

Guidelines for the Award of Credit and a Credit Transfer System Within the NVQF

Final Draft 24 November 2020

Prepared for the Swiss Agency for Development and Cooperation (SDC) and the Nepal National Skill Testing Board (NSTB) on Behalf of the Nepal Vocational Qualifications System (NVQS)

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1 Glossary – Definitions of Terms Used and Acronyms

Accreditation of institutions: The process of recognising that education and training institutions meet appropriate standards of quality

Assessment: The process of gathering evidence to determine whether a learner has met the required standards. Assessment is also used as part of the learning process to assist the learner in making progress

CAT: Credit accumulation and transfer

Competency-based: Sometimes means the same as ‘outcome-based’, i.e. where qualifications are based on clear statements of what the learner must know or be able to do. Sometimes ‘competency’ refers to occupational competency, i.e. a specific type of outcome referring to what the learner must be able to do to perform a work role competently

Comprehensive framework: An NQF that includes all sectors of education and training in which qualifications are offered

Credit accumulation: The process of gaining credits towards a qualification within an institution (or closed system, e.g. all qualifications offered by a single awarding body)

Credit transfer: The process by which credits gained in one institution or system may be recognised in another institution or system

CTEVT: Council for Technical Education and Vocational Training

Level descriptor: A definition of the characteristics of a qualification that would lead to it being assigned to a particular level

Level: A stage in a hierarchical system used for grouping qualifications that are deemed to be broadly equivalent. Also sometimes called a ‘reference level’

Linked framework: An NQF in which the different sectors (secondary schools, VET and higher education) are in distinct tracks but (as against a tracked system – see below) there is an emphasis on identifying similarities and equivalence and establishing credit transfer between tracks

Modularisation: A system in which qualifications consist of a number of modules, each of which can be certificated independently. Sometimes, this is known as ‘unitisation’ and ‘modularisation’ is used to refer to a system in which learning programmes consist of a number of components

Module: A component of a larger qualification, which is certificated independently. (Sometimes, it means a component of learning and teaching within a programme, not independently certificated)

NCS: National Competency Standard

NLH: Notional Learning Hours

NSTB: National Skill Testing Board

NVQ: Nepal Vocational Qualification

NVQS: Nepal Vocational Qualification Framework

Outcome-based: Where qualifications are based on clear statements of what the learner must know or be able to do. Sometimes, the term ‘competency-based’ is used with the same meaning. However, sometimes ‘competency-based’ has a more specific meaning (see above)

Partial framework: An NQF that does not include all sectors of education and training in which qualifications are offered

Performance criterion: Part of a unit which sets out the requirements for competent work performance; must be outcome focussed, evaluative and able to be reliably assessed.

Portfolio: A collection of evidence presented by a person to support a claim for achievement of competency.

Range statement: Part of a unit which sets out the range of contexts in which work occurs and the various techniques, equipment, conditions and regulations which affect it and determine effective performance

Recognition: the formal credentialing of a person's achieved competencies. May be a full qualification or smaller components of competency as described in a standard. Recognition of current competency involves assessment against an agreed standard.

Qualification: An official record (certificate, diploma) of achievement which recognises successful completion of education or training, or satisfactory performance in a test or examination; and/or the requirements for an individual to enter or progress within an occupation

Qualifications framework: A system for placing qualifications that meet certain standards of quality on one of a series of hierarchical levels

Qualifications system: All aspects of a country's activity that result in the recognition of learning

Quality assurance: Processes and procedures for ensuring that qualifications, assessment and programme delivery meet certain standards

Recognition of Prior Learning (RPL): The process of recognising previous learning (often experiential) towards gaining a qualification

Regional Qualifications Framework: A framework that consists of a set of agreed principles, practices, procedures and standardised terminology intended to ensure effective comparability of qualifications and credits across countries in a region

Standards-based: An alternative term for outcome-based (see above). May sometimes refer to a particular approach

TVET: Technical and Vocational Education and Training - sometimes referred to as VET

Unit: An alternative term for a 'module'. Sometimes the term 'module' is used for a component of learning and teaching and 'unit' for a component of a qualification

Unitisation: A system in which qualifications consist of a number of units, each of which can be certificated independently. See also 'modularisation'

Zone of mutual trust: A network of people, including providers and users of qualifications, who have developed a sense of trust in the worth of qualifications and/or the institutions who deliver them.

2 Introduction

This Guide provides an introduction to the concepts of credit, credit accumulation and credit transfer within a qualification framework. It goes on to recommend a system which could be used to assign credit within the NVQS, enable credit accumulation and transfer within NVQS and permeability between the NVQS and the formal technical education and general education sectors.

It draws on the experience of other countries which operate qualification frameworks and research carried out by reputable international bodies. The qualification frameworks referenced include:

Australia	Pakistan
England	Philippines
Malaysia	Scotland
New Zealand	Sri Lanka

Attention was also paid to research carried out in the Association of South East Asian Nations (ASEAN).

Publications from international bodies include those from:

CEDEFOP	International Labour Organisation
European Training Foundation	The Asia Foundation
European Union	UNESCO

3 About Qualification Frameworks and Systems

3.1 Qualification Frameworks

Since the 1990s, NQFs have become a world-wide phenomenon. The 2019 *Global Inventory of Regional and National Qualifications Frameworks* identified 94 countries in all inhabited continents with national qualifications frameworks, together with seven regional qualification frameworks offering transparency and mutual recognition between the countries who make up those regions¹. In nearly one half of all nations on earth, NQFs have become a key government policy to promote lifelong learning and recognition of achievement in response to rapidly evolving labour markets within and across national boundaries.

At its simplest, a qualification framework is an instrument for the development, classification and recognition of attitudes, skills and knowledge, expressed as *learning outcomes*, along a continuum of agreed *levels*. A framework, therefore, provides a method of comparing different qualifications and showing how learners may progress from one level to another within and even across occupations, sectors and jurisdictions where arrangements for mutual recognition exist².

Qualification frameworks may encompass all education and training routes – in which case they are truly *comprehensive* qualification frameworks – or they may limit themselves to one or several (but not all) education and training sectors. Thus, some countries have qualification frameworks for Higher Education whereas others only embrace Technical and/or Vocational training. These are *sectoral* qualification frameworks. These are *partial* or *sectoral* frameworks

Beyond this basic architecture – learning outcomes + levels – qualification frameworks can have a number of other features. For example, qualifications within framework may be seen as being independent of the institution which provides the associated learning programmes; qualifications may consist of components – units or modules of learning – which allow for recognition of part achievement of a qualification or for the gradual achievement of a qualification over an unfixed and flexible period of time. Of particular importance to this guide is that qualifications or qualification components may carry a credit value which offers the possibility of credit accumulation and transfer between institutions, qualifications and even educational sectors³. Qualification frameworks and credit systems are often tightly integrated.⁴

The main features that distinguish qualifications framework from previous qualifications systems can be summarised as follows⁵:

- Qualifications are described in terms of a single set of criteria or a single definition of what is to count as a qualification.
- Qualifications are ranked on a single hierarchy expressed as a single set of levels each with its distinct level descriptors.
- Qualifications are classified (in the case of vocational qualifications) in terms of a comprehensive set of occupational fields.

¹ *Global Inventory of Regional and National Qualifications Frameworks*. (European Centre for the Development of Vocational Training, European Training Foundation, United Nations Educational, Scientific and Cultural Organisation, and UNESCO Institute for Lifelong Learning, 2019)

² Tuck, R. *An Introductory Guide to National Qualifications Frameworks: Conceptual and Practical Issues for Policy Makers* (International Labour Organisation, 2007).

³ *Ibid.*

⁴ *Linking Credit Systems and Qualifications Frameworks, an International Comparative Analysis* (CEDEFOP, 2010).

⁵ Young, M. *National Qualification Frameworks: Their Feasibility for Effective Implementation in Developing Countries* (International Labour Office, 2005)

- Qualifications are described in terms of learning outcomes that are independent of the site, the form of provision and the type of pedagogy and curriculum through which they may be achieved.
- A national framework of qualifications provides a set of benchmarks against which any learning can be assessed in terms of its potential contribution to a qualification.
- All qualifications are defined in terms of elements (sometimes referred to as units or unit standards) and ascribed a volume in terms of NLH learning hours expressed as quantifiable credit. A learner has to achieve a given number of credits to gain a qualification.

It is these features that, in principle, allow qualifications to deliver the benefits claimed for them. For example, in principle, qualifications as part of framework are designed:

- to be achieved by accumulation over time (credit accumulation and transfer);
- to be transportable, units of one qualification can be used for other qualifications;
- to be transparent - learners know precisely what learning outcomes they are required to demonstrate to achieve a qualification;
- not to require any specific prior learning programme – potential for Recognition of Prior Learning (RPL).

3.2 Qualification Systems

However, qualifications frameworks cannot stand alone. To make frameworks *operational*, countries need to establish wider qualification *systems*. These systems may vary across jurisdictions but generally include components such as policies on qualification design, procedures for institutional accreditation, protocols for learner assessment, quality assurance and certification.

Thus, the combination of qualification frameworks and qualification systems provides countries with the opportunity to standardise and improve education and training with a number of possible policy goals, for example to:

- Strengthen the quality and credibility of qualifications and training programmes;
- Stimulate cross-institutional/awarding body recognition of achievement;
- Establish coherence across qualifications and articulation between learning pathways;
- Promote the recognition of learning outcome achievement in non-formal and informal learning;
- Encourage lifelong learning and flexible career routes through credit accumulation and transfer;
- Enable the mobility of labour across national boundaries through participation in a regional framework or through mutual recognition.

Because frameworks and systems are so closely intertwined and the fact that the framework sits within the system we will in future use 'NVQS' to refer to both the framework and system in Nepal.

4 Summary of the Nepal National Qualifications Framework

In this section we review some of the key features and objectives of the NVQS.

4.1 Nepal Vocational Qualification Framework – Aims, Objectives and Features

NVQS is seen as an essential element in modernising Nepal’s education and training to further its transformation from a developing to a developed country which provides its citizens with gainful and productive employment, combined with progressive career opportunities both domestically and overseas. The domestic economy needs skilled workers for it to flourish, but overseas employment continues to make a vital contribution which cannot be ignored. In 2018, for example, more than 25% of Nepal’s GDP was supplied by migrant workers’ remittances⁶.

The NVQS is being established with the following principal aims⁷:

- Promoting lifelong learning through better understanding of learning routes and qualifications, improved access, progression routes, credit transfer and RPL
- Quality assurance and recognition

‘Recognition’ applies, of course, not just to domestic employers and other stakeholders but also to the many foreign states and their employers who provide work opportunities for Nepali skilled workers abroad.

The NVQF consists of eight levels where level 1 reflects basic skills and knowledge, and level 8 requires knowledge and skills ‘at the most advanced frontier of a field of work or study at the interface between themes.’⁸ Level 8 in the NVQF may be considered equivalent in achievement to a PhD in Higher Education.

NVQs comprise Units of Competency which are grouped in a way that covers those functions which are necessary and sufficient for competency in a given occupation.

Three important features of the NVQS are:

- The ability to interface with non-formal and informal learning
- The relationship with lifelong learning and continuing education
- The facility for the Recognition of Prior Learning (RPL)⁹

4.2 Intended Articulation/Permeability of NVQF with TVET and General Education within an NQF

The NVQS is a sectoral framework but is seen as being the first stage in developing a comprehensive NQF which will embrace Technical Education and General Education. The intention is that learners’ achievement to be awarded credit which will enable learners to progress vertically and horizontally within each sector. In addition, some emphasis has been placed on the importance of ‘permeability’, i.e. the facility for learners to be able to transfer credit earned in one sector to be recognised in another. Thus, Levels 1-5 are divided into two parts. Levels 1-2 address informal training whilst Levels 3-5 cover non-formal VET; Level 3 and above align with formal TVET and permeability (credit transfer) should operate at these levels between NVQS and formal TVET.

The practicalities of how this may happen are discussed in more detail in *Section 9*.

⁶ *Nepalese Labor Migration—A Status Report* (The Asia Foundation, 2018).

⁷ *National Qualifications Framework of Nepal: Short Explanation* (CTEVT/NSTB – Swisscontact, 2019).

⁸ *Ibid.*

⁹ *Ibid.*

4.3 Key Characteristics of Qualifications and Qualification Components in the NVQS

Within a qualification framework, qualifications (or even the components of qualifications) can be defined using two properties: Level and Credit.

Within the NVQS the following elements are important in the design of qualifications:

- Learning Outcomes
- Level Descriptors
- Units
- Credit as a quantum of learning time

4.4 Learning Outcomes and Assessment Specifications

Learning outcomes are generally defined as:

“Statements of what learner knows, understands and is able to do on completion of a learning process defined in terms of knowledge, skills and competence.”¹⁰

In the context of the NVQS, attitudes have also been included.

Competency is central to the NVQS and therefore learning outcomes can be derived from the new and emerging National Competency Standards (NCS).¹¹

Learning outcomes have the following characteristics:¹²

1. They are ‘achievements’, clearly identifiable (written as active statements – verb, object, condition).
2. They must be achievable within the learning environment (which can include the workplace).
3. They can be assessed.
4. They establish an educational level and are related to a specific national skill and competence level.

The basis for assessment is provided by *assessment criteria* or, in the case of NCS, *performance criteria* which define the quality or standard to which the learning outcome should be achieved for successful completion. Assessment is also supported by other requirements such as Range of Variables and Evidence Guides (both features of the Nepal NCS, as benchmarked against the Philippines Training Regulations) which taken together form the assessment specification. The combination of the learning outcomes + the assessment specification - assessment/performance criteria, range and evidence guides – is fundamental to defining the *level of achievement*.

4.5 Level of Achievement

The level of a qualification – or unit – is determined by strict comparison of the learning outcomes and the assessment specification with agreed *level descriptors*.

Level descriptors have two important dimensions:

¹⁰ *Linking Credit Systems and Qualifications Frameworks, an International Comparative Analysis* (CEDEFOP, 2010).

¹¹ One of the possible weaknesses of NCS, as currently drafted, is that, even though the elements could be seen as equivalent to, or convertible into, learning outcomes, they only address practical performance. NCS have no clear learning outcomes or assessment criteria for knowledge. This created an additional workload for sector skills councils when English NVQs were adapted for the Qualification and Credit Framework (QCF) in the late ‘noughties’.

¹² *Using Learning Outcomes: European Qualifications Framework Series: Note 4*. (European Union, 2011).

“First, they introduce hierarchy of levels (the vertical dimension) which captures the increase in complexity, depth and breadth of learning outcomes. This hierarchy makes it easier for individuals to understand what is expected from somebody holding a qualification at a particular level. It also supports those designing and reviewing qualifications. Second, specifying domains of learning outcomes (the horizontal dimension) helps individuals, as well as education and training stakeholders, to distinguish between (for example) categories such as knowledge, skills, competence, social and personal competence, and autonomy and responsibility. This dimension is critical as it demonstrates that different types of qualifications with different purposes and profiles (general and vocational, practical and theoretical) can be delivered at all levels.”¹³

In the case of the NVQS, there are eight vertical levels and the horizontal dimension is provided by three domains of Knowledge, Skills and Competence (attitude). The levels are determined by level descriptors for each domain which have increasing demands in terms of complexity.

The table below shows Levels 1-5 as an example:

Level	Knowledge	Skills	Competence (attitude)	Qualification Title
Level 1	Basic general knowledge. 3R's, social skills.	Basic skills required to carry out simple tasks	-Follow the guidelines under given framework conditions -Deal with simple situations -Work under full supervision	Entry Skill Certificate
Level 2	Knowledge of particular field of work or study.	Minimum cognitive and practical skills. Relevant information finding to do the job. Basic skills to solve routine problems using simple rules and tools.	-Follow the guidelines with new and specific activities. -Build self- confidence with support and -Work under full supervision	Basic Skill Certificate
Level 3	General concepts of the job. Theories and principles associated with the job.	Solving problems applying basic methods. Identifying tools and techniques to solve problems.	-Act with some autonomy -Cope with challenges under given conditions -Work under supervision with some autonomy	National Skill Certificate

¹³ *Analysis and Overview of NQF Level Descriptors in European Countries* (CEDEFOP, 2018)

Level	Knowledge	Skills	Competence (attitude)	Qualification Title
Level 4	In-depth theoretical knowledge in the field of work or study.	Generating techniques to solve specific problems	<ul style="list-style-type: none"> -Handle assigned and routine situations independently -Participate in teamwork -Supervise others in common tasks. -Work independently 	National Technical Certificate
Level 5	Specialized theoretical and factual knowledge and skills to work, to supervise and to assess subordinates.	Demonstrating creative abilities to develop creative solutions to abstract problems.	<ul style="list-style-type: none"> -Manage, coordinate and supervise projects independently; -Handle the unpredictable situations -Start self-reflection one's own behavior and improve to the given context -Critically and responsibly deal with the actions of other people, -Give feedback to the development of subordinate's potential. -Supervise others 	National Diploma

The level descriptors used within the NQF follow the same principles as those in many other countries, for example, Pakistan, Sri Lanka, Australia, Scotland and across the whole of the European Union through the European Qualifications Framework. In countries where comprehensive frameworks have existed for some time – notable examples include Australia and Scotland – they are becoming well accepted by all education sectors, including general education and now enjoy some acceptance and understanding by students and employers. However, narratives in education are rarely 'short stories'; this process has taken a long time, in the case of some of the countries mentioned, around 20 years. It would be realistic to expect, with appropriate support and promotion in the public eye, that similar understanding and acceptance can be achieved in Nepal.

Where qualification frameworks have existed for some time (Australia 25 years; Scotland 20 years; Europe 12 years) despite very rapid progress in industrial technologies and labour market demands, there has been no requirement or need to adjust level descriptors within those frameworks because they have been written in a broad and generic way which is relatively independent of the context in which they are applied. Level descriptors within the NQF follow the same approach and there is little evidence to suggest from the experience of other countries that they would need frequent review and revision.

One of the key advantages of having a National Qualifications Framework is to gain recognition and credit for qualifications in other countries. This is particularly important to a country such as Nepal

which historically has ‘exported’ a large number of workers to receiving countries like India and the Gulf Region. One of the drawbacks can be that national qualifications tend to use different levels and level descriptors. Whereas Nepal has eight levels, Sri Lanka has seven (although it only goes to bachelor’s degree), United Arab Emirates has 10, as does Australia, New Zealand has eight and the European Union also has eight. Therefore, the problem of transportability of qualifications in terms of mutual recognition is not a new one. Scotland, for example, has 12 levels, but England only has eight, yet these countries regularly exchange workers and students. Australia has 10 levels and New Zealand only eight. Because of their geographical proximity, once again, people – and their qualifications – frequently move between these countries for work and study. Within the geographical region of Europe, where there is relatively easy movement of people for the purposes of employment and education, there are 42 national qualification frameworks across 38 countries¹⁴. In all of these examples, and many more, it has been possible to compare levels and level descriptors, map across frameworks, identify level equivalences (for example, level 3 in England is accepted to be equivalent to level 5 in Scotland) and achieve mutual recognition on a government-to-government basis. This is a process which the Government of Nepal will have to enter into when the NQF is legally established.

4.6 Unitisation

The NVQS is a system which contains unitised qualifications.

Units represent a package of one or more learning outcomes (with their associated assessment requirements) which can then be grouped together through agreed *rules of combination* to form qualifications. Rules of Combination vary according to local and historical conventions. For example, in the original UK NSVQ system, all units within a level 3 qualification were assumed to be at level 3. When, 20 years later, the Qualifications and Credit Framework (QCF) was introduced, units were individually assigned a level and often it became clear that individual units were not necessarily at the same level as the overall qualification. The rule then became that at least 50% or more of the credits making up a qualification had to be at or above level 3. It is now generally accepted that units may be at different levels within a qualification and that the level of the qualification as a whole can be determined by an agreed balance of unit credits at those different levels.

In all unitised systems, the unit is the smallest component of learning and assessment for which credit can be awarded.

4.7 Credit

Credit is important in some, but not all, NQFs.¹⁵ Where it is used:

“Credit is intended to give an indication of the volume of learning required by a programme. It is usually expressed as a numerical value linked to NLH learning time, although the precise definition of NLH learning time may vary from system to system.”¹⁶

Notional learning time – or Notional Learning Hours (NLH) – is a key concept in the calculation of credit values and in the case of most systems includes much more than guided learning hours or directed learning in a formal educational or training environment.

¹⁴ *National Qualification Framework Developments in Europe*, CEDEFOP, 2015

¹⁵ For example, in a recent review of 10 ASEAN NQFs, it was found that only one had a fully functioning credit system (Malaysia) with another in preparation (Philippines) – Bateman A and Dyson C, *Quality Assurance Arrangements Related to National Qualifications Frameworks in ASEAN and Their Impact on Higher Education* (SHARE Project, 2018)

¹⁶ Tuck, R. *An Introductory Guide to National Qualifications Frameworks: Conceptual and Practical Issues for Policy Makers* (International Labour Organisation, 2007).

Within qualification frameworks which feature credit, *credit values are fixed and constant*, regardless of whatever qualifications they are used in and at whatever level.

4.8 The Purpose of Credit, Credit Accumulation and Credit Transfer

Within the NVQS, credit is intended to facilitate learner mobility and progression and eliminate so-called 'dead-ends'. Any achievement within the framework should carry credit, thereby enabling credit accumulation for the learner towards a qualification and who may then transfer this credit into other qualifications in the same or adjacent sectors¹⁷.

This may have helpful advantages:

"Credit transfer arrangements in the TVET system increase opportunities for students by facilitating student mobility between institutions and sectors. The purpose of credit transfer is to make it easier for students to move between courses and institutions. This gives people more opportunities to fulfil their potential and respond to changing employment needs. Credit transfer generally means that a student gains credit for previous study, so they can complete their current qualification more quickly. Credit transfer can apply between courses within an institution and between institutions (e.g. moving from one university to another). The focus of credit transfer arrangements is to establish the equivalence of learning outcomes."¹⁸

Defining units and qualifications in terms of credit values has some ancillary benefits. Firstly, the credit value provides a clear indication of the 'size' of the qualification since it identifies the typical volume of learning required. This is helpful to providers in planning their curriculum and delivery. It is also helpful in signalling to both employers and learners how much effort is required to successfully achieve the specified learning outcomes.

Historically, this has been less of a problem when TVET typically consisted of two- or three-year diploma programmes where the curriculum has been squeezed or expanded into the time available. NVQs tend to be different because they should be developed to reflect real-world labour market needs and conditions and therefore require greater flexibility in duration. The demands on being a level 2 cook may not be the same as those on a level 2 mason. Time taken to train and practise skills to the point of competency may well vary. Some qualifications, developed to meet specific employer needs, may focus on one narrowly specialised competency – for example, building brick arches. Courses required to bring someone to the point of competency in this case may only last for two or three weeks. In these contexts, the use of credit points can be valuable for accumulation and transfer. For learners, a credit system provides a method of logging the learning they have engaged in literally over a lifetime within a national quality assured system which may well have international recognition.

4.9 Common Units and Equivalent Units

Another potential benefit of credit accumulation and transfer is minimising the need for learners to repeat areas of learning where they have already demonstrated competency. This has been a longstanding criticism of traditional education and training systems and can lead to frustrations for learners and wasted resources for providers. Why squander money teaching someone to do something they can already do? To a certain extent RPL addresses this issue for those who have learned through life/work experience but not structured learning. If a learner, however, has already demonstrated achievement in a structured and quality assured programme, there should be a mechanism to use the outcomes to accelerate learner progress in other programmes. Credit transfer offers some hope.

¹⁷ 'Sectors' may refer to educational sectors, e.g. TVET or vocational or industrial sectors, e.g. Construction and Engineering.

¹⁸ Shrestha, P. *National Vocational Credit Accumulation and Transfer System* (unpublished paper commissioned by the Nepal NVQS Project/Swisscontact, 2019).

Thought, of course, needs to be given not just to the volume of learning, but also level and content. Credit is only meaningful for the purposes of transfer if both the level and learning outcome content of a unit or qualification aligns with the expectations of the person receiving the credit transfer request.

This can sometimes be achieved by methods other than credit values. For example, transfer arrangements between qualifications or institutions can be facilitated by the use of *common units*, i.e. use is made of the same unit across two or more qualifications. Once the learner has achieved that unit, if they attempt another qualification which contains that unit, they do not need to be reassessed. Another approach is the use of *equivalent units*, i.e. the system, or individual stakeholders within the system agree that one unit is equivalent to another in terms of the coverage and complexity of learning outcomes. Once again, there should be no need for reassessment.

Both approaches pose some challenges. If common units covering transversal competencies such as communication or teamwork are used across different industrial sectors, this can be challenged by a stakeholder arguing that teamwork in Hospitality is different to teamwork in Construction. Thus, the system either needs to establish some general principles or set up a method of mediating between sectors. Equivalent units can pose the same difficulties, but additionally require a process of evaluating units which appear similar to ensure that equivalent content at the equivalent level of complexity exists. Once again, this requires mechanisms for scrutiny and mediation within the system.

Good use is made of common units in the Philippines TESDA Training Regulations where there are sets of units covering Sector Common Competencies and Occupation Common Competencies which are used in each relevant qualification. This approach can optimise transfer between qualifications by eliminating the need for unnecessary reassessment. The use of common units is now being replicated in the emerging NVQS. The question of equivalent units may need to be considered at some stage in the future.

4.10 The Importance of Quality Assurance in Maintaining the Value and Credibility of the Framework

Any qualification framework has a number of important stakeholders: educational institutions, training providers, employers, foreign governments and agencies, the general public and, of course, learners themselves. For the system to work effectively, there must be trust in the framework and trust between the stakeholders. This is why sometimes we refer to ‘zones of mutual trust’ in relation to qualification frameworks.¹⁹

In terms of building and maintaining trust in the NVQS, three important considerations need to be addressed²⁰:

1. There needs to be *consistency* in the framework, i.e. there must be the uniform application of agreed principles in the design and description of qualifications and qualification components. This must include clear guidelines for the allocation of level to qualifications and arrangements for credit accumulation and transfer.
2. The system requires reliable *monitoring mechanisms* and where one policy goal is credit accumulation and transfer, there need to be *nodal agencies* to mediate credit transfer between institutions and sectors.
3. There must be effective *quality assurance* measures in place to enable and strengthen the credibility of qualifications within the framework. One key aspect of quality assurance is the assessment of learner achievement. Stakeholders must be convinced that the successful

¹⁹ Coles M, Oates T, *European Reference Levels for Education and Training: Promoting Credit Transfer and Mutual Trust* (CEDEFOP, 2005)

²⁰ Shrestha, P. *National Vocational Credit Accumulation and Transfer System* (unpublished paper commissioned by the Nepal NVQS Project/Swisscontact, 2019).

learner/candidate really does possess the knowledge, skills and competencies to which the qualification attests. This will engender trust in the framework and system but can only be achieved by *valid and reliable learner assessment*.

This guide will only focus on the first issue, that of consistency and, in particular, a consistent approach to credit rating. The question of quality assurance in the delivery of qualifications – in particular, assessment of learners – has been dealt with in a separate guide.

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5 General Principles for Credit Rating Qualifications and Units – International Experience and Examples

In this section we shift the focus to some of the general principles involved in the credit rating process.

5.1 What is Credit Rating?

Credit transfer, as mentioned earlier, can be achieved by various mechanisms, for example the use of common and equivalent units. However, assigning credit value to units and qualifications also carries the important benefits mentioned in *Section 4.8* above.

Credit value represents the volume of learning required to successfully complete a unit or qualification. Credit rating is the process of making an accurate estimate as to the volume of learning involved. In contrast to other approaches, like the credit hours system used in the USA and other countries which emulate US educational practices, the process of estimating credit values includes all forms of required learning and gives equal value to all of them. This is known as Notional Learning Hours (NLH). Credit rating must also consider level since the level of the unit influences credit value.

5.2 Notional Learning Hours

Where credit values are used, they are almost always a quantum of NLH. So, in Pakistan:

“The credit value of the whole qualification shall be defined by estimating the amount of time/instruction hours required to complete each competency unit and competency standard.”²¹

New Zealand (which has one of the oldest VET credit systems) requires:

“Credits allocated to unit standards must reflect the notional learning time it is expected to take candidates to meet the outcome and performance requirements in those unit standards. Notional learning time includes time spent in structured tuition and self-paced learning and practice; time taken to gather and provide evidence for assessment purposes; and time taken to be assessed in all the outcomes and contexts.”²²

In looking across a range of frameworks where NLH is used as the basis for credit, NLH can be summarised as including:

- formal learning (classes, training sessions, structured coaching, seminars and tutorials, etc.);
- non-formal learning (community groups, community-based workshops, etc.);
- practical work and practice to gain and refine skills and knowledge (in the workplace, laboratories, workshops, etc; necessary private study, including information retrieval, preparation, revision, etc.);
- all forms of assessment.²³

It is important to remember that none of this relates to the time taken by any *individual learner*, or that the credit value of a programme can be increased or decreased if a learner takes more or less time to achieve the outcomes. Therefore, a qualification or a unit always has a *fixed credit value* within a framework. Thus, if Learner A takes 120 hours to successfully complete a unit and Learner B takes 180 hours, Learner B does not accrue 50% more credits. *Therefore, credit is awarded on the basis of achievement against standards, not time served.*

²¹ *National Vocational Qualifications Framework (NVQF) Version 2* (National Vocational and Technical Training Commission, Pakistan, 2017)

²² *Guidance and Examples for NQF Unit Standards*. (New Zealand Qualification Authority, 2004)

²³ Tuck, R. *An Introductory Guide to National Qualifications Frameworks: Conceptual and Practical Issues for Policy Makers* (International Labour Organisation, 2007).

5.3 The Average or Typical Learner

Calculation of NLH is generally done by firstly defining the 'average' or 'typical' learner who will attempt the unit or qualification and then use an expert group to estimate the learner workload needed to successfully complete the learning outcomes and associated assessment requirements. The definition of typical learner usually includes the assumption that the learner is 'at the level of' the qualification or unit, in other words, they have already completed the learning required at a lower level. Thus, if an expert group is calculating NLH for a level 3 qualification, and there is an underpinning level 2 qualification, the group must make the assumption that the 'average/typical learner' has already achieved the level 2 learning outcomes. If we were to assume the learner arrives as a completely blank sheet with no relevant knowledge and skills, then calculation of NLH at level 3 would have to include all the hours they take to achieve the level 1 and level 2 learning outcomes as well. This would severely distort the system since a learner who has already gained credit through achieving level 1 and level 2 would be awarded the same credit again for achieving level 3.

5.4 Calculation of Credit Value

Once NLH has been agreed, it is then possible to allocate a credit value to the unit or qualification. Once again, systems differ in countries and regions. Within the European Credit Transfer System (ECTS), one credit is equal to 25 NLH. This ratio has also been accepted in Sri Lanka. On the other hand, in some countries it is normal to allocate one credit for each 10 NLH. New Zealand, the UK and South Africa use this quantum of learning and Australia is evaluating it as a possibility. Pakistan also uses a ratio of 1 credit per 10 NLH. Malaysia (the only ASEAN system with fully functioning credit arrangements) is something of an outlier by allocating one credit for each 40 NLH. The United Arab Emirates (UAE) which is a significant receiving nation for Nepali migrant workers works on a quantum of 15 NLH per credit.

One approach taken in the English Regulated Qualification Framework (RQF), as an attempt to minimise these disparities, is to use what is known as 'Total Qualification Time' (TQT) i.e. qualification designers are required only to state the number of NLH for each qualification. If the awarding body wishes to specify a credit value, for example, to create recognition and transferability with Scotland, they can divide the TQT by 10. That's their decision. If someone operating within the ECTS wants to calculate their credit value for an English qualification, they can divide the Total Qualification Time by 25. This is seen as enhancing transparency.

The implications of how credit values are calculated do need consideration. The ratio of 25 NLH per credit works well in a system where qualifications tend to be quite large. Historically, 1:25 has tended to be driven by delivery modalities in the Higher Education sectors where typical programmes of study are full-time and may last for two, three or even four years²⁴. In the skills/occupational competency sectors, labour market responsive programmes of training may last only a few weeks or months. For these sectors, a ratio of 1:10 tends to be more useful. The fact that many countries use 1:10 also in their Higher Education sectors suggests that this does not cause too many practical difficulties for HE. For the NVQS, 1:25 or 1:10 may need careful evaluation and possibly the need to establish methods of translating credit values between the different sectoral frameworks.

One observation on the NVQS is that: "Credit is a smaller and more sensitive measure of learner achievement than a qualification."²⁵ It could be that, in a vocational qualification context, a smaller quantum of NLH may be more appropriate.

²⁴ For example, the European Credit Transfer System (ECTS) originated in the Bologna Process which was essentially focusing on the Higher Education sector within the EU. (https://ec.europa.eu/education/resources-and-tools/european-credit-transfer-and-accumulation-system-ects_en)

²⁵ Shrestha, P. *National Vocational Credit Accumulation and Transfer System* (unpublished paper commissioned by the Nepal NVQS Project/Swisscontact, 2019).

A possible way forward would be to ensure that the total estimated number of hours for each unit and qualification is recorded so that any conversion that may need to take place in the future can be facilitated.

5.5 Use of the NVQF Level Descriptors

Where frameworks use credit values, they are closely interlinked with level. In fact, the volume of learning involved in a qualification or unit will be strongly influenced by the complexity and demand placed on the learner. A handful of learning outcomes at level 1 may only result in one or two credit points. The same number of learning outcomes at level 5 are likely to yield a much larger number of credits because those learning outcomes will be significantly more demanding and need longer periods of learning. Therefore, before the process of credit rating begins, it is vital to agree what the level of the unit or qualification is.

5.6 Credit Rate Units or Qualifications or Both?

In some sectors, for example formal TVET and Higher Education, qualification designers know from the outset what the duration of the programme will be, how many semesters and the duration of semesters, and they have quite a lot of discretion in developing and combining learning outcomes into units (or 'modules' depending on nomenclature). Thus, they can work 'top-down' to create a 'tidy' set of qualifications, all with the same credit value and units with uniform credit values. They can begin by determining the credit value of the qualification as whole and then break the overall credit value down into units which can follow predetermined values and then tailor content to fit these subdivisions of learning time.

This approach is much harder in a vocational/competency-based framework which uses NCS and whose qualifications reflect occupational profiles and labour market needs and conditions. As noted in *Section 4.8* above, the world of work is uneven, skills demands for occupations, even when they are at the same level, may differ and the duration of learning programmes cannot always be uniform. The NCS are based on work functions, not all of which will require the same duration of learning and therefore credit. Short-term training in specialist 'top-up' skills are more difficult to regularise in terms of duration. This makes it harder to predetermine NLH and credit values for units and qualifications.

Much the same can be said of unit levels. Some occupational profiles will include units at different levels. A level 2 cook, for example, may be required to make basic hot drinks, a function which is really level 1. A level 2 mason may have some responsibility for the supervision of labourers which could be seen as a level 3 function, even though the technical functions are level 2. This leads to 'spikey' or 'lumpy' occupational profile levels rather than a nice straight line.

Credit rating, therefore, has to proceed from the 'bottom up' rather than 'top down'.

Most of the NQFs in the skills sectors we reviewed follow a similar process in qualification design:

1. Identify the target occupation for the qualification (for example, Cook)
2. Carry out a functional analysis of the occupation
3. Develop competency standard units from the functional analysis – possibly importing units either from within the same country or importing and adapting units from other national systems
4. Identify the intended level and purpose of the qualification (e.g. whole occupational competency or skills top-up in selected areas)
5. Decide which units should comprise the qualification(s) and the rules of combination (which may include, for example, elective routes)
6. Agree the level and credit rating for each individual unit
7. Quantify credit for the whole qualification by adding up the credits in each individual unit

8. Confirm the level of the qualification by checking the balance of credits and levels against agreed criteria. At this point, some adjustments may need to be made to ensure the qualification is at the level desired.

It is useful to note that in some systems, for example, the Scottish SCQF and the (now defunct) English QCF, there is another stage between (5) and (6) above. In these countries, competency standards are not exclusively developed for qualification purposes so there is a need for a fuller conversion of the standards into qualification units. This may involve, for example, adding in assessment strategies, scope of assessment, evidence guides etc. This may not be necessary in the Nepal context since the NCS follow the Philippines model of including all of this information. Thought, however, may need to be given to developing learning outcomes for knowledge, understanding and attitudes which are less clear in the current NCS.

5.7 Should Credit Be Assigned at Level 1?

Looking at parallel international practice, it was difficult to find an example where credit is not assigned to qualifications or units at *all* levels within their frameworks. This may simply be a shortcoming in our research and may need further investigation. In fact, it would seem inconsistent not to assign credit at all levels, including level 1. There are several reasons for this:

- It signals to learners and employers that all learning is valuable and should carry credit. This is likely to encourage more learners with no formal qualifications and little experience of education to engage with the framework
- Achievement at level 1 may seem inconsequential to some stakeholders, but to the learner it may represent a considerable effort and an effort which is worthy of reward and an invitation to progress to higher levels; only the same approach to credit accumulation and transfer at all levels would make this possible
- In 5.6 above, we noted that qualifications often contain some units at higher or lower levels than the qualification itself. Thus, in credit rating a level 2 qualification, there may be found to be units at level 1. Some level 2 units may be found in level 1 NVQs and credit should be awarded for these, but they would not be detected unless that level 1 qualification were credit rated
- The system wishes to put a premium on *consistency*. It would be more consistent to follow the same principles and procedures at all levels in the framework.

6 Recommended Processes for Allocating Credit and Level to Qualifications and Units in the NVQS

In this section we consider how the general principles of credit and credit rating can be applied to the NVQS.

6.1 Quality Assurance Overview

We noted in *Section 4.10* above that the NVQS must have credibility and engender trust in its stakeholders. If credit is to have value in the new system and achieve its aims of credit transfer and learner mobility, there must be a robust quality assurance system for qualification design and credit rating to ensure *consistency*. This should include:

1. Clear criteria and guidelines for the design of qualifications, for example: use of units, unit components, rules for the research and writing of units and unit components, requirements and guidelines for learner assessment etc.
2. Specifications for who should be involved in qualification design, including the research and development of NCS and the credit rating of units and qualifications, and what training they should receive.
3. Clear rules and guidelines for the credit rating of units and qualifications
4. Structures and processes for scrutinising and accrediting qualifications, including the allocation of levels and credit values

Unless these types of measures are in place, the quality of the products – qualifications – and their components and properties – learning outcomes, assessment specifications, levels and credit values – can be called into question, stimulating *doubt* rather than *trust*. Ideally, the major stakeholders in the NVQS need to be represented and engaged in the quality assurance processes.

Finally, all processes must be transparent, with decisions and the reasons/evidence for decisions being carefully documented and available for examination by NVQA and other stakeholders.

Offering criteria and guidelines for qualification design is beyond the scope of this Guide, and therefore we will focus on (2), (3) and (4) above.

We suggest that quality assurance could be achieved by the actions and interactions of two committees:

- Credit Rating Committee (CRC), appointed with appropriate expertise on an industrial sector basis
- Qualification Accreditation Committee (QAC), as a standing subcommittee of the NVQA

6.2 Credit Rating Committee

The process outlined below proposes the establishment (by NVQA) of a Credit Rating Committee (CRC) for each qualification or suite of closely linked qualifications. The CRC must be *formally constituted by NVQA* and be given clear Terms of Reference, guidelines, accountability and reporting procedures. The primary objectives of each CRC will be to:

- Agree a level for each unit in a qualification
- Agree NLH and credit value for each unit in the qualification
- Agree the total credit value and level of the qualification
- Provide Rules of Combination (RoC) for the qualification (how many credits need to be achieved to complete the qualification successfully)
- Recommend their decisions to the QAC

In some circumstances, the CRC may be required to make adjustments to unit content or qualification structure where difficulties are encountered.

Members of the CRC should be formally appointed by the NVQA (suggested membership and criteria are outlined in *Section 7* below). The CRC members must all be trained in credit rating. The CRC will meet for a fixed period of time to provide credit rating, with its membership refreshed to take account of new qualifications coming through for accreditation.

In the context of Nepal, the Technical Committees currently being formed by the Sector Skills Committees could fulfil the functions of a CRC – the Technical Committee’s ToR would need to be expanded. This would limit the proliferation of different committees within the system. Alternatively, one or two members of the Technical Committee could also sit on the CRC.

6.3 Who Should Be Involved in the Credit Rating Committee?

The credit rating process should be undertaken by *group or committee* – ideally the *same group or committee responsible for designing all aspects of the qualification*. The CRC should be established on a sectoral basis for the credit rating of a specific qualification or suite of related qualifications (for example, Cook Level 1, Cook Level 2, Cook Level 3).

The use of a committee is important because the credit rating of vocational/competency-based qualifications requires a variety of expertise and experience, and it is important that all the relevant system stakeholders are involved. Using the same experts as those responsible for designing all aspects of the qualification will be important because the credit rating process may expose some difficulties regarding the intended size and level of the qualification. For example, it may have been expected that a certain qualification would be delivered through short term training, but the credit rating process reveals that the NLH is actually much greater than what was originally intended. Alternatively, credit rating may indicate that there are not enough credits at the intended level. In other cases, the committee may discover that the learning outcomes and assessment criteria are insufficiently clear for confident decisions to be made about level and credits. In these cases, a CRC which is also the qualification design group will be in a position to make the necessary changes to the qualification without having to engage in debate and exchange with someone else.

Since the qualifications are supposed to attest to competence in an occupation, it is important to engage *employment interests* in the CRC. The resulting qualification is more likely to be accepted by employers if they have been involved in the design stage. It is also important to engage employer representatives because at least some of the training and skills practice/development may happen in the workplace. A skilled and experienced worker or supervisor will have a much better idea about how long workplace training for a particular unit, or learning outcome within a unit, will take and therefore what contribution ‘on job’ learning will make to NLH. Employment interests should also include *representatives of relevant trade unions or worker federations* where they are seen as being important stakeholders in the NVQS.

However, some of the training for the qualification may be delivered by a training provider, either ‘off job’ in the company or in a separate facility. *Training providers*, with experience in the sector/occupation, will be well-placed to advise on the duration of this more structured training and also what additional activities – self-study, research, practice or revision – the learner will typically undertake. Training providers are also important stakeholders in the NVQS credit transfer arrangements, and they must also be convinced that credit rating has been done with due care and attention and impartially. Resulting credit values (or at least the Guided Learning Hours which constitute part of the NLH) may ultimately have some influence on the funding of qualification delivery, so it is also important that training providers have confidence in decisions and how those decisions were reached.

Since the NLH will also include time taken for assessment and preparation for assessment, it will be important that the CRC includes *experts in learner assessment*. This could be, for example, a representative of an NSTB-accredited Assessment Centre with experience in the occupation and

sector which is the target of the qualification. They will be able to advise on how long the assessment process may take and the impact this has on NLH.

The group will also require the assistance of an *expert in credit rating and qualification design*. This person should be a *representative of the NVQA* and be there to ensure that the required processes are followed and to provide mediation and problem solving when there are differences between the various stakeholders. Their primary purpose must be to make sure that NVQA requirements are implemented and therefore act as the first line of defence in the quality assurance strategy for qualification design and credit rating. They will also be needed to obtain final 'sign-off' on the CRC's decisions.

This person may act as the chair of the CRC, or it may be that, in order to enhance credibility and trust, the group should be chaired by a *notable employer*. If the NVQA representative and Chair are different individuals, then they should establish a good working relationship and understanding of their respective roles and responsibilities.

The CRC will also need a *secretary*, since it will be important to keep records of decisions, the reasons for decisions.

All CRC members should receive at least one day's basic training in qualification design and credit rating. The NVQA representative should have received higher level training of at least three days' duration.

The table below summarises the recommended membership of the group.

Role	Function	Number	Criteria
NVQA representative	<ul style="list-style-type: none"> • Ensure all NVQA criteria and guidance is followed. • Facilitate discussion and decision-making. • Provide information and guidance. 	One person. However, it may be politic to use a prominent employer representative to lead and facilitate discussion and decision making.	<ul style="list-style-type: none"> • High level training in all NVQS requirements • Training in group facilitation and mediation • Appropriate level of authority and seniority in NVQA • Desirable if they were involved in the development of the NCS
Employer representation	<ul style="list-style-type: none"> • Provide expertise and advice on workplace learning • Assure that final decisions meet employer needs 	Minimum two people. Ideally, different sizes of companies should be represented and some geographical diversity.	<ul style="list-style-type: none"> • Experience and expertise in the occupation for which qualification is developed • Experience and expertise in supervising and developing workplace learners. • Suggest at least three years' experience • Desirable if they were involved in the development of the NCS

Role	Function	Number	Criteria
Trade Union Representation	<ul style="list-style-type: none"> • Provide expertise and advice on workplace learning • Assure that final decisions meet the needs of competency-based learners. 	One person.	<ul style="list-style-type: none"> • Experience and expertise in the occupation for which qualification is developed • Experience and/or understanding of workplace learning
Training provider representation	<ul style="list-style-type: none"> • Provide expertise and advice on off job training • Assure that final decisions meet training provider needs 	Minimum two people. Some geographical diversity or other indicators of diversity within the training market.	<ul style="list-style-type: none"> • Experience and expertise in training learners in the occupation for which the qualification is being developed • Experience and/or understanding of workplace learning • Suggest at least three years' experience.
Accredited assessment centre representation	<ul style="list-style-type: none"> • Provide expertise and advice on assessment • Assure the final decisions meet the needs of assessment centres 	Minimum two people. Some geographical diversity.	<ul style="list-style-type: none"> • Experience and expertise in assessment of learners in the occupation for which the qualification is being developed • Experience and/or understanding of workplace learning and assessment • Suggest at least three years' experience.
Secretary	<ul style="list-style-type: none"> • Provide necessary papers, • Keep minutes, collecting evidence and recording decisions. • Provide other administrative support 	One person	<ul style="list-style-type: none"> • Training in NVQA requirements relevant to the role • Proven administrative skills

As the NVQS rolls forward, it may be important to develop and use the experience and capacity of key staff in assigning level and credit. Those who have already developed some expertise in credit rating in a sector could be used again for a new qualification provided they have the necessary industry and occupational competency and experience. At the same time, so that the system can engage with a wide range of expertise and experience and build a sustainable process, it will be important to continue to bring in new employment and training provider experts. Thus, small numbers of new experts can work alongside those who have gained more experience.

6.4 Qualification Accreditation Committee (QAC)

The NVQA will need to establish a committee which scrutinises qualifications and accredits them, i.e. gives endorsement for those qualifications to become a part of the NVQS. It is important that this Qualification Accreditation Committee (QAC) is not seen as only having a technical role (although that is important). It is also vital that all major stakeholders, for example, CTEVT, NVQA/NSTB, sector skills committees, and training providers and/or accredited assessment centres are represented for final

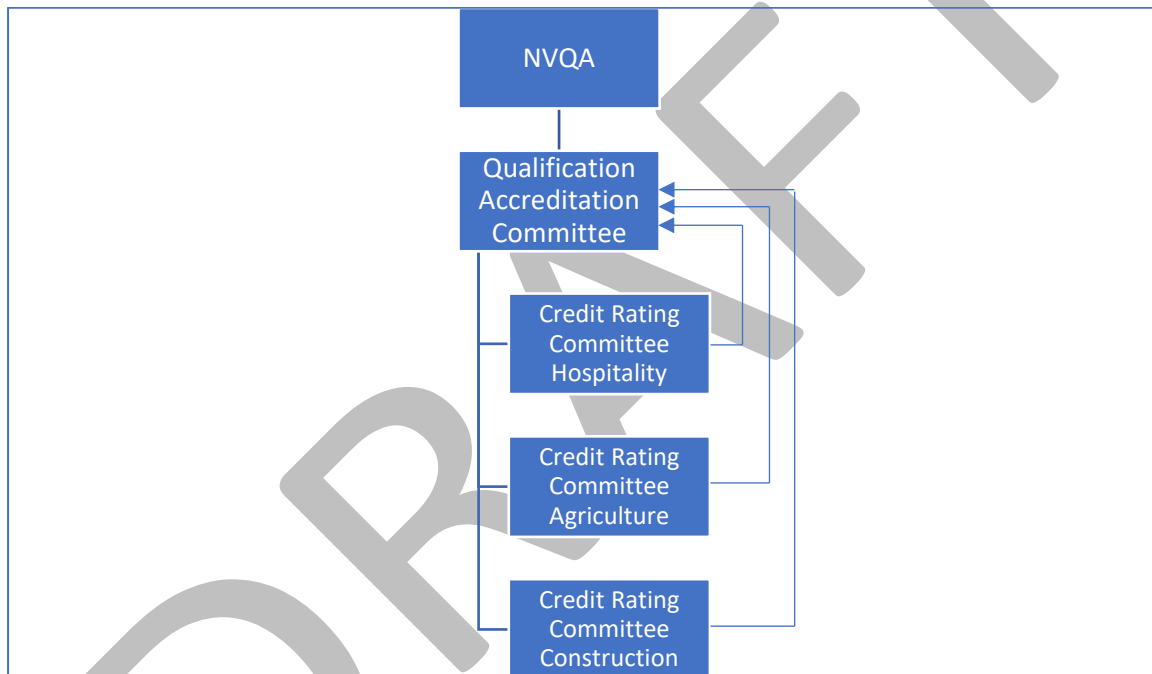
endorsement. Because decisions made on credit and level will have a future impact on transfer between vocational and technical and general education sectors, it may also be necessary to include representation from these sectors in this committee.

The remit of the QAC should be to:

- Establish CRCs and appoint their members
- Review the recommendations of Credit Rating Committees, their rationale and supporting evidence
- Endorse CRC decisions or request further deliberation
- Give final sign-off and recommendations to the NVQA Council for qualifications to enter the NVQS subject to review in x number of years.

The QAC will have a number of criteria to consider regarding qualifications, for example, evidence of market demand, compliance of the qualification with NVQS criteria, but credit and level are vital elements to be quality assured.

The graphic below shows an example of the suggested bodies within the QA framework.



7 Suggested Process for Credit Rating²⁶

We then suggest that the following process stages are followed. The process is predicated by the following assumptions and principles:

1. The process includes assigning a level and credit value to a qualification for submission to the NVQS
2. Qualifications are unit-based
3. Units are based on NCS
4. The level and credit value of a qualification represents the totality of credit value and level for each unit within the qualification's Rules of Combination (and therefore each unit must be examined, and credit rated individually)
5. A unit's level is determined by comparing its learning outcomes (or elements in an NCS), assessment criteria and assessment specifications with the level descriptors in the NVQF
6. Credit values are the number of credits that will be awarded to a learner for the successful achievement of the unit
7. The level and credit value of a unit are fixed and constant within the NVQF. Once level and credit is assigned to a unit and endorsed by NVQA, it cannot be varied without official review. Thus, if a qualification uses a unit which already has level and credit value, that level and credit value must be accepted.
8. Credit values are calculated on the basis of an agreed quantum of notional learning hours (NLH). Credit values are always whole integers and not fractions of integers. Therefore, 10 credits is acceptable, 10.25 credits is not.
9. Notional Learning Hours (NLH) is the total number of hours taken by the typical learner, at the level of the unit, on average to successfully complete the unit.
10. Allocating level and credit is not an exact science. Experts in the CRC must use their best professional judgement. The implementation of qualifications should be monitored and evaluated over a period of time. This will provide additional evidence to review level and credit in the future.

7.1 Stage One: CRC Orientation – Process and Qualification

The NVQA representative (or Chair if someone else) will briefly go over the objectives and requirements for credit rating, remind each member of the group of the importance of their role and their duty to carry out their responsibilities impartially and professionally and with a view to always seeking to reach consensus decisions. They will outline the planned programme of work for the credit rating committee.

It is also important to make sure the CRC members have a clear understanding of the proposed qualification, for example:

- Qualification purpose (for example, full occupational competency, specialist skills top-up)
- Any expectations regarding duration of learning programme (for example, 12 months or 6 weeks)
- Intended level of qualification
- Target occupation (for example, auto technician, mason, chef)
- Intended learner profile (for example, adult in employment or young person on training scheme)

²⁶ In researching credit rating internationally, it was difficult to find detailed examples of instructions/process guides. The stages described in this section are based on guides developed for the Scottish Credit and Qualifications Framework and the English/Welsh/Northern Irish Qualifications and Credit Framework. This is supplemented by the author's own experience of credit rating competency-based qualifications for these frameworks.

- Intended delivery modality (for example, workplace learning, workplace learning with day release, full-time training provider with short periods of work experience)
- Expected assessment modality (for example, wholly in workplace, wholly in accredited assessment centre, mixture of workplace and assessment centre)
- Qualification content (unit titles)
- Qualification structure (for example, are all units mandatory – every candidate has to successfully complete them to achieve the qualification – or are there routes within the qualification which may consist of some mandatory units and some electives?)

In reviewing the proposed qualification’s content, it will be important at this point to identify any common units which occur in other qualifications and therefore already have been given a level and credit value. The CRC must honour the rule that the level and credit value assigned to these units are fixed and cannot be varied by the committee.

7.2 Stage Two: Establishing Unit Level

This stage can be done in combination with Stage Three and Four, i.e. each unit can be looked at on a case-by-case basis for level, NLH and credit value.

Determination of the level of a unit must not be a subjective process and should not be led or influenced by assumptions made at the start of the qualification design process. For example, the developers of the NCS may have intended a qualification to sit at level 3 and therefore someone may assume that all units will be at level 3. The CRC should not follow this assumption; the final level of the qualification (once the credit values of all units are aggregated according to Rules of Combination) may be at level 3, but some units may be below or above that level, or indeed it may transpire that the qualification as a whole turns out to be at different level to the one anticipated. Therefore, the assignment of level to a unit must be done by carefully and impartially by comparing the unit’s learning outcomes, assessment criteria and assessment specifications with the level descriptors in the NVQF.

CRC members must be fully acquainted with the NVQS level descriptors and be given a good understanding, through the use of relevant examples, as to how they could be interpreted in an occupational and sector context. In particular, they should note how wording changes in the descriptors distinguish levels.

Looking at the extract below for Levels 3 and 4, the CRC would need to carefully note the change in wording for the level descriptors. For example, they would need to agree the difference between ‘solving problems applying basic methods’ and ‘generating techniques to solve specific problems’ and between ‘act with some autonomy’ and ‘handle assigned routine situations independently’ within the context of the qualification or unit they are considering.

Level	Knowledge	Skills	Competence (attitude)	Qualification Title
Level 3	General concepts of the job. Theories and principles associated with the job.	Solving problems applying basic methods. Identifying tools and techniques to solve problems.	-Act with some autonomy -Cope with challenges under given conditions -Work under supervision with some autonomy	National Skill Certificate

Level	Knowledge	Skills	Competence (attitude)	Qualification Title
Level 4	In-depth theoretical knowledge in the field of work or study.	Generating techniques to solve specific problems	-Handle assigned and routine situations independently -Participate in teamwork -Supervise others in common tasks. -Work independently	National Technical Certificate

They may also be given examples of similar units which have already been assigned a level within the NVQS for comparison purposes.

The CRC should evaluate the unit content by comparing it with each dimension in the NVQF level descriptors. The CRC may find that the unit is higher in some dimensions and lower in others. Decisions on the final level of the unit should be an average.

The form below (or something similar) should be used to record the process.

Unit Level Recording Form		
NVQ Title:		
NVQ Unit Title:		
NVQ Unit Number:		
NVQF Dimensions	Level for Dimension	Comments
E.g. Skills		
E.g. Knowledge		
E.g. Competence (Attitudes)		
Estimated Overall Level		
Summary of Rationale for Level:		
Name of Credit Rating Committee:		
Signature of NVQA Representative/CRC Chair:		
Signature of CRC Secretary:		
Date:		

7.3 Stage Three: Identifying the Characteristics of the Typical Learner

As noted earlier, credit value is calculated by estimating NLH i.e. the total number of hours taken by the typical learner, at the level of the unit, on average to successfully complete the unit. Before the CRC can begin the process of estimating NLH, it will need to identify likely characteristics of the typical learner for the qualification.

The first point to note is that the typical learner must be 'at the level of the unit'. Therefore, it must be assumed that they have completed, either through formal learning and assessment or informal learning (typically through life or work experience), all of the preceding learning outcomes. Thus, if it is assumed that the qualification is for a level 3 cook, we must assume that the typical learner is capable of successfully completing related learning outcomes at levels 1 and 2. If we do not do this, we will be adding in a very long learning period and will, in effect, also be awarding credit for levels 1 and 2 as well. Helpful information here could be any entry requirements or prerequisites for the qualification.

The second point to consider is that the typical learner should not be either a high achiever or a slow learner. It is important for the CRC to think about the type of learner who is 'in the middle'. Training providers and employer representative will have valuable inputs to make on this part of the process.

Other typical learner characteristics which may be significant include:

- Age and experience
- Educational qualifications
- Level of literacy, numeracy and ICT skills
- Employed in the occupation or training full-time in an institution

The form like the one below can be used to record the characteristics of the typical learner for a qualification.

Typical Learner Recording Form	
NVQ Title:	
Previous relevant learning (either formally or informally)	
Age	
General Education Achievement	
Level of literacy, numeracy and ICT	
Work experience	
Employed during period of training	
Full-time in training institution	
Mixture of employed and full-time training	
Name of Credit Rating Committee:	
Signature of NVQA Representative/CRC Chair:	
Signature of CRC Secretary:	
Date:	

7.4 Stage Four: Calculating Unit Credit Value

As noted in earlier sections, the credit value of a unit is calculated by estimating the number of hours of NLH taken by the typical learner (as defined above) to successfully complete the unit. NLH should include the following (although not all will be relevant to all units and some not listed below may also be identified):

- a. Formal learning, for example in class, training sessions, coaching, seminars and tutorials
- b. Practical work in workshops, labs or other contexts for skills acquisition and practice
- c. Workplace activities (which will include informal learning on job and practising in the workplace) to reach the required standard of competency
- d. Private study and research, including ICT activities
- e. All forms of learner assessment (as specified in the evidence/assessment specifications for the unit) which lead to a competency decision; this could include preparation for assessment e.g. portfolio building, revision

It is important to note that, in each case, learning time should be worked out on the basis of *what is necessary* to achieve the learning outcomes to the standard shown in the assessment criteria and assessment/evidence guides. Credit is about *achievement, not time served*. For example, a learner may be employed in a restaurant for 12 months and after 12 months show that they can complete the unit successfully. That is not the same as how much time they *need* to get to that standard. In fact, the typical candidate may only need 4 months to reach the standard. The remaining 8 months has simply been the learner continuing to practise at that level.

When working out NLH, various a priori factors need to be agreed, for example:

- Formal learning in the classroom – how many classes on the subjects related to the unit, how many hours (or fractions of an hour) does a class last for?
- Practical work in workshops, labs etc. – how many sessions are needed to develop those skills and how many hours (or fractions of an hour) do those sessions last for?
- Workplace activities – how many hours per day does the typical learner work on activities relevant to the unit in order to reach the standard, how many weeks, how many working days per week?
- Private study – how many hours might be needed?
- Learner assessment – how many hours would the learner need to prepare for assessment (for example, revision and portfolio building), how many hours will the assessment last?

It is also important to acknowledge that at the higher levels in a framework, the typical learner usually spends more time on private study than formal learning in the classroom or practical work in the workshop or lab. At level 1, the learner may do no private study at all, whereas at level 5 they may be undertaking a considerable number of hours of research, reading, note taking etc.

Once the CRC has estimated the number of NLH needed for the typical learner to successfully complete the unit, the committee can then work out the credit value of the unit. This is done by dividing the total number of NLH by the quantum agreed for one credit. Thus, if the total number of hours is 250 and the agreed quantum is 1:25 (i.e. one credit = 25 hours of NLH) then the credit value is 10. If, on the other hand, the agreed quantum is 1:10 (i.e. one credit = 10 hours of NLH) then the credit value is 25. Credit values must always be a whole integer. So, if the division results in a fraction of an integer, e.g. 10.6, then the credit value should be rounded up, therefore 11. If the fraction is, for example, 10.4, then the credit value should be rounded down, in this case 10.

A suggested form for recording NLH and credit value is given below.

Unit Credit Value Recording Form		
NVQ Title:		
NVQ Unit Title:		
NVQ Unit Number:		
Type of learning	Typical Activities	Number of Hours
Formal learning (classroom, training sessions, coaching, seminars, tutorials)		
Practical work (workshop, labs etc.)		
Workplace activities		
Private study (research, ICT etc.)		
Assessment (preparation, revision, assessment itself)		
Total Notional Learning Hours		
Agreed unit credit value		
Name of Credit Rating Committee:		
Signature of NVQA Representative/CRC Chair:		
Signature of CRC Secretary:		
Date:		

7.5 Stage Five: Calculating Final Credit Value and Level of a Qualification

At this stage, the CRC should add up the number of credits at each level. The table below shows a possible example:

Level 1		Level 2		Level 3		Level 4		Level 5		All Levels
None		Unit 1	3 credits	Unit 2	10 credits	Unit 5	4 credits	None		
		Unit 6	2 credits	Unit 3	6 credits					
				Unit 4	5 credits					
		Total	5 credits	Total	21 credits	Total	4 credits			30 credits

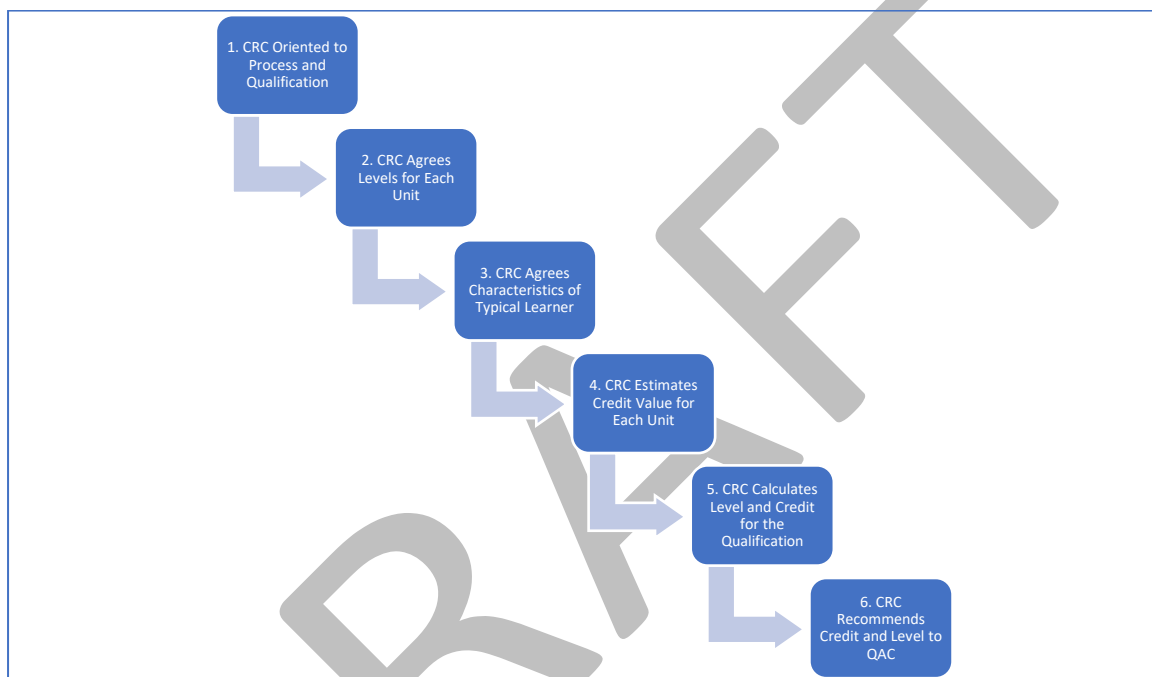
In this case, the NVQ is a 30-credit qualification. It is at level 3 because, although there are units at different levels, 50% or more of the credits are at level 3 or above. In this case, the Rules of

Combination for the NVQ are assumed to be simple, i.e. the learner has to achieve all of the units in the qualification structure to complete the qualification. Thus, the criterion for completing the qualification is to achieve 30 credits.

If, in the future, qualification structures are more complex, e.g. consisting of a mixture of mandatory units and elective units, then rules of combination become more complicated. However, the criterion for completing the qualification will still be credit-based. In this case, we may say: to complete the qualification, the learner must achieve 20 credits from the mandatory units and 10 from the elective units. More complex Rules of Combination will require further guidance and additional training for credit rating experts.

7.6 Process Diagram for Credit Rating

The graphic below summarises the processes required for credit rating.



8 Non-Formal and Informal Learning: RPL Processes

8.1 Credit Awarded for Achievement, Not Time Served

Recognition of Prior Learning (RPL) is an important feature of the NVQS, and it will be vital that the future system facilitates learner achievement, in whatever context learning has taken place. It should be possible for learners who have gained competencies through informal learning – life experience, community activity and work experience – to be awarded credits.

Within a qualification framework, credit can only be awarded for achievement against accredited qualifications or units, and the credits given will be based on the credits and levels which have been allocated to those qualifications or units. As emphasised several times before, credit is awarded for the *achievement of learning outcomes, not time served*. For example, a person may present themselves for RPL and provide good evidence from an employer that they have worked to company standards as a hotel manager for two years. The RPL claimant might point out that qualifications for hotel managers are at level 5 in the NVQF and that they have worked for 600 hours during that time. They may then ask for 24 credits (assuming 1 credit per 25 hours) at level 5. Unfortunately for them, this cannot be allowed. Firstly, we have no idea whether the company's standards are the same as the national competency standard. We don't know if their duties covered all of the functions included in the hotel manager's NVQ. We are in the dark about what proportion of time served was actually spent on learning. To award credit on this basis would undermine all the key principles of a credit- and competency-based framework.

8.2 Steps to Award Credit for Prior Learning

The steps to award credit to the claimant are essentially the same as those for anyone wanting RPL:

1. Work with the RPL claimant to identify which qualifications or units would be appropriate to the competencies they think they have gained through informal learning. If the claimant has a varied employment or other informal learning history, there may be more than one qualification or set of units which are appropriate.
2. Work with the claimant to identify possible evidence they may already have from their learning experience. This may include things they have made, attestations from employers and others with whom they have worked. If they are still employed, it may be possible for a qualified assessor to visit their workplace and observe them at work. Where there are gaps in their evidence, it may be possible to fill some of these by carrying out an NSTB skill test.
3. A qualified assessor will need to evaluate their evidence against the learning outcomes and assessment criteria and requirements in the units that have been mapped against their experience.
4. Credit can then be awarded to them for the qualifications or units.

8.3 Credit and the National Skill Tests

Since its inception in 1983, NSTB has been providing skill testing services in different skill sectors and levels. The skill test certification system is carried out for those individuals who have acquired vocational skills from formal, informal, and non-formal settings. Over more than 35 years, NSTB has developed 290 National Occupational Skills Standards (NOSS) and tested over 340,000 individuals. It will be important that, with the development of NVQS, these individuals are not left behind in terms of credit accumulation and transfer. Therefore, some method should be found to deal with this legacy issue and award credit to those who have been successful in the skill tests.

A potential way forward, which requires piloting and verification, could be to treat the skill tests as *equivalent units* (see *Section 4.9* above). A component of assessment, such as a skill test, can be considered equivalent if its content and level can be evaluated as equivalent to a unit that already exists within the NVQS. This will require mapping and comparison of skill tests with units already

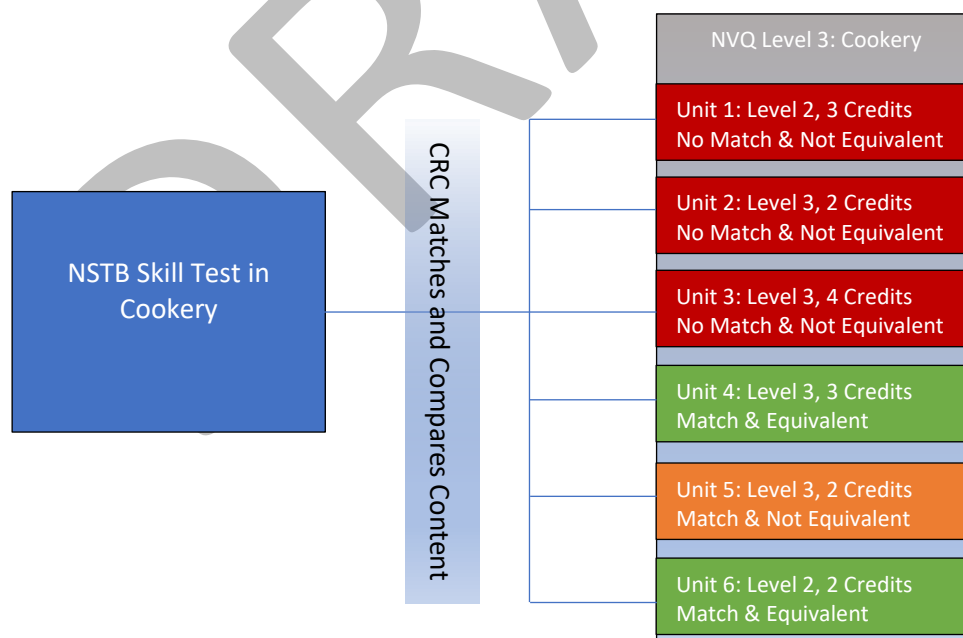
accredited within the framework. Ideally, this needs to be done proactively, i.e. NVQA, beginning with those sectors where NCS and NVQs have already been developed, should identify corresponding skill tests and use the appropriate Credit Rating Committees (CRC) to map the content of each skill test against units within the NVQS. NVQA should not wait for successful skill test candidates to apply for credit. If this mapping is done at an early stage, credit can automatically be awarded to these successful candidates.

The recommended process would be:

1. NVQA and the relevant sector skills committee and CRC (or a technical consultant acting on behalf of the CRC and acting under its supervision) review the NVQs currently developed in their sector and identify which skill tests may correspond to units within these NVQs.
2. The CRC identifies units within the NVQ which appear to correspond to the content of the skill test.
3. The CRC then carries out a detailed comparison of the content of the skill test with the corresponding units within the relevant NVQ, paying particular attention to the tasks and assessment criteria within the skill test and the elements and performance criteria within the NVQ unit.
4. If the CRC identifies that there is a satisfactory match (perhaps greater than 80%, for example), they could then recommend that the skill test is equivalent to one or more units within the NVQS.
5. Any successful candidate for that skill test could then be awarded credit and level for the identified units on the basis that they are equivalent.
6. The process is then repeated as new NVQs come online.

It will be important to note that there are unlikely to be exact matches; this will be an approximate process which will be based on the principle of fairness to those who have taken the skill tests in the past.

Example Approach



On the basis of this example, any successful candidate in this NSTB Skill Test in Cookery would be awarded units 4 and 6 from the Level 3 NVQ and accumulate the corresponding 3 credits at level 3 and 2 credits at Level 2. They could build on this credit accumulation by completing units 1, 2, 3 and 5 and achieve the full NVQ.

9 Credit Accumulation and Transfer Within and Across Frameworks

9.1 Credit Accumulation and Transfer

In this section we look at the potential advantages of credit transfer and how these might be optimised. In order to do this, we need to remind ourselves what is meant:

“The process of transfer is the means through which learners are able to have learning which took place in one context (country, system, and institution) recognised in another. The expression credit transfer refers to the process through which credit achieved and recognised in one setting can be taken into account for other qualifications or education and training programmes.”²⁷

In the context of the NVQF and the intended future NQF (comprehensive and embracing vocational, technical and general education), we need to consider three possibilities:

- Credit transfer within the NVQS
- Credit transfer from NVQS to Technical Education and vice versa
- Credit transfer from NVQS and/or Technical Education into Higher General Education and vice versa

It is also important to remember that, although we have explored the concept of credit values at some length, credit is a broader concept and includes any mechanism which facilitates transfer. These may include, for example, the use of common units, equivalent units, diploma transcripts and other facilities.

We should also acknowledge the reasons why a learner may want transfer and what advantages they gain from it. Essentially, this can be summarised as *continuity of learning* and *progression*.

Credit accumulation and transfer to enable *continuity of learning* is important because learners' circumstances sometimes interrupt their training and education. For example, a learner may begin a programme and achieve some unit credits, but they move to a different location and can no longer train in the same workplace or institution. Alternatively, personal or family circumstances may mean that they have to cease training for a period of time until they are able to resume. In these situations, it would be reasonable and fair to allow the learner to carry the unit credits they have already accumulated into the same programme and qualification in a different institution or the same or different institution at some point in the future.

Progression may be considered from two perspectives:

- Vertical progression, i.e. moving into a higher-level qualification/programme of learning, for example, a cook having completed level 2 cookery now wishes to achieve the equivalent level 3
- Horizontal progression, i.e. moving into a qualification/programme of learning which is at the same level, for example, someone already qualified as level 3 plumber wishes to move into a qualification/programme of learning to become a level 3 electrician.

Finally, in the context of this discussion, it may be helpful to note that there is a difference between *eligibility* for a programme of learning and *right of access* to a programme of learning. Therefore, certain arrangements around the recognition of credit in a system might make the learner eligible to apply for a programme, but decisions on whether they can access the programme of learning and enrol are decided by the receiving institution which has to consider other factors, for example, how many seats it has available and how many applicants it has to fill those seats.

²⁷ *Linking Credit Systems and Qualifications Frameworks - An international comparative analysis* (CEDEFOP, 2010)

9.2 Credit Accumulation and Transfer Within the NVQS

Given the structure of the NVQF and the principles which underpin it, the potential for credit accumulation and transfer within the system is promising.

For example, in terms of the continuity of learning, a learner who has already collected some unit credits in a qualification must have those credits 'banked', i.e. formally recorded as unit achievement and they should be able to carry those credits forward into the same qualification/programme of learning in a different institution or at some point in the future. If they have already been assessed as competent in units 1-5 in a 10-unit qualification, this must be accepted by the receiving institution and the learner should not be required to be assessed again in units 1-5, i.e. they can carry the credits forward. They should only need training and assessment in units 6-10.

However, without regulation, this will depend heavily on the decisions of individual institutions. Some institutions may prefer to train and assess the individual all over again. Therefore, there must be a rule to support this approach in the NVQS, i.e. unit credit achieved in one institution in the system must be recognised by other institutions. Unnecessary training and assessment must be avoided.

The same principle applies to pathways for vertical and horizontal progression. This can be facilitated by mutual recognition across institutions, qualifications and programmes of study and can be further enhanced by qualification designers by:

- Wherever possible the use of *common units*
- Identification of *equivalent units* within the system.

We have already seen in *Section 5.6* that occupational profiles sometimes include functions at different levels and that that qualifications can contain units at a lower level than the level of the qualification as a whole. Therefore, there could be common units across qualifications at different levels. Recognising that if a learner achieves these units in a lower level qualification, there should be recognition of this achievement in order to *progress vertically* and there should be no requirement for the reassessment of these units. Once again, this requires a clear rule concerning credit transfer, i.e. achievement of unit credits at whatever level in the framework must be transferable in any other qualification in which that unit occurs.

The same approach can apply to facilitate *horizontal progression*. Some qualifications in related occupations or sectors will contain common units. In the example of the plumber who wishes to requalify as an electrician, there will be common units across those two qualifications at least covering transversal competencies such as teamwork and communication. If the plumber has already achieved these, then the credits should be banked and there should be no requirement for reassessment. The same rule mentioned for vertical progression above can be used.

This facility can be greatly enhanced at an early stage by introducing a rule that qualification designers must *make as much use of common units as possible*. It would also be helpful if any database containing NVQS units identifies which units are used in more than one qualification so that potential bridges can be identified.

This can apply within industrial sectors only, for example, construction (electrician to plumber) or it can be used across related sectors. For example, if a unit on customer service works well in Hospitality, perhaps it should be evaluated for its validity in Retail before the Retail designers go ahead and develop their own.

Of course, the Retail sector may examine the unit and decide that it needs minor amendments to make it more appropriate to their workforce; this may involve, for example, changing words like 'guest' to 'customer'. Having made these changes, nevertheless the overall competency described in the two units (Hospitality and Retail) may be so similar that we can say both units are *equivalent*, i.e. if a learner achieves the unit in Hospitality, this should count as credit for the equivalent unit in the Retail qualification and the learner should not be reassessed for that unit.

This could also be supported by a rule stating that where common units cannot be used to cover similar functions, equivalent units can be created, but their equivalency must be logged within the system to enable learners to transfer credits.

The NVQS is at an early stage of development and focus at the moment is on three industrial sectors only. This is an ideal opportunity to get rules, such as the ones discussed above, to be agreed and embedded as conventions for qualification designers and training institutions. Getting these points right at the beginning and making good use of expertise across sectors should provide a firm platform for the development of credit transfer within the NVQS.

9.3 Credit transfer from NVQS to Technical Education and Vice Versa

The challenges here are greater because we are no longer comparing 'like with like'. The units and qualifications in the NVQS have a purpose which is essentially to *confirm competency in an occupation*. Qualifications and programmes of study in Technical Education have a different purpose which is more aligned to *prepare learners for employment in an occupation or sector*. In other words, Technical Education is delivering knowledge and skills which prepare learners to enter a profession but do not yet confirm competency. There is a difference, and both sectors should acknowledge this.

This difference between qualification purposes is compounded by the fact that these different types of units and qualifications follow different design conventions. In both cases, the potential for common and even equivalent units is weak. Research suggests that differences of this kind can represent an obstacle to credit transfer. CEDEFOP, for example, reported that:

"The 2006 study on credit transfer in Australia (Phillips KPA and Department of Education, Science and Training, 2006a, p. 13) shows that differences in curriculum and qualification design are among the obstacles to credit transfer. If the differences are too important, identifying equivalence becomes time-consuming and hence costly."²⁸

Three possible ways forward suggest themselves:

- A common approach to qualification design could be used in both the vocational and technical sectors
- Adjustment of the qualification content in Technical education
- Other arrangements for credit transfer between vocational and technical be established.

Each of these ways forward could be facilitated by the fact that CTEVT is responsible for both sectors and could feasibly implement any of them.

A common approach to qualification design could entail the following design criteria:

- All qualifications consist of units
- All qualifications (and by implication, all units) should have a stated purpose (either to confirm competency in an occupation or prepare learners for employment in a sector or occupation)
- All units have a valid and reliable basis for assessment (assessment criteria and other assessment requirements)
- All qualifications and units are assigned credit values and levels (i.e. they are allocated a credit value according to the procedures outlined in Section 7.)

The feasibility and cost-effectiveness of beginning such a reform process should be evaluated. Even if it is deemed unpracticable at this time, it may be worth including the possibility in future strategies for the NQF.

²⁸ *Linking Credit Systems and Qualifications Frameworks - An international comparative analysis* (CEDEFOP, 2010)

Another approach is to include some NVQ units within the technical education qualifications and curriculum. For example, if technical education learners are required to spend some time in the workplace as part of their programmes, why not use one or two NVQ units which are appropriate to their work experience to give them the chance to confirm competency in those units? If such arrangements existed, it would facilitate credit transfer in both directions. For example, an NVQS level 3 cook entering a programme of technical education would already have credit for those units. A technical education graduate wishing to gain full NVQ qualification would similarly have those credits in the bank.

Another approach is to establish other credit transfer arrangements which will be more approximate and possibly more relevant to an NVQS learner's eligibility to apply for entry into technical education. For example, the technical education sector could specify that learners applying for a programme of study and coming from an NVQS background must have accumulated a certain number of credits in an NVQ at an appropriate level and relevant to the programme of study they wish to follow. This could act as an alternative to current entry requirements and would have to be negotiated with institutions. However, any institution following this convention would need to be aware that the NVQ applicant may be strong in occupational and sector knowledge and skill but less so in areas such as literacy, numeracy and study skills and therefore may need to provide extra support to learners of this kind. Rather than provide that support during a diploma programme, they could set up unit and credit-based 'bridging courses' on a part-time basis which enable NVQ graduates to catch up on areas of general education which they previously missed.

9.4 Credit transfer from NVQS and/or Technical Education into Higher General Education

Evidence suggests the challenges here are possibly more daunting. For example, in a study of Australian VET graduates covering the period 1995-2001 revealed that only between 2.1% and 2.5% of VET students benefited from credit transfer into HE which is less than the number of students benefiting from validation of non-formal and informal learning (around 4% in the same period).²⁹

An evaluation of the Scottish Credit and Qualification Framework (SCQF) in 2005 when it had been in operation for five years reported that:

"In particular, with respect to the development of articulation and credit transfer arrangements between further education colleges and HE institutions, there was little evidence that SCQF had contributed much beyond providing a language and tools to underpin arrangements that would have usually been introduced in the absence of the SCQF."³⁰

So, whereas transfer between the vocational and technical sectors and higher education should be a worthy ambition, it may not be so high on the agenda at the moment. However, there is no reason why institutions in the general education sector should not adopt the same conventions for credit rating and be prepared to consider credit accumulation from the vocational and technical sectors as one criterion for entry. If this were to happen, similar arrangements for bridging courses and qualifications described in *Section 9.3* above will need even more examination.

²⁹ Bateman A and Knight B. *Giving Credit: A Review of RPL and Credit Transfer in the Vocational Education and Training Sector, 1995-2001* (ISBN-1-74096-078-5)

³⁰ *Evaluation of the Impact of the Scottish Credit and Qualifications Framework (SCQF)*. (Scottish Executive, 2005)

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