed to include both vocational and academic qualifications in a single framework)'. (Tuck, 2007 p.v)

Other commentators on the AQF have suggested that it:

- is effectively constructed as three separate frameworks (the schools, vocational education and training and higher education sectors)
- does not provide levels or equivalence of qualifications within the framework
- has fallen behind some of the international developments
- has minimal impact in the higher education and schooling sectors
- contains descriptors that are considered inadequate and conciliatory
- is producing too many qualifications
- does not assist credit and articulation across the sectors
- does not include non-sectoral based qualifications
- has been slow to respond to changing circumstances.

These views reflect the changes that have occurred within Australia in demands on education and training across all sectors and the associated reforms in higher education, vocational education and training and the senior secondary schools sectors that question the continuing relevance and utility of the AQF in its current form. In addition, there have been considerable changes in National Qualifications Frameworks elsewhere.

All these developments challenge the fitness for purpose and the status of the AQF both in Australia and internationally.

I.3 Strengthening the objectives of the AQF

The value of a Qualifications Framework lies in its potential to contribute to national policy goals for education including high levels of participation, lifelong learning, recognition of skills, improving the quality of education and training and the development of pathways, directly benefiting students.

Proposal I

The objectives of the AQF are aligned with the policy goals which it is designed to underpin and support.

The current objectives of the AQF are to:

- provide nationally consistent recognition of outcomes achieved in post-compulsory education
- help with developing flexible pathways which assist people to move more easily between the different education and training sectors and between these sectors and the labour market by providing the basis for recognition of prior learning and credit transfer and experience
- integrate and streamline the requirements of participating providers, employers and employees, individuals and interested organisations
- offer flexibility to suit the diversity of purposes of education and training
- encourage individuals to progress through education and training by improving access to qualifications, clearly defining avenues for achievement, and generally contributing to lifelong learning
- encourage the provision of more and higher quality vocational education and training through qualifications that meet individual, workplace and vocational needs, thus contributing to national economic performance
- promote national and international recognition of qualifications offered in Australia.

(AQF Implementation Handbook, Fourth edition, 2007, p.2)

Consideration needs to be given to whether these objectives are still relevant and continue to adequately describe the intention, purpose, and role of the AQF. In particular, based on contemporary expectations, the objectives of the strengthened objectives for the AQF must enable and facilitate:

- development and accreditation of nationally recognised and consistent qualifications
- authorisation of providers to deliver and issue nationally recognised qualifications
- recognition of students' learning and experience and facilitation of their progression and mobility through education and work
- national and international alignment of qualifications.

Question I

What changes should be made to the existing statement of objectives of the AQF to reflect national education and training goals?

I.4 Strengthening the architecture of AQF qualifications

To achieve the breadth of its objectives, both current and future, the architecture of AQF qualifications must be revised in line with contemporary practice.

The basic architecture of a Qualifications Framework should:

- describe what each qualification type means in terms of what students know, understand, and are able to do as a result of achieving each qualification
- describe the relationships between qualifications using descriptive classifications of some type
- include a measure of the volume of learning.

Qualifications constructed in this way can better enable the recognition of students' learning and experience, facilitate their progression and mobility through education and work, and allow for national and international alignment of qualifications.

The following key issues about the design of the current AQF qualification types have been identified:

- Although the qualification descriptors are currently learning outcomes–based, they are neither explicit nor consistent in expression and they are differently described for each of the education sectors.
- They do not reflect the conceptualisation of learning outcomes or the results to be achieved in a hierarchy of increasing complexity or demands on the students (ie an explicit reference level structure).
- There is no clear description of the relationships between the qualification types and how they articulate. By implication, this also reduces the ability to determine the need for and location of any new qualifications that might be developed in the future .
- They do not readily show how recognition of all forms of learning – formal, non-formal and informal learning – can be facilitated.
- The AQF is one of the few National Qualifications Frameworks that does not include a common measure of value at either the unit or the whole qualification level, to facilitate the transfer of learning from one situation/institution to another, to facilitate mobility in learning and employment and to promote and enable the accumulation of lifelong learning.

Proposal 2

The AQF is redesigned as a framework of qualifications based on a taxonomy of learning outcomes and explicit reference levels with a measurement of the volume of learning.

Redevelopment of the architecture of the AQF will provide the basic structure for the future development of a credit system.

The following section discusses these inter-related key components of the proposed architecture in more depth and provides options for consideration.

Section 2: Strengthening the architecture of the AQF

2.1 Introduction

A strengthened AQF will provide more robust structural mechanisms for the design and accreditation of qualifications, for comparing qualifications, to facilitate pathways and will provide the basis for any future credit system. These key components are outlined in this section and include:

- a taxonomy of learning outcomes applied to each qualification type
- explicit reference levels, and
- a measurement of the volume of learning.

The taxonomy of learning outcomes is the basic building block that provides the organising framework within which qualifications are able to be described. Describing qualifications in terms of learning outcomes enables relationships and connectivities between qualifications to be described, providing the basis for decisions regarding the number of levels and the descriptions of those levels. Robust taxonomies of qualification learning outcomes and levels are the essential underpinnings of a credit system, the first component of which is a measurement of the volume of learning.

2.2 A taxonomy of learning outcomes

Proposal 2a

A learning outcomes classification or taxonomy is developed as the basis for the qualification descriptors in the AQF.

Moving to a more consistent and explicit taxonomy of learning outcomes is supported by stakeholder opinion that:

- change is required and that the qualification descriptors in the AQF should be updated and be more consistent
- qualification descriptors should be based on more coherent learning outcomes that embody a taxonomy applied more consistently across educational sectors.

Learning outcomes are a generic currency for the various means by which individuals achieve their learning. This enables all forms of learning to be recognised – formal, non formal and informal.

The use of learning outcomes to define qualification types provides the opportunity to achieve greater consistency in the way qualifications are described as well as clarity about the differences and relationships between qualification types.

The descriptors of the qualifications in the current AQF are learning outcomes-based to some extent, but are inconsistently applied across the qualifications and sectors. They differ in their construction, the language used and the learning outcomes to which they refer. (See the *AQF Implementation Handbook*, Fourth Edition, 2007 Table 3, pp.8-10)

A more explicit taxonomy of learning outcomes for AQF qualifications will:

- assist in the development and accreditation of qualifications, facilitating decision making regarding the location of qualifications and leading to greater national consistency
- facilitate more consistent recognition of learning and application of credit
- improve the comparability of Australian qualifications with those of other countries.

2.3 Taxonomy options

There is broad consensus in the research and between countries that there are three major dimensions of learning outcomes. These are:

- Knowledge – what a student knows/understands in terms of breadth, depth and complexity
- Skills – what a student can do, how knowledge and understanding is applied
- Competences – often referred to as the context in which the knowledge and skills achieved can be applied. This dimension includes specific competences and can also include generic competences. Alternatively, these generic competences may be classified separately as a fourth dimension.

These dimensions are often referred to as the ‘KSC’ taxonomy.

A KSC taxonomy is applicable across all qualification levels and fields. It provides for the inclusion and assessment of the knowledge and skills achieved as well as for the complexity and breadth of the context in which they have been learned and assessed and thus, by inference, can be applied. This is considered the minimum information required to fully explain the outcomes of a qualification and is becoming standard practice in all National Qualifications Frameworks. (CEDEFOP, 2006a)

Qualifications Frameworks based on a three dimension (KSC) taxonomy of learning outcomes are most common. However, there is also an ongoing concern among employers that graduates should have adequate skills in learning to learn, problem solving, and communication and are able to use technology relevant to their workplaces. For this reason, in some Qualifications Frameworks these generic competences are specified in a separate or fourth dimension in order to make them more explicit. In Australia all sectors of education focus on generic skills, albeit to varying degrees. These are referred to as key competences or life skills in the school sector, employability skills in the VET sector and graduate attributes or qualities in the higher education sector.

Table 2: Examples of KSC learning outcomes taxonomies in use in other countries

Country	Knowledge	Skills	Competence
European Qualifications Framework	Knowledge: theoretical or factual	Skills: cognitive and practical	Competence – described in terms of responsibility and autonomy
Bologna (Higher Education)	Knowledge and understanding	Applying knowledge and understanding	Making judgments Communication skills Learning skills
England/Wales	Knowledge and understanding	Application and action	Autonomy and accountability
Ireland	Knowledge: breadth and kind	Know how and skill – range and selectivity	Competence – context, role, learning to learn, insight
New Zealand	Process (levels 1-7) Knowledge (levels 8-10)	Learning demand (levels 1-7) Skills (levels 8-10)	Responsibility (levels 1-7) General Statement (presumably of context) (levels 8-10)
Scotland (simplified)	Knowledge and understanding	Practice (applied knowledge and understanding)	Autonomy, accountability and working with others Generic cognitive skills Communication, numeracy and IT skills
Singapore (Workforce development only)	Knowledge and skills involved	Issues and problems the knowledge and skills are applied to	Autonomy, accountability and working with others Occupational levels and jobs to which the knowledge and skills relate

2.4 The proposed taxonomy of learning outcomes

Australia now has the opportunity to decide on the best option for a new range of qualifications descriptors based on taxonomy of learning outcomes. Two options are provided below for consideration:

- Option A – a three dimensions KSC taxonomy with embedded generic competences
- Option B – a four dimensions KSC taxonomy with generic competences as a separate dimension.

Table 3: Taxonomy options

Option A: A three dimensions KSC taxonomy with embedded generic competences

Knowledge	Skills	Competence	
What the qualification graduate knows and understands described in terms of breadth and depth a range which may include concrete, abstract, meta-cognitive and strategic to new knowledge	What the qualification graduate can do including cognitive skills involving the use of logical, intuitive and creative thinking and practical skills involving manual dexterity and the use of methods, materials, tools and instruments	CONTEXT The context within which the graduate can apply the qualification, particularly in terms of the degree of autonomy (the amount of supervision, guidance and the required clarity of parameters required for performance) and accountability (the degree of responsibility able to be managed for their and others processes and output)	GENERIC What core skills the qualification graduate has in terms of learning to learn, problem solving, communicating and using technology

Option B: A four dimensions KSC taxonomy with generic competences as a separate dimension

Knowledge	Skills	Competence – context	Competence – generic
What the qualification graduate knows and understands described in terms of breadth and depth a range which may include concrete, abstract, meta-cognitive and strategic to new knowledge	What the qualification graduate can do including cognitive skills involving the use of logical, intuitive and creative thinking and practical skills involving manual dexterity and the use of methods, materials, tools and instruments	The context within which the graduate can apply the qualification, particularly in terms of the degree of autonomy (the amount of supervision, guidance and the required clarity of parameters required for performance) and accountability (the degree of responsibility able to be managed for their and others processes and output)	What core skills the qualification graduate has in terms of learning to learn, problem solving, communicating and using technology

Question 2

Should an explicit taxonomy of learning outcomes be used consistently to describe all qualifications in the AQF?

Question 3

If an explicit taxonomy of learning outcomes is used, will students and employers be better served by Option A or Option B?

2.5 AQF qualification descriptors

Once the kind of taxonomy is determined the descriptors for each qualification will be able to be updated and revised. An analysis of the descriptors of qualifications in the current AQF against the KSC learning outcomes taxonomy is shown in Table 4.

Table 4 shows in summary form how the proposed taxonomy of learning outcomes is related to the current characteristics (see *AQF Implementation Handbook* Table 3) and distinguishing features (see *AQF Implementation Handbook* Table 4). A more complete analysis is included at Appendix 2 and 3 to this proposal.

Table 4: Analysis of the qualification descriptors in the current AQF

Learning outcome dimension	Senior Secondary Certificate	Vocational education and training qualifications	Higher education qualifications
Knowledge – breadth, depth, complexity	Included in general terms (eg ‘both generic and subject-specific’)	Included in general terms in the characteristics table, specified in the distinguishing features table	Specified (ranging from concrete to abstract to meta-cognitive to strategic to new)
Skills – application/ performance	Specified as those required for preparation for civic life, work and lifelong learning not otherwise specified	Knowledge and skills specified in terms of performance, application and contexts	Not specified
Competence – autonomy and accountability	Not specified	Specified in terms of autonomy (the amount of guidance required) and accountability for the processes and outputs of oneself and others	Specified in terms of autonomy (the amount of guidance required/ the parameters in which the graduate can perform)
Competence – generic	Process for acquiring knowledge and skills is referred to as academic, vocational education and training and community based learning	Interpersonal and team work skills Higher level VET qualifications also include conceptual thinking / creativity skills, learning to learn skills (being self directed learners)	Learning to learn and, interpersonal skills (Pathways/links to other qualifications included but are not expressed as competences)

(*AQF Implementation Handbook*, Fourth Edition, 2007, Table 3: ‘Characteristics of Learning Outcomes’, pp. 8-10 and Table 4: Distinguishing Features of Learning Outcomes, pp.11-12)

Table 4 shows that:

- The Senior Secondary Certificate descriptor is the most limited
- The vocational education and training sector qualification descriptors focus on skills and responsibilities applied in work situations
- When the vocational education and training sector qualifications are compared and contrasted (as in Table 4 of the *AQF Implementation Handbook*, 2007, p12), knowledge outcomes are specified as well as skills/application and competence/responsibilities
- The higher education sector qualification descriptors focus on knowledge and also refer variously to academic conceptual thinking /creativity skills, learning skills (being self directed learners) and interpersonal and team work skills.

The learning outcomes outlined in the qualifications descriptors in the current AQF are formulated differently for each sector of education and on the basis of historical orientations that are now out of date. Each sector has changed considerably since the original descriptors were compiled, for example:

- Senior secondary school education now includes opportunities for a mix of academic or knowledge based and vocational or work skills based learning programs
- Vocational education and training qualifications, particularly those at the higher levels, are more strongly underpinned by knowledge and theory
- Higher education qualifications are becoming more focused on the world of work and many descriptions of university courses show an increased emphasis on work related or work integrated learning and practice
- All sectors of education have an increased focus on generic competences.

Following the outcomes of the consultation, decisions can be made regarding the process for updating and revising the qualification descriptors.

2.6 Explicit reference levels

Most modern Qualifications Frameworks are hierarchically structured according to the level of learning required for a qualification, based on the relative complexity of the learning outcomes. As Tuck notes ‘assigning qualifications to levels involves judgements about the relative ‘worth’ or ‘value’ of different qualifications...’ (2007, p.35)

These Qualification Frameworks are structured so that there is a clear relationship between these reference levels and the taxonomy of learning outcomes, qualification descriptors and volume of learning.¹

Proposal 2b

AQF qualifications are organised within the AQF by an explicit reference levels-based structure.

Using this organising structure will provide more robust mechanisms that will illustrate the relative complexity of qualifications, for comparing national and international qualifications, facilitating pathways and for providing the basis for a credit system.

Unlike other Qualifications Frameworks, the AQF is not explicitly structured on the basis of levels although many users and writers describe the framework as a level-based structure. The titles of Certificates I-IV appear to encourage the perception of ‘levels’ as does the ‘ladder’ arrangement in the table of AQF qualifications (see Table 1 above) with many people simply counting from the bottom from 1 to 11.

These de facto levels have been assigned in an inconsistent manner as there is no explicit and systematic basis for the location of any of the qualifications at specific levels. This has created problems of ambiguity for the existing qualifications as well as difficulties for the addition of new qualifications (ie where should they be located and what are they equivalent to or different from).

Including a formal structure of levels in the AQF would add clarity to the relationships between different qualifications and contribute to the development of pathways and credit arrangements between qualifications, directly benefiting students. Similarly, an explicit reference levels-based structure would greatly facilitate international alignment of the AQF with other Qualifications Frameworks.

¹ In a different way, organising mechanisms such as the International Standard Classification of Education (ISCED) and the Australian counterpart, ASCED, are frameworks for classifying educational programs by educational activity and attainment for statistical rather than educational purposes.

2.7 The number of levels

It may seem tempting to allocate one level for each existing AQF qualification. However, this would result in an overly complex framework that does not adequately express the true comparability and relativity of the learning outcomes of AQF qualifications at a level.

Where learning outcomes indicate that there could be more than one qualification at a level, this does not mean that they are the same but that they match the criteria set out in the level descriptors and are equivalent in certain aspects. International practice demonstrates that each level in the framework does not need to be limited to just one qualification. Qualifications may also span levels.

For example, New Zealand has 3 qualifications at level 8 (Postgraduate Diplomas and Certificates, Bachelor with Honours), 2 qualifications at level 7 (Bachelor Degrees and Graduate Diplomas); Scotland has 3 qualifications at level 7 (Advanced Higher, Higher National Certificate and Certificate of Higher Education); Ireland has 1 qualification (Leaving Certificate) that spans levels 4 and 5.

Table 5 provides a summary of the numbers of levels in various Qualifications Frameworks.

Table 5: Summary of levels in Qualifications Frameworks

Country	No of levels	Coverage
New Zealand	10	Certificate 1 to Doctorate
Scotland	12	from 3 access levels to Doctorate
South Africa	8	General education to higher education
Wales	9	1 entry level to Doctorate
England	9	1 entry level to Doctorate
Hong Kong	7	Certificates to Doctorate
Ireland	10	More than 1 award type at each level
Malaysia	8	Certificate to Doctorate
Wales	9	1 entry level to Doctorate
European Qualifications Framework	8	Post-compulsory education to Doctorate

As indicated in Table 5, the number of levels in Qualifications Frameworks varies and ranges between 7 and 12.

A levels-based structure enables relationships with other countries' qualifications to be established. However, it is not necessary to have the same number of levels in each framework provided there is some recognisable relationship between the two frameworks. This is the principle underpinning the European Qualifications Framework (EQF) meta-framework. (Tuck, 2007, p.38)

As Tuck suggests, 'the starting point in deciding on the number of levels is the current understanding among stakeholders about key qualifications and their relationship to each other...' (2007, p.36)

2.8 AQF level descriptors

An explicit reference levels-based structure needs to include broad level descriptors based on the learning outcomes taxonomy in order to provide summary information about the nature of the learning outcomes of the qualifications at each level. These descriptors need to be broad enough to accommodate a range of qualifications and also to provide for the option to include new qualifications into the Qualifications Framework as the need arises.

Summary descriptors of learning outcomes at each level provide information about the learning required for qualifications at that level. For example:

'Achievement at level 5 reflects the ability to identify and use relevant understanding, methods and skills to address broadly-defined, complex problems. It includes taking responsibility for planning ...' (UK Qualifications Framework, p.x)

Level descriptors constructed on this basis make explicit the relativities and linkages between qualifications and briefly distinguish the:

- relative complexity and depth of knowledge and understanding
- degree of necessary support or instruction
- degree of integration and independence required
- range and complexity of practice/application
- degree of transparency and dynamics of situations.

(Bjornavold 2008, Bjornavold and Coles 2009)

Examples of levels descriptors from the EQF and the English Qualifications and Credit Framework (QCF), in Table 6, show how the levels may be described. These examples have been chosen as the QCF has already been mapped against the EQF and the examples provide realistic alignment between the two systems. The EQF level descriptors may provide a model for AQF level descriptors.

Table 6: Examples of explicit reference levels summary descriptors

(derived from Lester, 2008)

Level	Qualifications and Credit Framework (England)	European Qualifications Framework
QCF Entry level 3/ EQF1	Achievement at Entry 3 reflects the ability to make use of skills, knowledge and understanding to carry out structured tasks and activities in familiar contexts, with appropriate guidance where needed.	Basic general knowledge; basic skills for simple tasks; work or study under direct supervision in a structured context.
QCF1/EQF2	Achievement at level 1 reflects the ability to use relevant knowledge, skills and procedures to complete routine tasks. It includes responsibility for completing tasks and procedures subject to direction or guidance.	Basic factual knowledge of a field of work or study; basic cognitive and practical skills required to use relevant information to carry out tasks and to solve routine problems using simple rules and tools; work or study under supervision with some autonomy.
QCF2/EQF3	Achievement at level 2 reflects the ability to select and use relevant knowledge, ideas, skills and procedures to complete well-defined tasks and address straightforward problems. It includes taking responsibility for completing tasks and procedures and exercising autonomy and judgement subject to overall direction or guidance.	Knowledge of facts, principles, processes and general concepts in a field of work or study; a range of cognitive and practical skills required to accomplish tasks and solve problems by selecting and applying basic methods, tools, materials and information; take responsibility for completion of tasks in work or study, adapt own behaviour to circumstances in solving problems.
QCF3/EQF4	Achievement at level 3 reflects the ability to identify and use relevant understanding, methods and skills to complete tasks and address problems that, while well defined, have a measure of complexity. It includes taking responsibility for initiating and completing tasks and procedures as well as exercising autonomy and judgement within limited parameters. It also reflects awareness of different perspectives or approaches within an area of study or work.	Factual and theoretical knowledge in broad contexts within a field of work or study; a range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study; exercise self-management within the guidelines of work or study contexts that are usually predictable, but are subject to change, supervise the routine work of others, taking some responsibility for the evaluation and improvement of work or study activities.
QCF4/EQF4	Achievement at level 4 reflects the ability to identify and use relevant understanding, methods and skills to address problems that are well defined but complex and non-routine. It includes taking responsibility for overall courses of action as well as exercising autonomy and judgement within fairly broad parameters. It also reflects understanding of different perspectives or approaches within an area of study or work.	
QCF5/EQF5	Achievement at level 5 reflects the ability to identify and use relevant understanding, methods and skills to address broadly-defined, complex problems. It includes taking responsibility for planning and developing courses of action as well as exercising autonomy and judgement within broad parameters. It also reflects understanding of different perspectives, approaches or schools of thought and the reasoning behind them.	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	Qualifications and Credit Framework (England)	European Qualifications Framework
QCF6/EQF6	Achievement at level 6 reflects the ability to refine and use relevant understanding, methods and skills to address complex problems that have limited definition. It includes taking responsibility for planning and developing courses of action that are able to underpin substantial change or development, as well as exercising broad autonomy and judgement. It also reflects an understanding of different perspectives, approaches or schools of thought and the theories that underpin them.	Advanced knowledge of a field of work or study, involving a critical understanding of theories and principles; advanced skills, demonstrating mastery and innovation, required to solve complex and unpredictable problems in a specialised field of work or study; manage complex technical or professional activities or projects, taking responsibility for decision-making in unpredictable work or study contexts, take responsibility for managing professional development of individuals and groups.
QCF7/EQF7	Achievement at level 7 reflects the ability to reformulate and use relevant understanding, methodologies and approaches to address problematic situations that involve many interacting factors. It includes taking responsibility for planning and developing courses of action that initiate or underpin substantial change or development, as well as exercising broad autonomy and judgement. It also reflects an understanding of relevant theoretical and methodological perspectives, and how they affect their area of study or work.	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.
QCF8/EQF8	Achievement at level 8 reflects the ability to develop original understanding and extend an area of knowledge or professional practice. It reflects the ability to address problematic situations that involve many complex, interacting factors through initiating, designing and undertaking research, development or strategic activities. It involves the exercise of broad autonomy, judgement and leadership in sharing responsibility for the development of a field of work or knowledge or for creating substantial professional or organisational change. It also reflects a critical understanding of relevant theoretical and methodological perspectives and how they affect the field of knowledge or work.	Knowledge at the most advanced frontier of a field of work or study and at the interface between fields; the most advanced and specialised skills and techniques, including synthesis and evaluation, required to solve critical problems in research and/or innovation and to extend and redefine existing knowledge or professional practice; demonstrate substantial authority, innovation, autonomy, scholarly and professional integrity and sustained commitment to the development of new ideas or processes at the forefront of work or study contexts including research.

2.9 An explicit reference levels-based structure for the AQF

It is proposed that the AQF includes explicit reference levels, with qualifications increasing in complexity from level 1 to the highest level. Many Qualifications Frameworks include additional enabling/entry levels to accommodate learning in preparation for formal qualifications. Eight to 10 levels appears to be compatible with international standards.

Examples of both 8 and 10 levels-based structures are provided in Table 7. Both examples include an enabling level. Examples from the UK, Ireland and New Zealand are given by way of comparison and as a guide to current practice.

The left hand column of the Table is a brief description of the educational or employment focus of the qualifications at each level.

Table 7 also provides two examples of how AQF qualifications could be located in both examples of a levels-based structure.

Further consultation will be necessary in order to determine the actual placement of qualifications at each level within the structure.

Question 4

How could explicit level descriptors for each AQF level enhance Australian qualifications and their use?

Question 5

What number of explicit reference levels would best illustrate and encompass the increasing complexity of Australian qualifications?

Question 6

What is the best process to use for locating each qualification type in a levels-based structure?

Table 7: Examples of explicit reference levels

Main stages of education/employment (Source: NQAI, nd)	Example 1 – 8+1 entry level		Example 2 – 10 +1 entry level		International qualifications at this level
	Level	Australian qualifications	Level	Australian qualifications	
	Entry or enabling level qualifications	Enabling level	Year 11 Certificate I	Enabling level	
1 Secondary education Initial entry to employment or further education	Level 1	Certificate II	Level 1	Year 11	NZ – Certificates; UK – NVQ1, Lower GSCE
2 Completion of secondary education Progression to skilled employment, further and higher education	Level 2	Senior Secondary Certificate of Education (SSCE)	Level 3	Certificate III SSCE	UK – NVQ2, Level 2 Diplomas, Higher GSCE; NZ - Certificates
3 Qualified/skilled worker Entry to specialised education and training	Level 3	Certificate III and IV	Level 4	Certificate IV	UK – NVQ3, A level GSCE, apprenticeship, access to higher education NZ – Certificates
4 Entry to Higher Education Specialised education and training Paraprofessional employment	Level 4	Diploma Advanced Diploma Associate Degree	Level 5	Diploma	UK – Cert. Higher Education, Level 4 Certificate and Diploma NZ – Diplomas (Grad. Certificates at an extra level between 4 and 5)
5 Entry to professional graduate employment Entry to further higher education study	Level 5	Bachelor Degree	Level 6	Advanced Diploma Associate Degree	Scotland – Foundation Degree UK – Bachelor Degree, Foundation Degrees, Level 5 Diploma Ireland – Bachelor Degree; NZ – Bachelor Degree
6 Intermediate/higher education; professional employment	Level 6	Graduate Certificate Graduate Diploma Vocational Graduate Certificate Vocational Graduate Diploma Honours Degree	Level 7	Bachelor Degree	Scotland, Ireland – Bachelor Honours Degree UK – Bachelor Honours Degree, Grad. Diplomas and Certificates NZ – Bachelor Honours Degree, Postgraduate Diplomas
7 Professional or postgraduate education or employment	Level 7	Masters	Level 8	Graduate Certificate Graduate Diploma Vocational Graduate Certificate Vocational Graduate Diploma Honours Degree	UK – Masters
8 Professional or postgraduate education or employment	Level 8	PhD	Level 9	PhD	UK – PhD

2.10 A measurement of the volume of learning in a qualification

A measure of the volume of learning is the third component which, together with a taxonomy of learning outcomes and explicit reference levels, is proposed for a strengthened AQF.

Proposal 2c

AQF qualifications are assigned a measure of the volume of learning based on the notional student learning time involved in achieving the qualification.

Assigned points for the volume of learning provides further information on the complexity of a qualification by indicating how much time it takes a student, on average, to complete a qualification. This proposal is for a volume of learning measure to be assigned on a whole qualification basis rather than a unit specific basis.

The clarification of concepts of volume of learning across the education and training sectors should lead to greater consistency in how qualifications are designed, in determining their qualification type and also where they sit in relation to other qualifications in a strengthened framework.

A national approach to defining and assigning a numerical value for the volume of learning in qualifications is required to create a common language that will transparently, consistently and systematically link qualifications. Strengthening the concepts and definitions about credit points through the AQF will also enhance the portability of qualifications and mobility of students.

Volume of learning is often expressed, in numerical terms, as credit points. Credit points are used to quantify learning outcomes and give them a value or currency.

Credit points are well known in higher education and to some degree in vocational education and training. In current practice, credit points are used to determine if a person meets the entrance or exit requirements of a qualification. Credit points are also used in determining articulation arrangements between qualifications or institutions through a reduction in study time or in granting advanced standing. They can also be used to distinguish between a full-time or part-time load. In addition, there are other types of measures of individual learning for entry to a qualification, such as the weighted tertiary entrance rankings.

These current mechanisms are based on an assumption that credit is used mostly to progress to higher level qualifications; however students often transfer across, between or within sectors and fields of study and/or undertake concurrent qualifications.

Currently, there are different ways of assigning a numerical value to the volume of learning in a qualification in Australia. There is, however, very little information publicly available about how credit or the volume of learning is measured, what formulas or definitions are used, or why there are such apparently wide differences in the numbers (as illustrated in Table 8 below).

Anecdotally, educators and administrators in all three sectors apply some concept of 'student learning time' in the construction of credit points (particularly for credit transfer), but there appears to be no citable source or consensus about what this learning time is.

Table 8 on the next page shows a sample of the range of credit points assigned by providers.

Table 8: Some existing credit point measures

Organisation	Definition	Credit measure
University 1	Unspecified	48 credit points = 1 year F/T
University 2	Unspecified	24 credit points = 1 year F/T A unit = 3 – 4 pts
University 3	Unspecified	120 credit points = 1 year F/T A unit = ~ 15 pts
University 4	Unspecified	1 ‘course’ = 6 units
University 5	Unspecified	100 credit points = 1 year F/T A unit = ~12.5 pts
Victorian Credit Matrix	Points to denote the amount of learning time expected in a particular unit	1 point = 10 hours of learning time
University Mobility in Asia Pacific (UMAP) Credit Transfer Scheme (UCTS)	The UCTS credit points scale is a numerical measure of student workload, based on a typical full-time student’s commitments over a full academic year. It measures both contact hours/ class time and also private study time for a typical student enrolled in the course.	60 UCTS credit points = 1 F/T year

A desktop study of other National Qualification Frameworks shows that international consensus is growing about what constitutes credit towards a qualification, how it is measured and how volume is constructed. The EQF, United Kingdom and New Zealand have similar definitions about notional learning time as the basis for defining the volume of learning. Several countries use a 1 to 10 formula for assigning general credit points in relation to learning time. This has informed the proposals below.

It is proposed that AQF qualifications are assigned a numerical value based on a notional student learning time involved in achieving the qualification.

To enable this two things are required:

- a definition for the volume of learning, and
- a credit point formula for a qualification.

Notional learning time can be defined as the time it takes a student, on average, to complete all learning activities required for the achievement of a qualification.

These activities include, for example:

- Formal learning – structured assessed learning (classes, seminars, self-directed study, off the job training, structured tutoring/coaching)
- Non-formal learning – unstructured, intentional learning that might be validated for credit
- Informal learning – unstructured, unintentional learning that might be validated for credit.

Practical work and practice to gain and refine skills and knowledge (laboratory work, private study, work placements) and all forms of assessment and preparation for assessment should also be taken into account. (Tuck, 2007)

Notional learning time is not about how long individual students take; it is not a precise (scientific) measurement; it must involve comparisons with other qualifications; it must be based on expert judgement; it is dependent on a series of rules of thumb; and it should be validated by use and acceptance. (Hart, 2005)

2.1 | A formula for credit points for a qualification

Based on emerging consensus regarding the usefulness of a decimal measure for a unit of credit, it is proposed that the formula of one credit point for each notional 10 hours of learning is used.

Credit points would be assigned at the time of the development and accreditation of qualifications.

Table 9 illustrates how credit points might be assigned to qualification types. As most qualifications consist of components at a range of learning attainments, it is necessary to specify both the number of credit points and the proportion of learning at the level of the qualification type; 'x%' in the table refers to this proportion

The illustration in Table 9 is derived from several sources and is indicative only.

Table 9: Illustration of credit points for qualification types

Australian qualification type	Possible credit points
PhD	420–540 with at least x% at the final level of this qualification
Masters	180–240 with at least x% at the final level of this qualification
Graduate Diplomas Vocational Graduate Diplomas	90–120 with at least x% at the final level of this qualification
Graduate Certificates Vocational Graduate Certificates	40–60 with at least x% at the final level of this qualification
Bachelor	300–360 with at least x% at the final level of this qualification
Associate Degree	120 with at least x% at the final level of this qualification
Advanced Diploma	240–360 with at least x% at the final level of this qualification
Diploma	120–240 with at least x% at the final level of this qualification
Certificate IV	90–150 with at least x% at the final level of this qualification
Certificate III	90–150 with at least x% at the final level of this qualification
Certificate II	60–120 with at least x% at the final level of this qualification
Certificate I	30–120 with at least x% at the final level of this qualification
Senior Secondary Certificate of Education	120 with at least x% at the final level of this qualification

Question 7

Would a measurement of the volume of learning add value to AQF qualifications and support improved credit arrangements?

Question 8

What is the best process to use to determine the credit point value for each AQF qualification type?

Section 3: Next steps in strengthening the AQF?

Other components of the AQF need strengthening to ensure that the AQF is nationally and internationally robust and supports flexible cross-sectoral linkages and pathways relevant to Australia's education and training environment. These will be built on the redesigned qualification architecture proposed above. These are summarised below.

Credit system

The taxonomy of learning outcomes, the explicit reference levels-based structure and a mechanism for assigning the volume of learning proposed in Section 2 will provide the foundation for the development of a robust and transparent national education and training credit system.

The introduction of a credit system in the AQF will:

- support and inform the awarding, accumulation and transferability of general credit
- facilitate articulation arrangements between qualifications and institutions
- assist providers, career advisors and students to identify optimal pathways in training and education.

Cross-sectoral linkages and pathways

Work is currently underway to bring together the range of policy documents on cross-sector qualification linkages. A copy of the draft *National policy and guidelines on credit arrangements* is available on the AQF website. Additionally, the Deputy Prime Minister has commissioned the AQF Council to consider improvements to articulation and connectivity between the vocational education and training and higher education sectors. The outcome of this project will inform future AQF policy directions.

Protection of AQF qualifications

Protecting AQF qualifications and ensuring that they are recognised as such in Australia and overseas is a critical policy issue for the AQF. Two key areas include:

- consistency regarding qualifications certification documentation – the purpose of the documentation, what it should include and what it should be titled, and
- the use and application of AQF qualifications titles across the sectors.

Register of qualifications and providers

Responsibilities for maintaining a register of qualifications are identified in the *Authority to issue qualifications*, item 6 for each qualification in the *AQF Implementation Handbook*. While there is ready access to the existing register through the AQF website, the register is highly devolved across each sector and State and Territory making it difficult for students, employers and others to access information and verify the bona fides of a qualification. Consideration will be given to whether the benefits to the community of a public national register rather than the current devolved model.

Addition and retirement of qualification types

Guidelines for the inclusion of new qualifications and the retirement of existing qualifications will be developed to ensure that the AQF can accommodate the changing demands of the education and training sectors into the future. Greater international alignment may drive some rethinking on the types of qualifications in the AQF.

Quality assurance and governance of the AQF

Current national discussions, for example the *Report of the Review of Australian Higher Education* and *Skills Australia's Foundations for the Future*, regarding the development of a national regulatory and quality agency for tertiary education will inform further discussion regarding future governance and quality assurance arrangements for the AQF.

Conclusion

Based on responses received, the proposal in this paper will be refined and the components of the AQF will be designed and developed. Full stakeholder consultation will occur during this process.

Responses

AQF stakeholders are invited to provide comment on the proposal for strengthening the AQF.

The consultation period will conclude on Friday 12 June 2009.

Responses can be sent by:

- email to aqfc@saugov.sa.gov.au, or
- post to AQF Council Secretariat
GPO Box 320, Adelaide, South Australia, 5001.

Telephone enquiries can be made to 08 8226 2775.

Proposals and Questions

Proposal 1

The objectives of the AQF are aligned with the policy goals which it is designed to underpin and support. (Section 1.3, p 8)

Question 1

What changes should be made to the existing statement of objectives of the AQF to reflect national education and training goals? (Section 1.3, p 8)

Proposal 2

The AQF is redesigned as a framework of qualifications based on a taxonomy of learning outcomes and explicit reference levels with a measurement of the volume of learning.

(Section 1.4, p 9)

Proposal 2a

A learning outcomes classification or taxonomy is developed as the basis for the qualification descriptors in the AQF. (Section 2.2, p 10)

Question 2

Should an explicit taxonomy of learning outcomes be used consistently to describe all qualifications in the AQF? (Section 2.4, p 12)

Question 3

If an explicit taxonomy of learning outcomes is used, will students and employers be better served by Option A or Option B? (Section 2.4, p 12)

Proposal 2b

AQF qualifications are organised within the AQF by an explicit reference levels-based structure. (Section 2.6, p 14)

Question 4

How could explicit level descriptors for each AQF level enhance Australian qualifications and their use? (Section 2.9, p 19)

Question 5

What number of explicit reference levels would best illustrate and encompass the increasing complexity of Australian qualifications? (Section 2.9, p 19)

Question 6

What is the best process to use for locating each qualification type in a levels-based structure? (Section 2.9, p 19)

Proposal 2c

AQF qualifications are assigned a measure of the volume of learning based on the notional student learning time involved in achieving the qualification. (Section 2.10, p 21)

Question 7

Would a measurement of the volume of learning add value to AQF qualifications and support improved credit arrangements? (Section 2.11, p 23)

Question 8

What is the best process to use to determine the credit point value, with reference to the level, for each AQF qualification type? (Section 2.11, p 23)

Section 4: Glossary of terms

Sources: *AQF National Policy and Guidelines on Credit Arrangements* (draft 2009) and OECD: *Qualifications Systems: Bridges to lifelong learning, 2007*

Accreditation	A process of quality assurance through which accredited status is granted to a program of education or training showing it has been approved by the relevant legislative or professional authorities by having met predetermined standards.
Articulation	Articulation is a process that enables students to progress from one completed qualification with credit in a defined pathway.
Credit	Credit is the value assigned for the recognition of equivalence in content and learning outcomes between different types of learning and/or qualifications which reduces the amount of learning required to achieve a qualification.
Credit system	The processes involved in valuing credit, transferring credit and accumulating credit that are governed by rules in a qualifications framework.
EQF	European Qualifications Framework – a meta-framework to which all European countries will map their National Qualifications Frameworks by 2010.
Explicit reference levels	Levels relate to either degrees of complexity of learning and/or progression routes that students are able to take through qualification systems.
Formal learning	Formal learning refers to learning that takes place through a structured program of learning and assessment that leads to the full or partial attainment of a recognised AQF qualification or other formally recognised qualification.
Informal learning	Informal learning refers to learning gained through work-related, social, family, hobby or leisure activities and experiences. Unlike formal and non-formal learning, informal learning is not organised or externally structured in terms of objectives, time or learning support.
Learning outcome	The set of knowledge, skills and /or competences an individual has acquired and/or is able to demonstrate after completion of a learning process.
Lifelong learning	Learning activity that is undertaken throughout life and improves knowledge, skills and competences within personal, civic, social and/or employment related perspectives.
Non-formal learning	Non-formal learning refers to learning that takes place through a structured program of learning but does not lead to a formally recognised qualification.
Notional learning time	Notional learning time can be defined as the time it takes a student, on average, to complete all learning activities required for the achievement of a qualification.
Qualification	The formal certification, issued by a relevant approved body, in recognition that a person has achieved learning outcomes or competences relevant to identified individual, professional, industry or community needs.
Qualification type	Qualification type refers to the nomenclature used for a qualification such as 'Certificate III', 'Bachelor Degree', 'Vocational Graduate Diploma'.
Recognition of prior learning (RPL)	RPL is an assessment process that determines the credit outcomes of an individual application for credit.
Taxonomy	In Qualifications Frameworks, a taxonomy refers to a system of classification of learning outcomes.

Section 5: Bibliography

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Appendix I

AQF Council Terms of Reference

The Australian Qualifications Framework Council will be responsible to MCEETYA (and MCVTE as appropriate) based on a three year (reviewable) strategic plan and an annual business plan agreed by MCEETYA (and MCVTE as appropriate) and on matters referred from MCEETYA and MCVTE.

The functions of the Council are grouped under two key areas:

1. Provision of policy advice to MCEETYA (and MCVTE as appropriate) on:
 - Strategic strengthening of the AQF required to meet identified needs such as improving national consistency and contemporary relevance, including national and international portability
 - Improving flexible qualification linkages and pathways in education and training within and across all sectors, including recognition of non-formal and informal learning
 - Relevant national and international issues and their implications for national qualifications policy
 - National and international recognition and comparability of qualification standards and alignment of qualifications standards / frameworks.
2. Maintenance, monitoring and support for the implementation of the AQF including to:
 - Review and revise the AQF and existing AQF qualifications criteria and guidelines in consultation with key stakeholders
 - Actively monitor and support implementation of the AQF, particularly changes to the AQF with key stakeholders
 - Provide advice on the AQF to interested parties including in national and international forum
 - Maintain the AQF Implementation Handbook (or any replacement document(s)), and other key AQF materials
 - Maintain and review the AQF Register of Recognised Education Institutions and Authorised Accreditation Authorities in Australia
 - Maintain a current, accessible and effective AQF advisory service to users, including via the internet
 - Promote nationally consistent implementation of the AQF
 - Promote the quality assurance processes that underpin the AQF in each sector.

Appendix 2

AQF Handbook Table 3: Characteristics of Learning Outcomes

Source: AQF Implementation Handbook, Fourth Edition 2007

Code: ■ **red** = references to Knowledge, ■ **blue** = references to Application/Skills,
 ■ **green** = references to Competence, ■ **black** = unrelated;
 SSCE = Senior Secondary Certificate of Education

SSCE	Certificate I	Certificate II	Certificate III	Certificate IV
<p>The characteristics of learning outcomes at this level include the knowledge, skills and understandings, both generic and subject-specific, required as a basic preparation for civic life, work and lifelong learning.</p> <p>These are developed through studies that may include academic disciplines, vocational education and training, and community-based learning.</p>	<p>Breadth, depth and complexity of knowledge and skills would prepare a person to perform a defined range of activities most of which may be routine and predictable.</p> <p>Applications may include a variety of employment-related skills including preparatory access and participation skills, broad-based induction skills and/or specific workplace skills.</p> <p>They may also include participation in a team or work group.</p>	<p>Breadth, depth and complexity of knowledge and skills would prepare a person to perform in a range of varied activities or knowledge application where there is a clearly defined range of contexts in which the choice of actions required is usually clear and there is limited complexity in the range of options to be applied.</p> <p>Performance of a prescribed range of functions involving known routines and procedures and some accountability for the quality of outcomes.</p> <p>Applications may include some complex or non-routine activities involving individual responsibility or autonomy and/or collaboration with others as part of a group or team.</p>	<p>Breadth, depth and complexity of knowledge and competence would cover selecting, adapting and transferring skills and knowledge to new environments and providing technical advice and some leadership in resolution of specific problems. This would be applied across a range of roles in a variety of contexts with some complexity in the extent and choice of options available.</p> <p>Performance of a defined range of skilled operations, usually within a range of broader related activities involving known routines, methods and procedures, where some discretion and judgement is required in the selection of equipment, services or contingency measures and within known time constraints.</p> <p>Applications may involve some responsibility for others. Participation in teams including group or team coordination may be involved.</p>	<p>Breadth, depth and complexity of knowledge and competencies would cover a broad range of varied activities or application in a wider variety of contexts most of which are complex and non-routine.</p> <p>Leadership and guidance are involved when organising activities of self and others as well as contributing to technical solutions of a non-routine or contingency nature.</p> <p>Performance of a broad range of skilled applications including requirements to evaluate and analyse current practices, develop new criteria and procedures for performing current practices and provision of some leadership and guidance to others in the application and planning of the skills.</p> <p>Applications involve responsibility for, and limited organisation of, others.</p>

Code: ■ **red** = references to Knowledge, ■ **blue** = references to Application/Skills,
 ■ **green** = references to Competence, ■ **black** = unrelated;
 SSCE = Senior Secondary Certificate of Education

Diploma	Advanced Diploma	Associate Degree	Bachelor Degree	Graduate Certificate
<p>Breadth, depth and complexity covering planning and initiation of alternative approaches to skills or knowledge applications across a broad range of technical and/or management requirements, evaluation and coordination.</p> <p>The self-directed application of knowledge and skills, with substantial depth in some areas where judgement is required in planning and selecting appropriate equipment, services and techniques for self and others.</p> <p>Applications involve participation in development of strategic initiatives, as well as personal responsibility and autonomy in performing complex technical operations or organising others. It may include participation in teams including teams concerned with planning and evaluation functions. Group or team coordination may be involved.</p> <p>The degree of emphasis on breadth as against depth of knowledge and skills may vary between qualifications granted at this level.</p>	<p>Breadth, depth and complexity involving analysis, diagnosis, design, planning, execution and evaluation across a broad range of technical and/or management functions including development of new criteria or applications or knowledge or procedures.</p> <p>The application of a significant range of fundamental principles and complex techniques across a wide and often unpredictable variety of contexts in relation to either varied or highly specific functions. Contribution to the development of a broad plan, budget or strategy is involved and accountability and responsibility for self and others in achieving the outcomes is involved</p> <p>Applications involve significant judgment in planning, design, technical or leadership/guidance functions related to products, services, operations or procedures.</p> <p>The degree of emphasis on breadth as against depth of knowledge and skills may vary between qualifications granted at this level.</p>	<p>The acquisition of the foundational underpinnings of one or more disciplines, including understanding and interpretation of key concepts and theories and how they are evolving within the relevant scientific, technical, social and cultural contexts.</p> <p>Development of the academic skills and attributes necessary to access, comprehend and evaluate information from a range of sources.</p> <p>Development of generic employment related skills relevant to a range of employment context.</p> <p>A capacity for self-directed and lifelong learning.</p> <p>A course leading to this qualification is generally but not exclusively articulated with relevant Bachelor Degree programs. A course leading to this qualification will vary in breadth and depth according to whether it is a single or multidisciplinary program but will be taken to sufficient depth to provide a basis for full articulation with relevant Bachelor Degree programs.</p>	<p>The acquisition of a systematic and coherent body of knowledge, the underlying principles and concepts, and the associated communication and problem-solving skills.</p> <p>Development of the academic skills and attributes necessary to undertake research, comprehend and evaluate new information, concepts and evidence from a range of sources.</p> <p>Development of the ability to review, consolidate, extend and apply the knowledge and techniques learnt, including in a professional context.</p> <p>A foundation for self-directed and lifelong learning.</p> <p>Interpersonal and teamwork skills appropriate to employment and/or further study.</p> <p>A course leading to this qualification also usually involves major studies in which significant literature is available. Course content is taken to a significant depth and progressively developed to a high level which provides a basis for postgraduate study and professional careers.</p>	<p>Characteristics of learning outcomes at this level cover a wide range of specialised needs following an undergraduate program or relevant prior work, ranging from initial and ongoing professional development to preparation for further postgraduate study. The learning outcomes reflect a standard appropriate to advanced study and primarily include the acquisition and application of knowledge and skills in a new discipline or professional area, which may also involve extending knowledge and skills gained in an undergraduate program or relevant prior work.</p>

Appendix 3

AQF Handbook Table 4: Distinguishing Features of Learning Outcomes

Source: AQF Implementation Handbook, Fourth Edition 2007

Code: ■ **red** = references to Knowledge, ■ **blue** = references to Application/Skills,
 ■ **green** = references to Competence, ■ **black** = unrelated;
 SSCE = Senior Secondary Certificate of Education

Certificate I	Certificate II	Certificate III	Certificate IV
KNOWLEDGE			
Demonstrate knowledge by recall in a narrow range of areas	Demonstrate basic operational knowledge in a moderate range of areas	Demonstrate some relevant theoretical knowledge	Demonstrate understanding of a broad knowledge base incorporating some theoretical concepts
SKILLS /PRACTICAL APPLICATION			
demonstrate basic practical skills such as the use of relevant tools	apply a defined range of skills	apply a range of well developed skills	
	apply known solutions to a limited range of predictable problems	apply known solutions to a variety of predictable problems	apply solutions to a defined range of unpredictable problems
perform a sequence of routine tasks given clear direction	perform a range of tasks where choice between a limited range of options is required	perform processes that require a range of well developed skills where some discretion and judgement is required	identify and apply skill and knowledge areas to a wide variety of contexts with depth in some areas
receive and pass on messages/information	assess and record information from varied sources	interpret available information, using discretion and judgement	identify, analyse and evaluate information from a variety of sources
ROLES AND RESPONSIBILITIES			
	take limited responsibility for own outputs in work and learning	take responsibility for own outputs in work and learning	take responsibility for own outputs in relation to specified quality standards
		take limited responsibility for the output of others	take limited responsibility for the quantity and quality of the output of others

Code: ■ **red** = references to Knowledge, ■ **blue** = references to Application/Skills,
 ■ **green** = references to Competence, ■ **black** = unrelated;
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Diploma	Advanced Diploma	Vocational Graduate Certificate	Vocational Graduate Diploma
KNOWLEDGE			
demonstrate understanding of a broad knowledge base incorporating theoretical concepts, with substantial depth in some areas	demonstrate understanding of specialised knowledge with depth in some areas	demonstrate the self-directed development and achievement of broad and/or specialised areas of knowledge and skills building on prior knowledge and skills	demonstrate the self-directed development and achievement of broad and/or highly specialised areas of knowledge and skills building on prior knowledge and skills
KNOWLEDGE / PRACTICAL APPLICATION			
analyse and plan approaches to technical problems or management requirements	analyse, diagnose, design and execute judgements across a broad range of technical or management functions	initiate, analyse, design, plan, execute and evaluate major, broad and/or highly specialised technical and/or management functions in highly varied and/or highly specialised contexts	initiate, analyse, design, plan, execute and evaluate major functions either broad and/or highly specialised within highly varied and/or highly specialised contexts
transfer and apply theoretical concepts and/or technical or creative skills to a range of situations	demonstrate a command of wide-ranging, highly specialised technical, creative or conceptual skills	generate and evaluate ideas through the analysis of information and concepts at an abstract level	generate and evaluate complex ideas through the analysis of information and concepts at an abstract level
evaluate information using it to forecast for planning or research purposes	generate ideas through the analysis of information and concepts at an abstract level	demonstrate a command of wide-ranging highly specialised technical, creative or conceptual skills in complex contexts	demonstrate an expert command of wide-ranging, highly specialised technical, creative or conceptual skills in complex and/or highly specialised or varied contexts
ROLES AND RESPONSIBILITIES			
take responsibility for own outputs in relation to broad quantity and quality parameters	Demonstrate accountability for personal outputs within broad parameters	demonstrate responsibility and broad-ranging accountability for personal outputs	demonstrate full responsibility and accountability for personal outputs
take limited responsibility for the achievement of group outcomes	demonstrate accountability for group outcomes within broad parameters	demonstrate responsibility and broad-ranging accountability for the structure, management and output of work of others and/or functions	demonstrate full responsibility and accountability for all aspects of work of others and functions including planning, budgeting and strategy



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