

Grading qualifications in the QCF

Guidance for awarding organisations

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1. Purpose

1.1. The purpose of this document is to provide guidance to awarding organisations on the development of grading for qualifications accredited in the Qualifications and Credit Framework (QCF).

1.2. This guidance should be read alongside the regulatory requirements on grading of qualifications set out in Sections 1.28–1.30 and Section 5.4 of the *Regulatory Arrangements for the Qualifications and Credit Framework* (Ofqual et al 2008). (Hereafter referred to as the *Regulatory Arrangements*.)

1.3. This guidance focuses as much as possible on how the technical features of the QCF influence the development of graded qualifications. It does not seek to provide a comprehensive guide to grading and recognises that many awarding organisations have considerable expertise in the development of graded qualifications.

2. Scope

2.1. The guidance in this document relates explicitly to the existing regulatory requirements of the QCF and to the qualifications currently accredited (or being prepared for accreditation) within these requirements.

2.2. The guidance therefore relates mainly to vocational qualifications, as these are the qualifications that form the greater proportion of qualifications in the QCF.

2.3. The guidance does not relate to general qualifications (for example A levels or GCSEs) as these currently fall outside the scope of the QCF. If these qualifications are brought into the QCF in the future, it is assumed that particular arrangements for grading will be developed for these qualifications. There is therefore no intention that this guidance should relate to general qualifications in the future.

2.4. It is for individual awarding organisations to determine whether or not a particular qualification in the QCF should be graded. Many qualifications in the QCF will remain ungraded, and this guidance will not be relevant to them.

2.5. There are many different approaches to grading qualifications. It is not the intention of this guidance to promote a single approach to grading across the QCF. The guidance also recognises that there will be many different reasons why an awarding organisation may wish to offer a graded qualification. The guidance does not assume that one

particular approach to grading can be linked to a particular purpose. Again, this is assumed to be the business of awarding organisations.

2.6. This guidance relates solely to the outcomes of the grading process – to the identification of individual performance on a scale. It does not aim to guide awarding organisations on the assessment arrangements that lead to the establishing of grades.

3. Grading

3.1. The *Regulatory Arrangements* define a grade as:

'A point on a scale of performance used to differentiate achievement within a qualification.' (page 40)

3.2. We may extrapolate from this a definition of 'grading' as:

The identification of a point on a scale of performance used to differentiate achievement within a qualification.

3.3. This definition of grading is entirely consistent with the use of the term in the National Qualifications Framework (NQF). It is not the intention of this guidance to suggest that the definition or purpose of grading in the QCF should be different from other frameworks.

4. Grading in credit-based qualifications

4.1. Although the purpose of grading in the QCF is no different from the purpose of grading in other qualification frameworks, the practical development of grading arrangements will be different in credit-based qualifications from other types of qualification.

4.2. An approach to grading in the QCF needs to take account of the characteristics of the credit system both within individual qualifications and across the framework as a whole. Any approach to grading that is not based explicitly on a consideration of these characteristics could lead to distortions in the operation of credit accumulation and transfer within the framework. It could also lead to distortions in reporting the achievements of individual learners through grades.

4.3. This guidance highlights the following design features of the QCF and aims to show how each feature needs to be considered in developing graded qualifications:

- The unit-based structure of all QCF qualifications.

- The distinction between units and components of a qualification.
- The relationship between rules of combination and grading.
- The impact of unit levels on grading arrangements.
- The impact of unit credit values on grading arrangements.

4.4. In taking account of each of these characteristics of the QCF in relation to grading, this guidance also aims to relate the development of graded qualifications to the wider objectives of the framework.

4.5. These objectives are well known and need no detailed elaboration here. We may summarise them as follows. The qualifications system that operates within the QCF should be:

- **inclusive**, recognising the widest possible range of achievements from the greatest possible number of learners
- **accessible**, offering a framework for recognising achievements that is easy to understand and simple to use
- **responsive** to the needs of individual learners, employers and other users
- **non-bureaucratic** in its approaches to assessment, accreditation and recognition.

4.6. In accrediting qualifications in the QCF the regulators will pay due regard to these objectives in the accreditation process. This guidance therefore aims to anticipate how graded qualifications can be developed that are consistent with these objectives.

5. Qualifications, units and grading

5.1. One important feature of the QCF is that it is a unit-based framework. All qualifications are *built up* from units and all units are specified in a standard format. Conceptually this is very different from the NQF, which is a qualifications-based framework in which qualifications are *broken down* into units.

5.2. The standard unit format for the QCF includes the identification of the learning outcomes and assessment criteria necessary to award credit(s) for that unit. As the

Regulatory Arrangements also make explicit (Section 1.8) the unit specification is complete in itself and:

'No design features may be added to this standard format.'

5.3. The *Regulatory Arrangements* also make it clear (Section 1.29) that any grading arrangements must:

'Specify explicitly the criteria against which individual performance... is to be differentiated.'

5.4. It therefore follows that units themselves cannot be graded (as the additional criteria required to identify a grade cannot be specified within the standard unit format). As credits are awarded for the successful completion of a unit, it also follows that credits themselves cannot be graded.

5.5. This is an important technical feature of the QCF, but it does not mean that grading arrangements cannot be related to individual units. The important distinction to be made is that grading criteria are *additional* to the unit specification, not *part of* the unit specification.

5.6. This technical distinction is important for the effective operation of the QCF credit system. In a unit-based framework, a unit may be used in more than one qualification. It follows that a single unit may be used in both a graded and an ungraded qualification. Separating grading criteria from the unit specification itself permits this flexible use of individual units.

5.7. This separation also preserves the integrity of the QCF credit system. It enables credits to be awarded for individual units in all cases, and to be mutually recognised across the QCF, even where credits might be awarded within a graded qualification.

5.8. This separation of grading arrangements from the QCF credit system also separates the requirement for 'mutual recognition' from grading arrangements. Although awarding organisations are required to recognise the credits awarded by all other recognised awarding organisations in the QCF, there is no suggestion that they are also required to accept the grades of other awarding organisations.

5.9. In effect, the separation of grading criteria from the unit specification allows awarding organisations to develop their own grading arrangements for qualifications and enables a

range of different approaches to grading to be established within the regulatory arrangements of the QCF.

6. Units, components and qualifications

6.1. In the section on grading, the *Regulatory Arrangements* refer explicitly to grades in relation to 'a qualification or component' and defines a component in the QCF glossary as:

'A subset of a qualification to which a particular set of assessment methods and/or awarding arrangements is applied.'

6.2. The information about grading arrangements in the QCF is therefore contained within the information about a *qualification*, rather than the information about a *unit*. Although the term 'component' is used in the regulatory arrangements, it is simply a way of recognising that grading information, though located within the qualification data set rather than the unit data set, can still be related to individual units.

6.3. In the context of graded qualifications 'a component' is therefore simply a unit plus the additional information developed by an awarding organisation to apply a grade to that unit. Indeed the QCF regulations require that:

'any additional grading criteria must build explicitly on the assessment criteria of a unit or units within the rules of combination for the qualification.' (1.29b)

6.4. Although it would be technically feasible to develop grading criteria related to more than one unit, this guidance assumes that awarding organisations will establish grading criteria within components that relate to a single unit, and that they'll report on grades in one of three ways:

- to report grades related to individual units
- to report grades related to qualifications
- to report grades related to both units and qualifications.

6.5. In effect, the *development* of grading arrangements will be related to individual units. However, individual grades will be *reported* through the award of qualifications and not through the award of credits.

7. Grading, assessment and aggregation

7.1. So far in this document the term 'grading' has been used in a general sense. In fact the differentiation of achievement on a scale of performance can take place in two different ways. The first way is through the *assessment* of learner performance against an agreed scale. The second way is to take the outcomes of these assessment judgements and combine them in a particular way against an agreed scale.

7.2. This second method of differentiation, which is completely dependent on the first, is based on *aggregation* rather than on assessment. There is no reason why the performance scale used in assessment should be the same scale used in this process of aggregation. However, if the scale is simple enough then it could be used for both purposes. The grading models set out in the appendices to this guidance illustrate these possibilities.

7.3. This means that grades for all components of a qualification (which must be related to the assessment criteria of units) must therefore be based on assessment. It also means that the qualification itself cannot include any additional grading criteria that are not themselves based on the units within the qualification. In effect, this means that all qualification grades in the QCF must be established through aggregation, rather than through assessment.¹

7.4. This requirement leads to two simple and consistent principles that can be applied uniformly across all graded qualifications in the QCF:

- The differentiation of achievement in a component must be based on assessment.
- The differentiation of achievement in a qualification must be based on aggregation.

¹ This distinction is less clear in a case where a graded qualification consists of a single unit. It may appear that it is the qualification itself that is being assessed in such cases. In fact the general rule holds true – it is the component, based on a single unit, that is assessed, and the aggregation algorithm for the qualification is simply based on the grade for this one component.

8. Levels and assessment leading to a grade

8.1. The *Regulatory Arrangements* require the level of each individual unit to be determined by reference to the QCF level descriptors (Section 1.6b). In developing grading criteria for a component based on a unit, qualification developers must therefore ensure that:

'any additional grading criteria must be consistent with the overall level of the qualification or components to be graded and must be clearly distinguished from achievements at the next level of the QCF.' (1.29c)

8.2. In effect this places a technical constraint on the development of component grading criteria, which need to clearly identify an assessment standard against which grading judgements can be made, while at the same time being distinctive from both the assessment criteria at unit level and the level descriptors of the next level of the QCF.

8.3. Qualification developers will need to take this constraint into account in the development of component grading criteria. Each set of criteria will need to be sufficiently distinct from each other to support consistent and reliable assessment judgements without 'encroaching' on the assessment standard of units at a higher level of the QCF. Clearly the more grading criteria that are established within a component (to enable a number of different points of performance on a scale to be identified), the more complex the task of assessing performance against these criteria, and the more difficult it will be to ensure reliability and consistency in assessment judgements.

8.4. This design feature of the QCF therefore suggests that the fewer additional sets of grading criteria that exist within a component, the more reliable and consistent assessment outcomes leading to grades will be. The grading models in the appendices to this guidance are based on this constraint.

8.5. The levels of units in the QCF will have an influence not just on the conduct of assessment leading to a component grade, but also on the aggregation of component grades leading to an overall qualification grade. The following sections of the guidance consider the process of aggregating component grades into qualification grades.

9. Component grades and qualification grades

9.1. As noted in 6.4 above, it would be possible to develop grading arrangements in the QCF in which no overall grade for the qualification was reported, but which simply established a component grade related to each unit (or to some units) of the qualification.

In such circumstances, no aggregation of component grades into a qualification grade would be required.

9.2. Conversely, some awarding organisations may choose to report only a single qualification grade, and not to report component grades at all. In such circumstances a qualification grading algorithm must be developed – a set of calculations that enable the consistent translation of multiple component grades into a single qualification grade.²

9.3. An aggregation algorithm will also be required in the third scenario identified in 6.4 above – where an awarding organisation chooses to report both component and qualification grades.

9.4. In developing aggregation algorithms to support these second and third scenarios, awarding organisations will need to pay due regard to the relationship between grading and rules of combination in the QCF.

10. Component grades and rules of combination

10.1. Grading arrangements for components and qualifications are separate from the rules of combination for a qualification. Such rules relate solely to the award, accumulation and transfer of credits within and between qualifications, and not to any grading arrangements.

10.2. The standard format for rules of combination in the QCF includes five main headings under which rules are established for the combination of credit achievement through particular units, to meet the requirements for award of the qualification. These headings are:

- credit from mandatory units
- credit from optional units
- credit from other units

² Once again the case of a graded qualification based on a single unit needs to be noted. In effect, the grading algorithm is as simple as it can possibly be – the component grade is the qualification grade. Nevertheless, the principle that it is the component that is graded through assessment, and the qualification that is graded through aggregation, holds true.

- credit from equivalent units
- exemptions from credit achievement requirements.

10.3. Three of these categories are not relevant to component grading arrangements:

- As 'exemptions' relate to qualifications outside the QCF, no consistent approach can be established that links grading arrangements on such qualifications to components of QCF qualifications.
- 'Equivalent units' are by definition offered by other awarding bodies and therefore grading criteria based on these units cannot be applied by the awarding body offering the graded qualification.
- 'Other units' are not listed in the rules of combination for a qualification and therefore component grading criteria cannot be established for these units.

10.4. It therefore follows that grading arrangements for components in graded qualifications can be based only on the mandatory and/or optional units for that qualification. However, the development of qualification grading arrangements that include optional units is potentially more complex than for mandatory units. Such complexities need to be considered by qualification developers.

10.5. These potential complexities in including components related to optional units in graded qualifications can be illustrated by examining in more detail two particular aspects of the relationship between component grading arrangements and the design features of units in the QCF. These aspects are considered below.

11. Component grades and unit levels

11.1. One of the regulatory requirements of rules of combination in qualifications in the QCF (1.19) is that:

'More than 50 per cent of credits must be gained at the same level as the qualification or above.'

11.2. This means that a minority of the credits required for achievement of a qualification could be achieved at a level (or perhaps even levels) below the level of the qualification. These requirements relate to the whole qualification rather than to any particular category

of the rules of combination. It is therefore perfectly feasible that credits from both mandatory and/or optional units could be achieved below the level of the qualification.

11.3. As noted above, grading criteria for a component must take account of the level of the unit related to that component. It is therefore not possible to develop a single set of grading criteria that relates to units at more than one level.

11.4. This is a relatively simple requirement of graded qualifications in the QCF. However, it does require consideration from the beginning of the qualification development process. If a qualification permits the achievement of a significant minority of credits at a level below the qualification, then this will constrain flexibility in the development of grading algorithms based on components related to units at a level below that of the qualification.

11.5. One way of avoiding this complexity would be to base all components on units at the same level. This makes the development of aggregation algorithms simpler, but it clearly reduces the flexibility of the qualification to recognise individual achievements. This is a constraint that needs to be considered in a decision about whether or not to grade a particular qualification.

11.6. Although a simple solution, the above constraint on grading rules is not essential in order to establish comparability in qualification grades. It would be technically feasible to aggregate component grades based on units at more than one level, providing it was not feasible to raise the grade of the qualification above a 'pass' grade through performance based on components at lower levels. In other words, even if a learner recorded 'Distinctions' on all components based on lower-level units in a qualification, the grading algorithm would 'weight' these grades at less than a 'pass' at a higher level in aggregating component grades towards a qualification grade.

11.7. This is a complex case, but it is a model already proposed for some qualifications in the QCF. Although the level of units presents one technical constraint on the development of grading algorithms, it is not the only design feature of the QCF that needs to be considered in graded qualifications. The credit value of units is also important.

12. Component grades and unit credit values

12.1. In theory, a grading scale for a component can be applied to a unit with any credit value. The assessment criteria for the unit are important in developing component grading criteria, not the unit's credit value.

12.2. For example, grading criteria could be developed for a component based on a level 4 unit with a credit value of 1. Similarly, grading criteria could be developed for a component based on a level 4 unit with a credit value of 12. If both these components were included in an algorithm leading to a qualification grade, the component grade for the single-credit unit would need to be weighted at one twelfth of the value of the other component in order to arrive at a qualification grade.

12.3. If we now envisage a situation in which six units are used as the basis for developing graded components in a qualification, and that each of these units has a different credit value, the problems of developing grading algorithms for the whole qualification are multiplied. Although the basis for calculating the qualification grade would be consistent (because credit values are comparable across all units), it would nevertheless add to the complexity of grading arrangements.

12.4. One solution to this complexity would be to develop graded components based on units with the same credit value (the same credit value within the qualification). This improves the transparency of grading arrangements, while reducing the overall flexibility of the qualification. Again, qualification designers need to take this constraint into consideration in deciding whether or not a qualification should be graded.

13. Component numbers and the attenuation of variance

13.1. Another feature of qualification aggregation algorithms also needs to be considered – 'the attenuation of variance'. This is a general feature of such algorithms and is not particular to the design features of the QCF. It is important to consider this feature as additional to unit credit values in considering aggregation approaches to qualification grades in the QCF.

13.2. 'The attenuation of variance' is a technical term in grading, but it is more commonly referred to in mathematical terms as 'regression to the mean'. Whatever term is used, the mathematical effect is the same:

The greater the number of component grades used to establish a qualification grade, the more likely it will be that points on a scale of performance are clustered towards the centre of a distribution curve.

13.3. In simple terms, the more component grades are deployed in determining a qualification grade (irrespective of the credit value of the units on which those components are based), the more complex the aggregation algorithms that guarantee an

even distribution of grades across the points on a performance scale. Of course it is not assumed here that all grades will be evenly distributed across this scale, but it will always be necessary to account for the attenuation of variance in arriving at an appropriate distribution of grades on any given scale of performance.

13.4. The potential complexities of establishing grading algorithms for qualifications based on an aggregation of a large number of components, related to units with different credit values, and possibly including components based on units at a level other than the qualification level, illustrate the challenge of establishing even broadly comparable qualification grades on a relatively simple scale across all graded qualifications.

13.5. There are several ways in which the attenuation of variance can be counterbalanced in the design of graded qualifications. One simple way is to avoid the problem completely by reporting only component grades and not qualification grades. However, where awarding organisations wish to report an overall qualification grade, other solutions to this problem need to be deployed.

14. Basing qualification grades on limited numbers of components

14.1. One simple way of ensuring that qualification grading algorithms are relatively simple is to base component grades on a small number of units. For example, setting limitations on the number of units in a qualification (even if the credit values of these units were relatively high) would be one way in which a qualification developer could develop relatively simple and transparent aggregation approaches. Qualifications with, say, four or five components would ensure this, whereas those with eight or nine would not.

14.2. There is no requirement in the QCF that graded components must be based on *all* the mandatory and/or optional units of a qualification. It would be feasible to base graded components on a selection of units, and thus keep the number of graded components sufficiently few to enable the development of simple qualification grading algorithms.

14.3. There are limitations to this approach. The validity of the qualification grade needs to be based on a sufficient 'weight' of component grades across the qualification. A large qualification with, say, 20 units, in which the qualification grade is based on the aggregation of grades from components based on two units, would be insufficient to support the validity of the qualification grade (and would be unlikely to be accredited by the regulators).

14.4. Another approach would be to establish a grade for every component, and then count only a proportion of total component grades towards the qualification grade. This has the same limitations as the previous approach. In addition, qualification developers will need to consider the implications of how far learner choice might be exercised in selecting component grades to 'count' towards a qualification grade. Designating particular components as 'counting' towards the qualification grade and others as not may have an unintended consequence in relation to learner performance.

14.5. Both these approaches could be simplified by linking the components to be graded (or the grades to count towards a qualification) to the mandatory, rather than the optional, units of a qualification. In each case however, qualification developers need to strike an appropriate balance between the simplicity of arriving at a qualification grade and the potential constraints on learner choice within the rules of combination of the qualification.

14.6. The models of grading illustrated in the appendices aim to demonstrate how this balance might be struck in different cases.

15. Grading and qualification level

15.1. The current regulatory requirements for grading in the QCF permit the development of graded qualifications at any level of the framework. If the purpose of grading is:

'to enable users to identify a particular point on a scale of performance used to differentiate achievement'

then qualification developers will need to decide if such a purpose is relevant to achievements at any level of the QCF.

15.2. A strong case could be made that it is not appropriate to differentiate individual achievement within qualifications at Entry Level of the QCF. A case might also be made for a similar approach at Level 1. The current guidance on Foundation Learning (Entry Level and Level 1 of the QCF) appears to assume that qualifications will not be graded.

15.3. This is an issue that requires consideration in the decision about whether or not to develop a graded qualification. It needs to be considered in the context of the QCF credit system and the facility to include credits at more than one level within a QCF qualification. (The inclusion of credits at levels above and below the level of the qualification is explicitly encouraged within Foundation Learning.)

15.4. It may be that where individual differentiation of achievement is seen as desirable in qualifications at Entry Level or Level 1 the QCF credit system itself can offer a sufficiently sensitive measure of differentiation of individual achievements without recourse to the grading of components or qualifications. Once again, the rationale for the qualification will be important in deciding whether or not to grade a qualification at lower levels of the QCF.

16. Grading and qualification size

16.1. In addition to considerations of qualification level, qualification developers may also need to consider whether it is appropriate to develop graded qualifications of all sizes in the QCF. In particular, awarding organisations need to consider whether or not small qualifications (Awards) in the QCF should be graded, or whether grading arrangements should be developed solely for Certificates and Diplomas.

16.2. If an Award is to be graded, it will be necessary to ensure that the aggregation of component grades is meaningful within the context of the qualification. Some Awards may not meet this minimum requirement. The case for establishing a qualification grade if only one component is graded is weak.

16.3. Qualification developers may wish to consider grading arrangements for the size and level of qualifications together. The rationale for grading a Level 3 Diploma should be much more easily established than an Entry Level Award. Awarding organisations will have an interest in keeping the assessment burden on graded qualifications to a minimum, and the QCF regulations provide an adequate basis for the regulators to query a particular approach to qualification grading if it appears to be inconsistent with the qualification rationale.

17. Grading terminology

17.1. There is no requirement in the *Regulatory Arrangements* to use any particular terminology in grading arrangements, with the exception that the term 'credit' cannot be used to identify a grade – for obvious reasons. Qualification developers are therefore free to choose whatever terms they think fit in identifying grades.

17.2. However, it should be noted that the development of grading arrangements proposed in this document relates only to qualifications based solely on the *Regulatory Requirements*, and not to any particular qualification type. The grading arrangements for A levels, GCSEs and 14–19 Diplomas are explicitly excluded from the scope of this guidance.

17.3. It may therefore be politic to use names for grades in the QCF that are different from those in these general qualifications. It is therefore suggested that the terms 'A', 'B', 'C' and so on may not be appropriate for grades in the QCF, as they will not correspond to the use of these terms within A levels, GCSEs or 14–19 Diplomas.

17.4. An alternative to the letters 'A', 'B' and so on would be to establish a grading scale using the numbers 'One', 'Two', 'Three' and so on. However, the use of these numbers may cause confusion not only with the levels of the QCF, but also with the credit values of units. This would make the QCF less accessible to users.

17.5. There is an established use of the terms 'Pass', 'Merit' and 'Distinction' within many qualifications in the NQF. The benefits of using established conventions for grading terms in the QCF are strong. These are the terms that are used in the models included in the appendixes to this guidance.

18. A note on grading models

18.1. The appendixes in this guidance include descriptions of four grading models, a summary of the advantages and disadvantages of each model (linked to some of the characteristics of the QCF outlined above) and an example of a grading algorithm linked to each model.

18.2. It should be emphasised that these are examples only. This guidance is not suggesting that awarding organisations should select one of these four models in developing graded qualifications. Indeed an awarding organisation may select different models for different qualifications. The grading algorithms themselves are also relatively simple. It is accepted that in some instances awarding organisations will need to develop more complex algorithms in order to establish reliable and consistent qualification grades.

18.3. The models themselves are each based on an assumption that component grades are translated into a qualification grade. It is recognised that other aggregation approaches (for example based on points rather than on component grades) are possible but again, are complex to present in the context of such guidance.

18.4. No model is included where component grades alone are reported. However, each of the models has implications for the assessment of component grades. In particular the models aim to illustrate the relative advantages and disadvantages of developing component assessment arrangements based on one or two sets of grading criteria.

18.5. Finally, please note that there is no intention that all qualifications in the QCF should be graded. If an awarding organisation chooses to develop a graded qualification in the QCF then it is hoped that this guidance will be useful.

Appendix A

Model one – a single set of grading criteria leading to three component grades and three qualification grades

1. In this model a single set of component grading criteria is developed related to the assessment criteria of a unit. In making assessment judgements about the component, assessors would therefore confirm one of the following:
 - that the learner had failed to provide evidence to meet the assessment criteria of the unit, or
 - that the learner had provided evidence to meet the assessment criteria of the unit, or
 - that the learner had provided evidence to meet the grading criteria of the component.
2. In the first of these scenarios no credit would be awarded and no grade recorded. In the second, credit would be awarded and (as the QCF regulations require) a 'pass' grade recorded. In the third scenario credit would also be awarded and a 'grade' recorded for the component (for example 'merit' or 'distinction').
3. The main advantage of this approach is that it produces more consistent and reliable assessment outcomes than a model based on two sets of component grading criteria (see model two below).
4. This is firstly because it is easier to develop a single set of grading criteria related to the assessment criteria of a unit at a particular level, than to develop two distinct sets of grading criteria.
5. Secondly, the establishing of a single set of grading criteria makes assessment judgements more reliable and more consistent than two sets of criteria constrained by the QCF level descriptors. Thus, both in the development and the conduct of assessment, this three-point scale is more cost-effective and more manageable than a more complex four-point scale.
6. The algorithm for aggregating component grades into a qualification grade is similarly more straightforward and more transparent than would be the case where a four-point scale for qualification grades is used (see models two and three below).

7. The disadvantage of this model is that it may not provide sufficient differentiation in achievements to satisfy progression and/or selection processes used by employers or learning providers. Indeed, it may not satisfy the desire of (some) learners themselves to differentiate achievement within their peer group.
8. In effect this model offers the simplest possible approach to the grading of both components and qualifications that is consistent with the requirements of the QCF. As such, it may have limited application across the framework. The following example of a grading algorithm is based on this model.

Qualification grading algorithm based on model one

Combination of component grades	Qualification grade
5 x Distinction	Distinction
4 x Distinction and 1 x Pass	Distinction
3 x Distinction and 2 x Pass	Distinction
2 x Distinction and 3 x Pass	Pass
1 x Distinction and 4 x Pass	Pass
5 x Pass	Pass

In this example the calculation of a qualification grade is based on five components. The example assumes that credit values and levels are discounted in the grading algorithm, meaning that only the number of components is used to establish qualification grades. The terminology of both component grades and qualification grades is the same: the award of credit is graded as 'Pass' and the achievement of the component grade is termed 'Distinction'.

Note that if any of the units were not completed then the rules of combination for the qualification would not be satisfied and the qualification itself could not be awarded.

Appendix B

Model two – two sets of grading criteria leading to four component grades and four qualification grades

1. In model one a single set of grading criteria is developed for each component. In model two, two different sets of component grading criteria are established that both relate to the assessment criteria of a unit. These additional grading criteria are then used as the basis of a four-point scale of performance for each component. In making assessment judgements, assessors would be required to confirm that a learner had met in full either the assessment criteria of the unit(s) or one of the two sets of grading criteria for the component.
2. Each component grade is then used in the calculation of an overall qualification grade. Again, the terminology of component grades and qualification grades is identical.
3. Although more complex than model one, this model is still able to support reliable and consistent assessment judgements. Although it is more difficult to make comparable judgments about the differentiation of individual performance against three sets of criteria rather than two, the assessment judgement itself is based on meeting all the requirements of a single set of criteria. The difficulty with this model therefore lies primarily in the development of the criteria themselves, rather than in the judgement of the assessor.
4. The development of two sets of grading criteria rather than one will inevitably be a more bureaucratic and time-consuming development task for awarding organisations. It will also require the deployment of considerable technical expertise. It is therefore less reliable, less consistent and more expensive than model one.
5. Against these potential disadvantages, model two has a clear advantage over model one in that it provides greater differentiation of individual achievement on a scale of performance. In a context where there are limited opportunities for progression, or where selection is based on competition, the ability to differentiate achievement both at component level and qualification level on a four-point scale rather than a three-point scale is potentially very advantageous.
6. It should also be noted that this approach may be more appropriate for some sectors than others. The degree of tolerance in acceptable performance in a

particular industry for example, will have an impact on the ability to develop two sets of grading criteria within a component. The content of some units in the QCF will undoubtedly lend themselves more readily to this approach than others.

7. The following example of a qualification grading algorithm is based on model two.

Qualification grading algorithm based on model two

Combination of component grades	Qualification grade
4 x Distinction	Distinction
3 x Distinction and 1 x Merit	Distinction
2 x Distinction, 1 x Merit and 1 x Pass	Distinction
2 x Distinction and 2 x Pass	Merit
1 x Distinction and 3 x Merit	Merit
1 x Distinction, 2 x Merit and 1 x Pass	Merit
4 x Merit	Merit
1 x Distinction, 1 x Merit and 2 x Pass	Merit
3 x Merit and 1 x Pass	Merit
1 x Distinction and 3 x Pass	Pass
2 x Merit and 2 x Pass	Pass
1 x Merit and 3 x Pass	Pass
4 x Pass	Pass

This example shows how a qualification grade might be calculated through combining component grades on a four-point scale. The terms 'Pass', 'Merit' and 'Distinction' are used. The algorithm is based on a qualification in which four components grades are used to calculate the qualification grade.

Again, credits would need to be achieved on each of the four units that formed the basis of the graded components in order for an overall grade for the qualification to be achieved. An assumption is also made that all components are based on units with the same credit value and at the same level as the qualification.

Appendix C

Model three – a single set of grading criteria leading to three component grades and four qualification grades

1. Model three synthesises some of the features of models one and two. As such it inherits some of the advantages and disadvantages of both.
2. Like model one, components are based on a single set of grading criteria and assessors are required to make judgements about grades based on evidence against all these criteria. These judgements then lead to the establishing of a component grade on a three-point scale.
3. The aggregation algorithm for the qualification then takes this three-point component scale and translates it into a four-point qualification scale. This model therefore aims to add the benefits of increased differentiation in qualification grades, to increased reliability and consistency in assessment judgements, and cost-effectiveness in development of graded components.
4. Although this seems like a useful combination of the benefits of both models One and two, model three does have its limitations. Firstly, it cannot be easily applied to qualifications with a small number of components (indeed it cannot be applied at all to single component qualifications). Secondly, it is potentially confusing to both learners and to employers or other users. Thirdly, it requires the use of different terminology for component grades as opposed to qualification grades.
5. Notwithstanding these difficulties, this model may be appropriate in certain circumstances where component grades and qualification grades are used for different purposes, or where the particular balance of resources within an awarding organisation favours cost-effective component development in a context of competitive selection and/or progression.
6. The following example of a qualification grading algorithm is based on model three.

Qualification grading algorithm based on model three

Combination of component grades	Qualification grade
6 x Graded	Distinction
5 x Graded and 1 x Pass	Distinction
4 x Graded and 2 x Pass	Merit
3 x Graded and 3 x Pass	Merit
2 x Graded and 4 x Pass	Merit
1 x Graded and 5 x Pass	Pass
6 x Pass	Pass

In this algorithm six components are graded and then a qualification grade is awarded. In order to distinguish between component grades and qualification grades the term 'Graded' is used for the former and 'Merit' and 'Distinction' for the latter. The term 'Pass' is used in both cases, based on the award of credit and achievement of the rules of combination for the qualification.

Appendix D

Model four – a single set of grading criteria leading to four component grades and four qualification grades

1. Model four is based on the identical approach to aggregation used in model two (So, no additional algorithm is exemplified for this model). It also draws on one of the key features of models one and two, in that component grading is based on the development of a single set of grading criteria, rather than the two sets of grading criteria used in model two.
2. Once again the model aims to build on those aspects of model three that seek to balance greater consistency, reliability and cost-effectiveness in component development, while adding greater differentiation in component grades as well as qualification grades to this model.
3. In establishing a four-point grading scale for components based on a single set of grading criteria for that component, this model puts greater pressure on the reliability and consistency of assessment judgements. In effect it uses the assessment criteria for the unit and the grading criteria for the component in a similar way that grading criteria are used in (some) general qualifications to establish grade boundaries.
4. Assessors are asked to make one of four assessment judgements, leading to one of four component grades, on the basis of two sets of criteria available to them. These judgements are that the learner:
 - failed to meet the assessment criteria (No credits awarded)
 - met all assessment criteria (Credits awarded, Pass grade)
 - met all assessment criteria and the majority of the grading criteria (Merit)
 - met all grading criteria (Distinction).
5. Note that in this model the same terminology can be used for both component and qualification grades (overcoming two of the problems of model three). However, this model requires a more complex set of assessment judgements to be applied than any of the other models. Although the component development process may

support greater consistency and reliability than model two, the assessment judgements made in model four cannot be as consistent and reliable.

6. Again, it will be for awarding organisations to determine whether model four is appropriate in certain cases where cost-effective models of component development can be combined with well-developed assessment and standardisation arrangements, in a context where wider differentiation of learner achievement at both component and qualification level is needed.