Arrangements for awarding and setting standards in the Diploma

Principal learning, project and Diploma

Final report of the Diploma Awarding and Standards Group

August 2008
Ofqual/08/3865

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First published by The Office of the Qualifications and Examinations Regulator in 2008.

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Chapter 1: Introduction

The Diploma is a composite qualification made up of a combination of new and existing qualifications. It comprises three elements:

- a significant volume of principal learning in a specific line of learning
- core learning, covering: the three functional skills of English, mathematics and ICT; a project; personal, learning and thinking skills (PLTS); and work experience
- additional and specialist learning (ASL), allowing the learner to extend or complement their principal learning by taking existing qualifications chosen from an approved catalogue.

Using a learner's outcomes from the different parts of their Diploma to generate an overall grade that will be comparable within and across lines of learning and awarding bodies and consistent over time provides a number of significant challenges.

In June 2006, the Qualifications and Curriculum Authority (QCA) commissioned the Assessment and Qualifications Alliance (AQA) to lead the Diploma Grading Project Group to consider these challenges and provide a report with recommendations on how to address them[1]. Following an interim report in December 2006, AQA provided QCA with a final report in March 2007. That report formed the basis for QCA's advice to the Secretary of State on grading the Diploma.

In summary, the recommendations in QCA's advice, agreed by the Secretary of State, were that, for the award of a diploma, a learner must:

- pass each of the three functional skills at the appropriate level
- have confirmation that they have acquired the personal, learning and thinking skills
- have confirmation that they have undertaken the necessary work experience

[1] Since the work was completed, it has been decided to separate the roles of QCA into two: an agency responsible for developing and implementing government policy; and an independent agency, Office of the Qualifications and Examinations Regulator (Ofqual), responsible for regulating the qualifications system and national curriculum assessments. Ofqual reports directly to parliament.

- have met the requirements for the achievement of additional and specialist learning.

The key recommendation was that:

- the grade for the Diploma would be based on performance in the principal learning and the project, taken together. This is summarised in Figure 1, where the parts that contribute to the grade are shaded and the additional requirements are shown in white.

In addition, a general mechanism for how to use the principal learning and project qualifications to generate a Diploma grade was suggested. Performance in each principal learning unit and for the project is graded, and this is converted into a standardised points score, which are then added to form an aggregated points score. The aggregate of the points is used to determine the overall Diploma grade. This process is illustrated in Figure 2.

Figure 1 - Grading the Diploma: the constituents

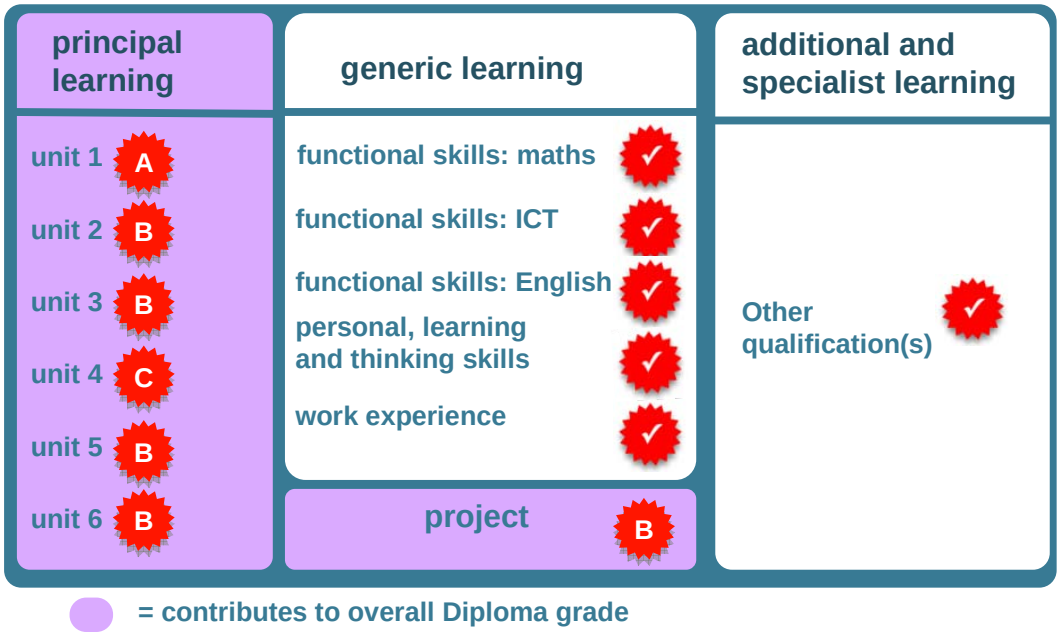
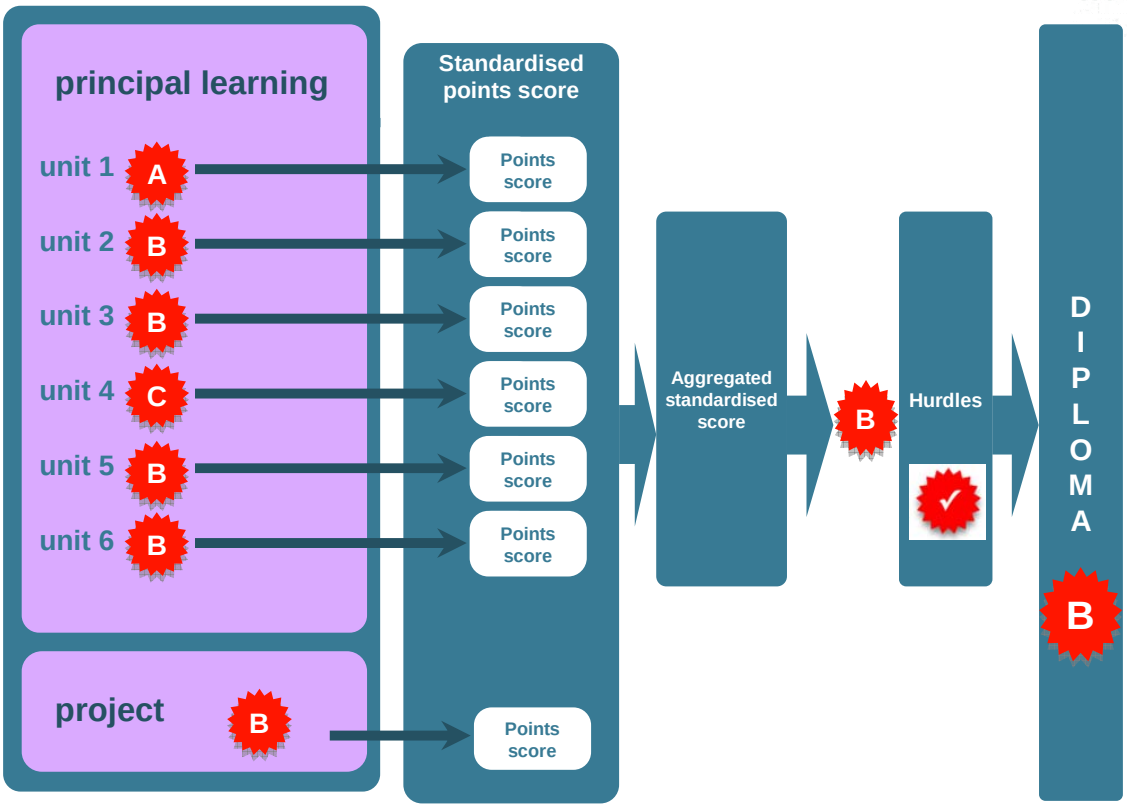


Figure 2 - From component grades to Diploma grades



Once the Secretary of State had agreed the advice, it became necessary to convert the general mechanism into detailed proposals that could be implemented consistently by each component awarding body (CAB). QCA set up the Diploma Awarding and Standards Group (DASG) to progress this critical activity in the period before teaching of the first five Diplomas in September 2008. The terms of reference for the DASG are given below.

i. To support activities aiming to define, exemplify and share appropriate national standards of performance for principal learning and the project.

ii. To develop detailed rules that all awarding bodies will apply when awarding principal learning and the project.

iii. To recommend mechanisms that will help ensure that the awarding judgements made are in line with national standards of performance and consistent across awarding bodies, across lines of learning and over time.

iv. To ensure outcomes are clearly communicated to all key stakeholders.

The focus therefore was very much on awarding and standards, and not on assessment arrangements.

The DASG membership comprised QCA staff, the regulator and nominees from principal learning and project awarding bodies recognised by the regulators. Following an introductory technical workshop and a work planning meeting, both held in June 2007, the DASG met on 10 occasions between October 2007 and July 2008.

In January 2008, the DASG produced an interim report to provide an opportunity for awarding bodies and Diploma development partnerships to comment on the proposals developed to date. Since the interim report, the work of the DASG has been to develop these proposals further while taking on board any comments made on the interim report. In addition, there has been the opportunity to commence work on activities designed to establish standards for each of the first five lines of learning as outlined in chapter 2. These activities are part of an ongoing process that will need to be replicated as subsequent phases of the Diploma come on stream.

This final report sets out a number of principles and practices, which have been agreed by the awarding bodies and Ofqual, to cover the awarding of principal learning, project qualifications and the Diploma. It therefore provides the detail needed to translate the high-level principles outlined in the regulatory arrangements into consistent practice. As a result, it should be read in conjunction with the *Regulatory arrangements for component and Diploma awarding bodies* (published August 2008, Ofqual/08/3761)[2] and *The statutory regulation of external qualifications in England, Wales and Northern Ireland* (QCA/04/1293). Aspects of the *GCSE, GCE and AEA Code of practice* (QCA/08/3563)[3] noted in this report should also be referenced.

This final report comprises four main chapters. The next chapter focuses on steps that will foster consistent grading standards to be set for principal learning, covering points i and iii in the terms of reference. It also draws on the experience of the initial work carried out to fulfil the requirements it sets out for establishing standards.

Chapters 3 and 4 are concerned with the development of detailed grading rules relating to points ii and iii. These rules will allow the aggregation of performance on principal learning units to generate a grade for the principal learning and Diploma, and how results for the project qualification will contribute to the grade for the Diploma. Chapter 4 specifically deals with how performances in principal learning and the project are combined to generate an overall Diploma grade.

In addition, it became clear during the discussions held by the DASG that there needed to be agreement about the basic approach to be taken by all awarding

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[2] ISBN: 978-1-84721-677-9

[3] ISBN: 978-1-84721-599-4

bodies in determining an agreed mark for internally assessed units. A separate working group met to come to such an agreement, and the key principles and procedures arising from the working group are provided as Appendix B.

This report has been endorsed by Ofqual. Some of the recommendations of the DASG in Chapter 3 are subject to further analysis by Ofqual and QCA. These cases have been indicated in the text. All the other recommendations are being implemented from September 2008. Ofqual will work with the awarding bodies to ensure that they develop processes and procedures that will meet the agreed requirements.

Chapter 2: Establishing standards in the Diploma

Setting fair and consistent standards in any qualification is a demanding task. Where the qualification is both new and complex, as with the Diploma, the demand increases greatly. Essentially, it is a careful balancing exercise needing to respect the inherent distinctiveness of the qualification while ensuring that it sits fairly in the marketplace.

The purposes of this section of the report are, first, to make explicit some key assumptions that have been agreed to underpin the process, and then to outline some possible mechanisms for producing appropriate judgements.

It provides an idea of the intended outcomes of each mechanism and explores issues associated with the timescale for the process. Since DASG published its interim report, there have been some steps taken to begin the process and this chapter reports on these steps and takes into account any lessons learned.

Background

Two important principles were agreed: the first was that the nature of composite qualifications means that standards are extremely difficult to establish at the level of the qualification as a whole. Where they primarily reside must be at the level of its separate constituents, especially where these are discrete qualifications. For the purposes of this report, this assumption has been extended to focus almost exclusively on setting standards in the principal learning. The overall grading mechanisms already agreed mean that the basic procedures agreed will also apply to the project. Because all other constituents of the Diploma function essentially as hurdles, their effect on standards is impossible to quantify. If the hurdle is passed, they have no further bearing on the final grade. If it is failed, their effect is absolute.

The second principle is that standards within the principal learning will have to be established at the level of the individual unit. There are good theoretical reasons for this but the case is essentially pragmatic. For a start, the work of learners for the entire principal learning qualification will be very difficult to assemble, let alone evaluate. Moreover, much of the work carried out for internally assessed units will be held within centres. More importantly, learners will be entered for individual units in different series (as early as January 2009), and their work on those units will need to be assessed and graded and results published, well before they seek an overall grade for their principal learning and Diploma..

There has also been agreement on certain key issues that underpin what follows. First, the standards will be realised by establishing grade boundaries on each unit and that these will need to be set by some kind of judgemental process rather than pre-established. Next, there are a number of layers in terms of judging the appropriateness of the standards set. In rough order of priority, these are the

standard is sensible in terms of the unit; that it is defensible in terms of the rest of the Principal Learning units; that it is defensible in terms of other Principal Learning qualifications in the same line of learning and at the same level; that it is defensible in terms of other qualifications at the same level and in the same general area; that it is defensible in terms of other lines of learning; that it is defensible in terms of qualifications at this level.[4] Clearly, whether it makes sense in terms of consistency of standards over time is irrelevant in the initial process, but will essentially replace the first priority in subsequent series, subject to the initial results proving robust.

Activities to support the standard setting process

This chapter sets out to explore what activities should be carried out to support the standard setting process so that as many as possible of the dimensions outlined above can at least be considered. The fact that the first awards for the level 3 project will be taking place as early as December 2008 (with the pilot extended project having already been awarded three times and the level 1 and level 2 projects once) and the principal learning from January 2009 adds considerable sharpness to the timeline for these activities, although several of the activities will not be possible until after that point.

The proposed activities are presented in broadly chronological order, although some may run concurrently. As a result of the timelines, work on some of the activities has already begun for the first five lines of learning and this chapter includes lessons learned. The first of these is that the activities should commence as early as possible after principal learning qualifications are accredited. Preparations are already under way for parallel activities on the phase 2 lines of learning.

An important feature of these activities is to consider the personnel involved. In many cases, they are self-evident and there are always issues of manageability and focus to be considered. However, there are real benefits in ensuring that wider ranges of stakeholders are involved at various points.

The first three activities are involved with trying to establish the context in which the standards set in the Diploma exist, and to ensure the involvement of key personnel who will need to take that context into account when setting standards in the principal learning.

[4] It would be especially awkward, for example, if there were real concerns about different standards for qualifications within the additional and specialist learning from those expected within Principal Learning.

Activity 1: Collecting potential source evidence

This involves scoping out the full extent of that context. Awarding bodies – at least all component awarding bodies (CABs) – are asked to review their existing suite of qualifications to determine which qualifications, if any, are most relevant to the knowledge, skills and understanding developed within principal learning. The National Database of Accredited Qualifications (NDAQ) is useful as a starting point here, but this activity also requires the kind of detailed knowledge of the qualifications that only awarding bodies can provide. The end product is a list of qualifications and units within qualifications with information about grading scale, the nature of candidates' evidence and where it is held, and where it maps across to the principal learning.

It is also necessary to identify key personnel who will be able to assist others to understand the qualification, including identifying and explaining candidate evidence. It is unwise to assume that appropriate overlap qualifications will be self-evident. (For example, there may be units within business qualifications, which have significant commonality with units within IT principal learning.) This activity needs to be carried out as early as possible. The key deliverable will be a list of relevant units and qualifications for each level at each line of learning, with key background information about each item on that list.

Activity 2: Identifying comparators

Once suitable qualifications have been identified, it is necessary to sharpen the focus on the most useful comparators. This involves one or more meetings to consider the range of materials identified in activity 1 and select the most useful within that range. There needs to be a meeting for each line of learning. (The initial steps taken so far for phase 1 suggest that it is possible to cover several lines of learning concurrently, provided it is possible to resource them sufficiently to manage the process. Indeed, there are real benefits in running the meetings concurrently.)

Materials for these meetings need to include the specifications for each unit used, especially any parts of it that specify the standards expected within the qualification and examples of candidate performance, which just meet those criteria and which is considered excellent.

The personnel need to include those identified in activity 1 and those involved with the development of the principal learning where different. It is also useful if awarding bodies supply someone with a coordinating role to ensure that agreed actions are carried out. By considering all three levels at a single meeting, it is also possible to ensure that there is both continuity and progression across the levels.

This activity cannot start until activity 1 has been completed but it is important that it is carried out early, since the outcomes have the potential to inform several

subsequent activities. This is one of many activities where a range of wider stakeholders and, in particular, the Diploma development partnerships (DDPs) may provide helpful input.

The key deliverables are:

- a list agreed among key practitioners of existing units that provide the most useful comparison, by level within the line of learning, with identified parts of principal learning
- examples of candidate performance with commentaries explaining where and how that performance meets the standard specified and where and how it exceeds it (these materials form the basis of an initial archive for the pre-award described below and for grading purposes)
- further commentaries exploring where the candidate performance does or does not match the requirements of the principal learning.

The activity also provides the opportunity to revisit the performance descriptions and consider whether they are likely to need adjustment in the light of the sort of material being identified.

Initial experience has enabled further work to be done in terms of making the requests sent to awarding bodies more effective, so that both materials and personnel provide maximum value. It has also been possible to refine the way a task is described to participants and the documentation provided. It also seems clear that this process may need to be an iterative one, with participants selecting a further batch of work with specific factors in mind.

Activity 3: Pre-standardisation

Normally, when introducing a new specification, awarding bodies produce exemplar materials comprising assessed candidates' work together with commentaries as to the rationale for the award of marks. There is always a tension in these circumstances between the need for authentic materials and the need for them to be made available very early on in the life of the specification. Where the qualification is completely new, as with the principal learning in the Diploma, this tension is even more acute.

It may well be that the outcomes of activity 2 may provide useful starting points for the materials, since they have the virtue of being real candidates' work, while any commentary on the marking can include discussion of how either the task being undertaken or the performance in response to it, or both, would need to be adjusted to better meet assessment requirements within the principal learning. The extent of this would inevitably depend on the match. However, the use of such materials would almost certainly be confined to the specific awarding body that provided them.

Such materials are not directly related to grading, but they do carry important messages to users of the qualification. The fact that there is no common unit structure or marking scheme across awarding bodies' principal learning is both a help, in that it makes superficial comparisons more difficult, and a hindrance, in that there may be radically different pre-conceptions across awarding bodies as to the ease with which marks may be gained. This may lead to even more superficial comparisons. For example, widely differing grade thresholds, however defensible, are likely to lead to accusations of lack of comparability.

It is important therefore that any published exemplar material does not excite such accusations. It will be unhelpful to the credibility of the Diploma if there are cases within a line of learning where pieces of work of very similar standard (even in surface factors such as length, fluency and referencing) receive very dissimilar marks (in percentage terms), or worse, very different types of commentary.

The activity in this case is therefore not the production of such exemplars, which is the business of the awarding bodies, but an exercise reviewing proposed exemplar materials by line of learning and probably across levels, before they are published, to ensure that there are no major hostages to fortune. The personnel should probably be drawn from those involved in the production of the materials, but could also come from those involved with activities 1 and 2.

It may also be sensible to think of how wider stakeholders may be involved at this point, since it might help deepen understanding of issues associated with the assessment and grading of principal learning in a relatively low risk situation. The timing will depend on awarding bodies' proposed timetables for production of exemplars and must clearly not be allowed to delay those timetables.

The key deliverable will be that published exemplar materials are sufficiently consistent to avoid the appearance of differing standards. It should also be possible to include some further work towards initial identification of grading standards.

Activity 4: Pre-awarding

Successful achievement of activities 1–3 will make activity 4 easier, but it is important that it is not seen as creating any definitive examples of graded work. Instead, it is going to be important for key personnel from awarding bodies to come together prior to the first award in each level of each line of learning. They will need to review authentic assessed candidate work and agree whether it represents an example of a particular grade and whether they would see it as strong performance within the grade or performance just meriting that grade. Ideally, the work will cover a range of attainment, come from several units, if not all, and the marks will have been ratified by a moderator. However, there is a tension between the ideal and manageability. In particular, the desirability for the marks to be agreed places significant constraints on the timing of any such event and probably on the amount of work available.

There are also questions to be resolved about the personnel involved, and the nature of that involvement. First, it is assumed that the people primarily involved in the realisation of each unit will be directly involved with the pre-award: principal examiners/moderators. There will also need to be some awarding body staff, to ensure that outcomes are recorded and appropriate mechanisms agreed for their onward transmission. In addition, it would seem sensible for there to be representation from the regulators, in order to ensure that any wider issues that arise can be resolved.

There is also a question of which awarding bodies need to be there. Clearly, any awarding body offering any unit from the qualification in the relevant series will need to have personnel at such an event. So too will any awarding bodies offering the qualification, but with no entries in that series.

But there remain questions about whether awarding bodies yet to start offering the qualification should have some representation. It is proposed that any awarding body that has an accredited version of the qualification should have personnel at the meeting, but not those merely developing one. Once again the tension is between manageability and the need to ensure widespread engagement.

The key deliverables are, at the minimum, a shared sense of the qualities needed to merit the key grades; additionally, agreement on some examples of work which exhibit those qualities; it should also be possible to revisit the performance descriptions and revise them in the light of real candidate work which is being considered in terms of possible grades.[5] All of these will benefit from the outcomes of activities 1 and 2, both in terms of the materials developed and the community of understanding established.

All of these will benefit from the outcomes of activities 1 and 2, both in terms of the materials developed and the community of understanding established.

In terms of timeline, this will probably need to happen to a tight schedule between the closing date for submission of work (almost certainly later than that, ie after any external assessments and with any moderation process well under way) and at least a week before the first award to enable awarding bodies to model the implications of the outcomes arising from the meeting. There will almost certainly need to be a meeting for at least each of the first two testing sessions for each line of learning.

[5] It is important to remember that the current draft performance descriptions were not devised with threshold performance at specific grades in mind but intended to capture the range of acceptable performance.

Activity 5: Attendance at others' awarding meetings

This is the most straightforward to implement and has already been done in the early days of applied GCSE. This is not to belittle the logistic demands of actually effecting it, especially as the number of awarding bodies potentially involved increases. The key questions to be resolved are which awarding bodies to involve (i.e. as for activity 4, just those offering the Principal Learning in the first year, those submitting for year 2 or all those definitely planning to offer it); how to ensure widespread involvement without overloading the meetings (especially the early ones) with extra personnel; and exactly what role outsiders will play. Clearly the experience of applied GCSE where the role was greater than observer but less than participant is helpful here. Two particular issues are how observers communicate/make use of decisions at meetings they have attended and, specifically, what to do if an observer is seriously unhappy about either the standards being implemented elsewhere or the process.

Two particular issues are how observers communicate/make use of decisions at meetings that they have attended and, specifically, what to do if an observer is seriously unhappy about either the standards being implemented elsewhere or the process.

The exact timeline depends on the actual schedule of awarding meetings, as will the exact nature of the programme of cross-attendance for at least the first two awarding sessions.

The key deliverable is cascading of grading standards across relevant parties. There is a useful side-effect in that personnel from awarding bodies with little experience in the kind of meetings that are going to be necessary will also get a sense of how they work[6].

Activity 6: Early notification of results

It is standard practice in August for awarding bodies and the regulators to consider results for any high profile qualifications prior to release. This allows them to be reviewed in a wider context, for example across awarding body, but also for consideration about whether awarding bodies have similar views of the processes or have similar experiences arising. This is normally at the level of whole qualifications, but for principal learning there are good arguments for this to happen at the unit level as well, at least initially.

The personnel involved would be awarding body technical staff and relevant regulatory staff, although it may be necessary to widen specific points of discussion.

[6] It will be essential for this to happen at an earlier stage for staff from such awarding bodies, who will need to be planning their procedures.

The timeline is dictated entirely by the award and results schedule, but there is considerable experience in this kind of process.

The key deliverable is an early opportunity to give results a sense check using as wide an evidence base as possible, and if necessary, to develop a narrative to accompany the results.

Activity 7: Post-award review

When the first awards are completed, it is necessary to bring relevant personnel together to look at the outcomes, both qualitative and, so far as it is meaningful, statistically. This would involve a mixture of examiners, moderators and awarding body staff. The regulator would also attend. Among other things, this provides a chance to allow examining personnel to explore any issues that may have arisen at their own or each other's meetings.

As with activities 3 and 4, there will be a further opportunity to revisit performance descriptions in the light of experience. There will almost certainly need to be a review of this kind after each of the first two sessions. In essence, the event would be a combination of a small scale and informal comparability study, a wash-up meeting, a technical seminar and a senior examiners' conference.

The event would need to take place relatively quickly, say, within two months of the relevant awarding series. This would mean that issues and decisions would still be relatively fresh in participants' minds and would allow actions to be implemented for the following series.

The key deliverables are a chance to compare outcomes in relatively non-confrontational environment; and a chance to explore wider implications of decisions made. Such an event would also provide the opportunity to discuss issues, to tighten up the performance descriptions, and to consider materials in terms of their usefulness for public consumption.

Activity 8: Involvement of other stakeholders

Although awarding bodies set the standards in the qualifications that they run, it is going to be critical for the principal learning and project qualifications that they have buy-in from a range of stakeholders (for example DDPs, Specialist Schools and Academies Trust, employers, and for level 3 at least, higher education). One way of bringing this about is an event where representatives from the various interest groups can be taken through the issues, the performance descriptions and assessed materials to ensure that such buy-in is achieved. This is a major element in any communication strategy. The personnel for any such meeting will need to be based on the specific line of learning and it seems likely that there will need to be separate meetings at least for level 3 and the other two levels; possibly all three levels.

Materials should be selected from activity 7, supplemented as necessary by the awarding bodies.

The timeline for this is debatable, but it would seem best if it happened in the autumn after the first summer series for levels 1 and 2, and probably also for level 3, although no full Principal Learning or Diploma awards will be made at that level.

The key deliverable from such an event is, ideally, public endorsement of what learners are achieving and, at least, no undermining of the qualifications from the sidelines.

Activity 9: Involvement of new lines of learning and awarding bodies

A running question in the other activities is how and when to bring in the awarding bodies offering new lines of learning for each phase. This is loosely about inter-lines-of-learning comparability, but is more about taking early steps to bring everyone up to speed with the sort of issues arising from the assessment and awarding of principal learning units.

The timeline for this is debatable, but probably at about the same time as activity 8, ie after things have had some time to settle, but while issues are still relatively fresh in the minds of those who may have to explain and even defend decisions.

The key deliverable here will be a wider understanding of marking and awarding issues and some sense of the sort of standards being applied when grading existing lines of learning. One way of effecting this might be to start activity 1 for new lines of learning with a seminar from those involved in existing lines about the issues and processes, as well as their understanding of the standards applied.

Chapter 3: Wider awarding rules

This chapter outlines the wider awarding rules that have been agreed by DASG for the constituents that generate the Diploma grade, whether it be Foundation, Higher and Advanced Diplomas or Progression Diplomas (at level 3). Some of the recommendations of the DASG on the wider awarding rules are subject to further analysis by Ofqual and QCA. In these cases the text is provided in italics.

For the purpose of this chapter, the constituents are:

- principal learning units at level 1, level 2 and level 3
- principal learning qualifications at level 1, level 2 and level 3
- foundation, higher or extended project qualifications.

For additional and specialist learning and functional skills qualifications, awarding procedures that already operate will be the ones used for that qualification by the relevant awarding body.

Before explaining the detail of the rules, it is useful to provide some detail about the key process by which decisions about determining performance standards will be made.

Awarding

The purpose of awarding in mark-based qualifications is to determine the minimum mark necessary for candidates to be awarded a given grade in that qualification or part of it. This means that awarding bodies must conduct an award for the principal learning and project qualifications. In addition, it is vital for all awarding bodies to follow sufficiently consistent procedures for determining boundary marks in order to ensure outcomes of those decisions will not be affected by the choice of procedure.

The judgements made depend on a combination of qualitative evidence and technical and statistical evidence. This is partly because a new high stakes qualification will be put under close scrutiny, so the process should include consideration of all available evidence, and partly because it is inherent in the nature of the way learning is defined within the principal learning that significant elements of judgement will be needed in setting standards.

Section 6 of the *GCSE, GCE and AEA Code of practice* (QCA/08/3563)[7] above outlines the processes and procedures that are deemed necessary to determine

[7] ISBN: 978-1-84721-599-4

marks at key grade boundaries for those qualifications. This section of the report describes the principles and practices that have been agreed for use by the awarding bodies and Ofqual. DASG recommends that awarding bodies should use relevant paragraphs of section 6 of the *GCSE, GCE and AEA Code of practice* (QCA/08/3563) in determining their procedures.

There are two issues to consider in setting out clear roles and responsibilities within the awarding process.

- **Single point of accountability**

First, there needs to be a single point of accountability for each principal learning qualification. The nature of the Diploma means that the point of accountability cannot lie with the Diploma awarding body (DAB), since by the time a DAB comes to be awarding the Diploma, the process will be automatic, based on information received from what might be a range of CABs. It is the CABs that will need to make the operational judgements for the principal learning and project, and it is therefore at this level that accountability must reside.

- **Management of personnel**

Secondly, there needs to be a certain level of flexibility in the management of the personnel involved in the award. That is, **the principal learning CAB must ensure that key defined responsibilities are undertaken and that no individual's responsibilities should involve manifest conflicts of interest.** This does not require specific personnel to be appointed.

For each line of learning at each level, those responsible for awarding should include individuals who take overall responsibility for a qualification and for separate units within it, with a particular focus on the internally and the externally assessed units, and for representing the views of the committee to the point of accountability.

The principal learning CAB must appoint one person to take responsibility for standards across all three levels of the principal learning within a line of learning, ensuring that the levels do not overlap, and for maintaining standards year on year. Section one of the *GCSE, GCE and AEA Code of practice* (QCA/08/3563) provides a useful outline of the functions of different personnel involved in an award. A case where a conflict of interest might arise would be if the person responsible for standards across the levels also had responsibility for standards within one level.

The awarding process must involve the consideration of a defined range of materials. In planning for early awarding, awarding bodies will have to consider what materials should be provided to support the process. The early activities described in Chapter 2 should provide a useful source to stand in for authentic archive material.

Paragraph 6.15 of the *GCSE, GCE and AEA Code of practice* (QCA/08/3563) outlines an extensive range of materials used to determine the grade boundary marks in those qualifications. Awarding bodies should consider this list in deciding what is suitable for this context. The appropriateness of each or the value of each to inform judgements will depend on the circumstances.

One particular issue that is likely to arise when setting the grade boundaries in the early series is low entries for some of the units. While this makes it easier to consider a much greater proportion of the work undertaken, it can be problematic when it comes to evaluating the soundness of any decisions taken. **Awarding bodies need to agree a set of possible strategies to adopt, depending on the particular entry for the unit.**

In order to determine a grade boundary, awarders must consider candidates' work and agree a range of marks within which the boundary will fall. Once this has been done, they must then use their collective professional judgement about the whole range of available evidence to reach a consensus about the single mark within those limits to recommend as the grade boundary.

Not only in the first year but subsequent years, **examples of candidate performance that are agreed to represent the standard at the grade boundary should be identified for archive**. It is advisable for informing future decisions that examples of candidate performance covering several series be retained.

Awarding committees should also consider available aggregate outcomes as part of the awarding process. Where such evidence is not available, they should take into account any evidence about the implications of their recommendations for aggregate outcomes.

Additional information relating to the specific awarding rules for the principal learning, project and Diploma is covered in the rest of this chapter. The calculation of aggregated marks is covered in chapter 4 – aggregation of performance.

Judgemental grade boundaries

Setting grade boundaries judgementally is a very time-intensive process. There needs to be an opportunity to review a range of qualitative evidence, often very substantial, and to consider the technical and statistical implications of the outcomes of that review. It is customary therefore not to set all the grades by this process, but a limited number, and use arithmetical processes of interpolation and extrapolation for the remainder. For such calculations to be made, a minimum of two boundaries needs to be established.

The DASG considered the implications of requiring a judgemental process for the principal learning and project qualifications. They agreed that the large number of

units involved meant that setting more than two grades judgementally for each unit would be unmanageable. They also discussed which grades would be best set judgementally. It was noted that fewer problems arise when interpolating than when extrapolating boundaries in current qualifications[8].

Using first principles, the ideal situation therefore is to award the top and bottom boundary and interpolate the other boundaries[9].

The recommendation of the DASG is therefore that the judgemental boundaries should be as follows:

Foundation: B and A*

Higher: C and A*

Advanced: E and A*

It was also agreed that the same should apply to the grading of the project qualification.

Detailed wider awarding rules

1. Making entries

- To qualify for the award of a Diploma, learners must be entered for all units of principal learning and for the project or extended project.
- For each level and for each line of learning a learner must take their principal learning with only one awarding body (ie there can be no transfer of units between awarding bodies).
- Learners must take all their principal learning at a single level (ie points for units cannot be transferred across levels).

[8] In fact for GCSE there has to be a secondary rule for cases where the extrapolated boundary proves unacceptable or even impossible.

[9] It was noted that this differs from practice at GCSE. However, the A grade was originally the highest grade awarded at GCSE. When the A* grade was introduced, it was considered more important to carry standards forward across a known boundary than to try and set them for the highest grade. Moreover, the A* grade was awarded at qualification level rather than by unit.

- Learners may submit a project at the same level or one level above the level of Diploma for which they are entered. In such circumstances, a successful project will receive the maximum points for the project at the level of the Diploma.
- *The same project must not be used for more than one Diploma at the same level (subject to further analysis by Ofqual and QCA).*
- Learners may undertake ASL at the same level or one level above the level of Diploma for which they are entered.
- In addition to entering for each unit of the principal learning, for a project qualification and for the other qualifications required for the award of a Diploma, learners, through their centres, are also required either to set an intention to claim with the Diploma aggregation service (which will automatically claim the award once all the requirements of the Diploma have been met and a trial grade has been calculated by the Diploma aggregation service) or to make a manual claim once a trial grade has been calculated.
- *Learners cannot count the same work experience towards more than one Diploma at the same level (subject to further analysis by Ofqual and QCA).*
- Learners are permitted to be entered for more than one line of learning and level at any one time. If an entry is made for more than one line of learning, the same rules apply, eg each principal learning qualification entry within a line of learning must be with only one awarding body and at a single level.
- Units and/or qualifications can be taken in any order.
- Qualification entries are normally made by the home centre, which ensures that all unit entries are made. Unit entries are usually made by the centre that will host the assessment. This may be the home centre or delivery centre. This is necessary so that each learner is provided with the correct assessment materials and receives the correct result(s) at the end of the process.
- All other constituents of the Diplomas must also be entered at the level required for that particular Diploma.

2. Receiving results

- A learner who is absent for all principal learning units or for the project will receive an absent result for the principal learning / project and will not be eligible for the award of a Diploma.
- A Diploma trial grade will not be calculated by the Diploma aggregation service until all of the constituents of the Diploma have been completed.
- A learner who is absent for all principal learning units or for the project will receive an absent result for the principal learning / project and will not be eligible for a Diploma grade. However, an ungraded result may be submitted that will count towards a Diploma grade.
- In cases of partial absence, CABs will be responsible for notifying the Diploma aggregation service, using agreed protocols.
- Home centres are responsible for notifying the Diploma aggregation service that a learner has met the requirements for PLTs and work experience. The Diploma aggregation service will receive results into the appropriate learner account.
- The Diploma aggregation service will validate that the sum of the principal learning unit points received from a CAB matches the points total received for the principal learning qualification. The Diploma aggregation service will also validate that a result is present for all principal learning units, even if one or more of these units are absent or ungraded. The Diploma aggregation service will receive results into the appropriate learner account.
- The Diploma aggregation service will provide a trial grade once all the contituents are complete. If a centre has notified the Diploma aggregation service of a learner's intention to claim, a qualification result will be issued by the DAB.
- There are no time limits for learners achieving a Foundation, Higher or Advanced Diploma beyond the shelf life of the qualification. Results will continue to be collected and stored against learner accounts.
- Diploma transcripts are part of the formal certification of the Foundation, Higher, Progression and Advanced Diploma. The Diploma transcript is only valid when issued with the Diploma certificate.
- Transcripts will list all ASL completed, including any ASL qualifications that exceed the minimum requirement for guided learning hours.

3. Resits

- There is no limit on resits for principal learning units or the project. In all cases, the best result is the one that will count.

- Where a learner has retaken any qualification that they wish to count towards the award of a Diploma, they must submit a new intention to claim to the Diploma aggregation service before a new Diploma award can be issued.

4. Submission to claim

- A learner who submits an intention to claim for the Diploma and who has the relevant combination of results to be graded cannot subsequently decline the grade. However, it is still possible to resit any or all of the principal learning units/project on a subsequent occasion to improve the overall result. In such a case, a further intention to claim must be submitted.

- *Once a Diploma result has been issued, all the constituent qualifications that have been counted towards that Diploma,* ***with the exception of the functional skills results****, will be frozen and cannot be used in any further Diplomas at the same level. This is designed to reduce the risk of qualifications being double counted towards separate Diplomas (subject to further analysis by Ofqual and QCA).*

- *Where a learner has more ASL (in terms of GLH) than necessary for the award of a Diploma, the Diploma aggregation service will count the minimum combination of qualifications to qualify for the Diploma. Only these ASL results will be frozen. The system will have to be able to calculate the most effective way of combining ASL qualifications for inclusion in a Diploma result. A key factor should be, as far as possible, to preserve any unfrozen ASL qualifications at a higher level from the level of the Diploma being claimed (subject to further analysis by Ofqual and QCA).*

- *Learners will have the opportunity to amend the choice of ASL qualifications being used for their Diploma (subject to further analysis by Ofqual and QCA).*

- Learners who have results in enough qualifications to qualify for a Diploma, but who have not submitted an intention to claim, will be issued with a trial grade notifying them of the grade they are entitled to receive. Information about the trial grade will have to include information about which ASL qualifications are being included in the overall result. If the

learner does not wish to claim the grade at that point, they need take no further action.

- A learner who has gained or has entered for a valid combination of constituents for the award of a Diploma will submit either:
  - an intention to claim in advance of completion of all constituents of the Diploma (which will automatically make a claim on the learner's behalf once a final trial grade has been calculated)

  or

  - following completion and calculation of a trial grade, where an intention to claim has not been set, a manual claim to the Diploma aggregation service.

The following section considers the options and actions available to a learner who wishes to finish his/her principal learning, project, extended project, ASL or generic learning qualifications or intends to complete a Foundation, Higher or Advanced Diploma.

i. If the learner, through their centre, submits an intention to claim for the Diploma (and has completed all the constituents of the Diploma):

   - he/she will receive a Diploma grade, certificate and transcript from the DAB
   - he/she may attempt to improve the grade by re-taking one or more units/ constituents and submitting a further intention to claim.

ii. If the learner does not submit, through their centre, an intention to claim (and has completed all constituents of the Diploma):

   - no grade or certificate is automatically issued for the Diploma.
   - However, the learner will have grades and certificates for the separate constituent qualifications they have achieved
   - the individual constituent results can be improved by retaking one or more units/constituents
   - the constituent results remain in the ‘bank’. This means he/she can claim the grade to which he/she is entitled at a later date, provided the learner’s qualifications satisfy all the Diploma requirements. There is no requirement to sit any further units.

5. Issuing results

- Where a learner completes a qualification (for example within ASL), which means that they are entitled to the award of a Diploma, the centre must submit a claim to the Diploma aggregation service on behalf of the learner, and the Diploma aggregation service will instruct the DAB to issue a Diploma.

- From September 2008, CABs will be responsible for providing the Diploma aggregation service with information on a learner's prior achievement (applies to approved qualifications from the Diploma catalogue achieved before a learner account was opened in the Diploma aggregation service on or after 1 January 2005). There are no proxies for principal learning, the project and functional skills in the Diploma. Diploma aggregation service will store results in the appropriate learner account.

- CABs will be responsible for issuing the overall principal learning qualification grade and points, and principal learning unit results (grades and points). The Diploma aggregation service will accept unit results at any time, but will not attempt to aggregate the Diploma until an overall principal learning qualification result has been received from the CAB. This may include one or more ungraded or absent unit results.

- CABs will be responsible for issuing the overall project (level 1 and level 2) and the extended project (level 3) grades and points. This may comprise an ungraded result.

- CABs will also be responsible for issuing achievements for any constituent qualifications that are held in the Diploma catalogue.

6. Enquiries and appeals

- For ASL qualifications, the system of enquiries and appeals that operates will be the one used for that qualification by the relevant awarding body.

- For functional skills qualifications, the system of enquiries and appeals will be that agreed between Ofqual and the functional skills awarding bodies.

- For the project qualification and the internally assessed units of the principal learning, the CAB must have in place a system of enquiries and

appeals that allows for the reassessment of the work originally used to arrive at the final mark[10].

- For externally assessed units in the principal learning, CABs must have in place a system of enquiries and appeals that allows the centre to request that the assessment of individual candidates or a group of candidates be checked clerically or be reviewed in terms of the application of the mark scheme.
- If there is concern about the result of a principal learning unit or project, the centre that made the entry can make an enquiry to the CAB. CABs must notify the Diploma aggregation service of any changes to results following an enquiry.
- The outcome of an enquiry into a principal learning unit or project can lead to the overall Diploma grade or constituent qualification grade being confirmed, raised or lowered. If the learner submitted an intention to claim, the Diploma grade may be confirmed or raised

[10] Further information about appeals about internally assessed work is provided in Appendix B.

Chapter 4: Aggregation of performance

A key part of the work of the DASG was to take the initial work carried out by the Diploma Grading Project Group on aggregating unit performance to generate a result for principal learning. The aim was to come up with a system that recognised the range of structures used in principal learning qualifications, which was clear and transparent and produced defensible outcomes.

The DASG also considered how to combine outcomes from the principal learning with those from the project qualification to determine a final grade for the Diploma.

The DASG commissioned a great deal of modelling work and considered the outcomes it produced. It also considered a range of different approaches to aggregating outcomes currently used in different qualifications.

Background to the aggregation of performance rules

One of the key features of the principal learning qualification is the range of different approaches taken by awarding bodies in designing qualifications that met the line of learning criteria but retained a distinctive flavour. Table 1 shows the variety that this flexible approach has produced.

Table 1: Number of possible units within principal learning, project and Diploma qualifications, and variations in unit size, weighting and maximum raw marks

Qualification	Level	Numbers of units	Max. unit raw marks	Guided learning hours	Weightings (1 = 30 GLH)
Principal learning	Foundation	4, 5, 6, 7, 8	30, 48, 60	30, 60	1, 2
	Higher	7, 8, 9	30, 48, 60	30, 60	1, 2
	Advanced	6, 7, 9	30, 60, 90	30, 60, 90	1, 2, 3
Project	Foundation	1	35, 50, 60	60	2
	Higher	1	35, 50, 60	60	2
	Advanced	1	30, 50, 120	120	4
Diploma	Foundation	5, 6, 7, 8, 9	30, 35, 48, 50, 60	30, 60	1, 2
	Higher	8, 9, 10	30, 35, 48, 50, 60	30, 60	1, 2
	Advanced	7, 8, 10	30, 50, 60, 90, 120	30, 60, 90, 120	1, 2, 3, 4

In addition, the number of grades to be awarded varies across different levels of the qualification.

As a result of these variations, it is clear that there is no correspondence between qualifications in terms of raw marks and the grades to which they lead. The main requirement of the proposed system is that it should apply to all relevant qualifications regardless of level and line of learning. The Diploma Grading Project Group recommended a system that was essentially a simplified version of the Uniform Mark Scale (UMS) system used at A level, whereby a unit is graded and the

grade boundaries used as anchor points for producing a standardised mark, which reflects not only the grade that the mark merits, but its location in the grade band.

However, the Diploma Grading Project Group rejected adopting the exact UMS model used at A level for these purposes because the raw mark scales within the principal learning and project qualifications are much shorter than those required for the successful operation of the A level UMS. DASG agreed with this view and sought to finalise a similar but simplified system for the Diploma. However, the basic principle applies, whereby raw marks are given a point score reflecting a grade and, as far as possible, the degree of success within that grade.

Aggregation of performance rules

The following tables provide the proposed points, by grade, for the range of unit weightings for each level of the principal learning, the project and the Diploma.

The tables show how many points (and weighted points to reflect the guided learning hours) are awarded to learners who obtain a particular grade for a unit within a principal learning qualification for each level. The tables also show the number of aggregated points and aggregated weighted points necessary to obtain a particular grade for a principal learning, project, and Diploma qualification for each level.

Level 3

Minimum points awarded, by grade, for units of each size for level 3 principal learning and the extended project

GLH	30	60	90	Extended project (120)
Maximum point score	7	14	21	28
A*	6	12	18	24
A	5	10	15	20
B	4	8	12	16
C	3	6	9	12
D	2	4	6	8
E	1	2	3	4
U	0	0	0	0

Level 3 principal learning and Diploma boundaries

Grade	Principal learning minimum points	Diploma minimum points
Maximum point score	126	154
A*	108	132
A	90	110
B	72	88
C	54	66
D	36	44
E	18	22

Level 2

Minimum points awarded, by grade, for units of each size for level 2 principal learning and the higher project

GLH	30	60	Higher project (60)
Maximum point score	5	10	10
A*	4	8	8
A	3	6	6
B	2	4	4
C	1	2	2
U	0	0	0

Level 2 principal learning subject boundaries

Grade	Principal learning minimum points	Diploma minimum points
Maximum point score	70	80
A*	56	64
A	42	48
B	28	32
C	14	16

Level 1

Minimum points awarded, by grade, for units of each size for level 1 principal learning and the foundation project

GLH	30	60	Foundation project (60)
Maximum point score	4	8	8
A*	3	6	6
A	2	4	4
B	1	2	2
U	0	0	0

Level 1 principal learning subject boundaries

Grade	Minimum points	Diploma minimum points
Maximum point score	32	40
A*	24	30
A	16	20
B	8	10

The modelling mentioned above also showed that aggregation effects and, hence, principal learning cumulative percentage outcomes, will vary substantially due to a number of factors that are, to a large extent, uncontrollable, unpredictable or both. These factors include: variations in the number and weighting of the units to be

aggregated; the inter-unit correlations (ie consistency of candidates' performance across units); and the number of grades used.

The DASG agreed that none of the alternative approaches tested overcame the effects of these factors significantly better than the one proposed here. At the same time, each would have presented markedly greater problems in terms of transparency than the proposed model.

Transforming marks to points

While the above tables show the key principle behind the proposed method of aggregation, the DASG also provided recommendations covering the detail of how the model should work. Essentially, any learner who scores the exact raw grade boundary mark will be awarded the exact number of points as shown in the tables. However, the question remains as to how to translate marks that fall within a grade band on the raw mark scale into the appropriate point score. Ofqual will work with the awarding bodies to ensure that a consistent approach is agreed.

The process is essentially arithmetic. The agreed minimum raw mark for a grade will equate to the point score for that grade, as shown in the table for the relevant size of unit and level of qualification. The raw marks within the range up to the next grade boundary will be spread out as evenly as possible across the number of points available for that grade.

Appendix A: Description of aggregation of performance rules

The purpose of this appendix is to present a detailed and technical outline of the modelling results explored. It should be noted that the modelling described here simply gives a broad indication of the effects of aggregating unit results using the proposed methods; it is not intended to provide realistic predictions of the results for the Diploma.

Background to the aggregation of performance rules

Given that the Diploma will not be available until September 2008, there are no existing data to analyse and, therefore, data from other qualifications were used as proxy. Data from June 2006 AQA Applied GCE Health and Social Care AS units were used as a basis for generating proxy data for modelling of the principal learning. The AS unit marks of a random sample of 1,000 of these candidates were used as seeds to generate a number of simulated units with maximum marks of 30, 60, 90 and 120 marks.

All pseudo-units exhibited slightly negatively skewed distributions (eg -0.47) and correlations between the units generally ranged, for example, between approximately 0.45 and 0.53. Note that modelling conducted as part of the final report from the Diploma Grading Project Group (Taylor, Quinlan, Daly, Baird and Cresswell, 2007) found that grade distributions did not differ unduly as a result of varying the size of the correlations between units (ranging between approximately 0.40 and 0.70).

One of the drawbacks of this approach is that the candidates who take the Diploma may differ substantially from those who took the qualifications used to generate data for the current modelling. Consequently, the relationships between the elements in the Diploma may not be the same as the relationships between the elements used in the modelling. However, as the aim of this modelling was to explore the technical merits of various grading aggregation methods, qualitative differences between actual and predicted candidature is less of an issue.

An additional complicating factor is the variations between Diploma constituents that will be available to candidates when teaching begins in September 2008, as is evident from the Diploma catalogues currently published on the National Database of Accredited Qualifications.

Table 1 below summarises the variations in the numbers of units within the three levels of Diploma qualifications currently accredited, in addition to the variations in individual unit size measured in guided learning hours and maximum raw marks. The number and weighting of units comprising principal learning and Diploma qualification varies between levels, across and within lines of learning and awarding bodies, and

these variations are likely to change as new specifications are developed and accredited.

Table 1: Number of possible units within principal learning, project and Diploma qualifications, and variations in unit size, weighting and maximum raw marks

Qualification	Level	Numbers of units	Max. unit raw marks	Guided learning hours	Weightings (1 = 30 GLH)
Principal learning	Foundation	4, 5, 6, 7, 8	30, 48, 60	30, 60	1, 2
	Higher	7, 8, 9	30, 48, 60	30, 60	1, 2
	Advanced	6, 7, 9	30, 60, 90	30, 60, 90	1, 2, 3
Project	Foundation	1	35, 50, 60	60	2
	Higher	1	35, 50, 60	60	2
	Advanced	1	30, 50, 120	120	4
Diploma	Foundation	5, 6, 7, 8, 9	30, 35, 48, 50, 60	30, 60	1, 2
	Higher	8, 9, 10	30, 35, 48, 50, 60	30, 60	1, 2
	Advanced	7, 8, 10	30, 50, 60, 90, 120	30, 60, 90, 120	1, 2, 3, 4

Therefore, it is not possible to introduce any form of hurdle that is based solely upon a specified number or proportion of units. For example, it is not feasible or fair to stipulate that candidates must achieve an A grade in at least half the units to receive an A grade in their principal learning qualification. Any such hurdles will necessarily have to be based on guided learning hours, the only element that is common to all units and qualifications.

While keeping in mind the variations in unit characteristics described above, the aggregating of imperfectly correlated marks produces aggregation effects (commonly referred to as ‘regression to the mean’). These aggregation effects are a statistical artefact and largely unavoidable, arising when the results from several units or constituents of an examination are aggregated. Aggregation effects typically exhibit a pattern such that, at the higher grades, the cumulative percentage of candidates obtaining a particular grade on the qualification overall is less than (often considerably) the average cumulative percentage across the individual units.

For example, if the cumulative percentage of candidates obtaining an A* grade averages to around 7 per cent across all units within a qualification, aggregation effects may result in overall cumulative percentages falling to much lower levels, possibly to the extent that no candidates achieve an overall grade of A* (or grade A, for that matter). This effectively distorts the relationship between candidate achievement at unit level and overall achievement at qualification level.

Although it is not possible to clearly predict the magnitude of aggregation effects in the Diploma, it is nevertheless an unavoidable issue and one that quickly becomes apparent in the modelling outcomes outlined below.

Conversion of unit grades to points

In their final report, the Diploma Grading Project Group (Taylor, Quinlan, Daly, Baird and Cresswell, 2007, page 22) rejected a fully-fledged UMS for two reasons. First, the technical rules associated with UMS (such as capping) were thought to be unnecessarily complex, particularly in a qualification comprising a large number of units. Second, given that that some units may be assessed on a relatively coarse scale, there would be large gaps in the corresponding UMS for these units. For example, if a unit were assessed on a 20-point scale and converted to a UMS of 0-100, approximately only one-fifth of the marks in the UMS would be attainable. Such instances currently occur in a small number of GCE A level units, resulting in major issues of transparency and defensibility.

Therefore, following the Diploma Grading Project Group's recommendation, initial modelling was conducted using a two points per unit grade scheme; one, three and four points per grade scheme were included for comparison.

Table 2 illustrates the four options for levels 1, 2 and 3. Points were allocated within grades in the two, three and four points per grade schemes. In the three points per grade scheme, for example a 'high' A* in a Foundation unit would attract 12 points, a 'mid-range' A* would attract 11 points, and a 'low' A* 10 points (see Table 3 below).

Table 2: Number of points per unit grade

Level	Unit grade	Points per unit grade ratio			
		1:1	2:1	3:1	4:1
Foundation	A*	4	7–8	10–12	13–16
	A	3	5–6	7–9	9–12
	B	2	3–4	4–6	5–8
	U	0–1	0–2	0–3	0–4
Higher	A*	5	9–10	13–15	17–20
	A	4	7–8	10–12	13–16
	B	3	5–6	7–9	9–12
	C	2	3–4	4–6	5–8
	U	0–1	0–2	0–3	0–4
Advanced	A*	7	13–14	19–21	25–28
	A	6	11–12	16–18	21–24
	B	5	9–10	13–15	17–20
	C	4	7–8	10–12	13–16
	D	3	5–6	7–9	9–12
	E	2	3–4	4–6	5–8
	U	0–1	0–2	0–3	0–4

Tables 3, 4 and 5 show how the different points per grade ratios might correspond to grade boundaries in a 30-mark unit at Foundation, Higher and Advanced levels, respectively. For the purposes of modelling, the top (A*) and bottom (B, C or E) unit boundaries at each level were set arbitrarily and the intervening boundaries were interpolated.

Table 5 also illustrates how the combination of a relatively coarse raw mark scale (30 marks maximum), a relatively high number of grades (7, A*–U) and a relatively fine points scale (4:1 points per grade, 28 points maximum) results in a number of grade points being inaccessible (ie 7, 11, 19 and 23 in the 4:1 point score column).

Table 3: Number of points per unit grade in a 30-mark Foundation unit

Unit		Points per grade ratio							
		1:1		2:1		3:1		4:1	
Raw mark	Grade boundary	Point boundary	Point score	Point boundary	Point score	Point boundary	Point score	Point boundary	Point score
30			4		8		12		16
29			4		8		12		16
28			4		8		12		15
27			4		8		11		15
26			4		8		11		15
25			4		7		11		14
24			4		7		10		14
23			4		7		10		13
22	**A***	**4**	**4**	**7**	**7**	**10**	**10**	**13**	**13**
21			3		6		9		12
20			3		6		9		11
19			3		6		8		11
18			3		5		8		10
17			3		5		7		9
16	**A**	**3**	**3**	**5**	**5**	**7**	**7**	**9**	**9**
15			2		4		6		8
14			2		4		6		7
13			2		4		5		7
12			2		3		5		6
11			2		3		4		5
10	**B**	**2**	**2**	**3**	**3**	**4**	**4**	**5**	**5**
9			1		2		3		4
8			1		2		3		4
7			1		2		3		4
6			1		2		2		3
5			1		2		2		3
4			1		1		2		2
3			1		1		1		2
2			1		1		1		1
1	**U**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
0			0		0		0		0

Table 4: Number of points per unit grade in a 30-mark Higher unit

Unit		Points per grade ratio							
		1:1		2:1		3:1		4:1	
Raw mark	Grade boundary	Point boundary	Point score	Point boundary	Point score	Point boundary	Point score	Point boundary	Point score
30			5		10		15		20
29			5		10		15		20
28			5		10		14		19
27			5		9		14		18
26			5		9		13		18
25	**A***	**5**	**5**	**9**	**9**	**13**	**13**	**17**	**17**
24			4		8		12		16
23			4		8		12		15
22			4		8		11		15
21			4		7		11		14
20	**A**	**4**	**4**	**7**	**7**	**10**	**10**	**13**	**13**
19			3		6		9		12
18			3		6		9		11
17			3		6		8		11
16			3		5		8		10
15	**B**	**3**	**3**	**5**	**5**	**7**	**7**	**9**	**9**
14			2		4		6		8
13			2		4		6		7
12			2		4		5		7
11			2		3		5		6
10	**C**	**2**	**2**	**3**	**3**	**4**	**4**	**5**	**5**
9			1		2		3		4
8			1		2		3		4
7			1		2		3		4
6			1		2		2		3
5			1		2		2		3
4			1		1		2		2
3			1		1		1		2
2			1		1		1		1
1	**U**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
0			0		0		0		0

Table 5: Number of points per unit grade in a 30-mark Advanced unit

Unit		Points per grade ratio							
		1:1		2:1		3:1		4:1	
raw mark	grade boundary	Point boundary	Point score	Point boundary	Point score	Point boundary	Point score	Point boundary	Point score
30			7		14		21		28
29			7		14		21		27
28			7		14		20		27
27			7		13		20		26
26			7		13		19		25
25	**A***	**7**	**7**	**13**	**13**	**19**	**19**	**25**	**25**
24			6		12		18		24
23			6		12		17		22
22	**A**	**6**	**6**	**11**	**11**	**16**	**16**	**21**	**21**
21			5		10		15		20
20			5		10		14		18
19	**B**	**5**	**5**	**9**	**9**	**13**	**13**	**17**	**17**
18			4		8		12		16
17			4		8		11		14
16	**C**	**4**	**4**	**7**	**7**	**10**	**10**	**13**	**13**
15			3		6		9		12
14			3		6		8		10
13	**D**	**3**	**3**	**5**	**5**	**7**	**7**	**9**	**9**
12			2		4		6		8
11			2		4		5		6
10	**E**	**2**	**2**	**3**	**3**	**4**	**4**	**5**	**5**
9			1		2		3		4
8			1		2		3		4
7			1		2		3		3
6			1		2		2		3
5			1		2		2		3
4			1		1		2		2
3			1		1		1		2
2			1		1		1		1
1	**U**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
0			0		0		0		0

Determining principal learning grade boundaries

The size of all Foundation, Higher and Advanced principal learning units are multiples of 30 guided learning hours. This produces principal learning qualifications comprising 8 x 30GLH units at Foundation (8 x 30 = 240GLH), 14 x 30GLH units at Higher (420GLH) and 18 x 30GLH units at Advanced (540GLH). Taking the points per grade values from Table 2 above, the following rubrics were used to calculate principal learning aggregated boundaries and determine outcomes in initial modelling of the 1, 2, 3 and 4 points per grade schemes. For example, an Advanced principal learning qualification comprises 540GLH with an equivalent of 18 30GLH units. Using the one point per grade option, the maximum available principal learning points is

126 (= 7 x 18), as is the A* boundary[11]; the A boundary is 108 (= 6 x 18); B is 90 (= 5 x 18); and so forth.

To illustrate, assume a candidate completes an Advanced principal learning qualification comprised of six units of 90GLH. If awarded the following unit grades: A, A*, B, C, C and B, this candidate would receive a total unit point score of 31 (= 6+7+5+4+4+5). Applying the unit GLH weighting of 3 (= 90/30) results in an overall principal learning score of 93 (= 31 x 3) and, given the above B boundary of 90, a final principal learning grade of B. The same principle for calculating aggregated boundaries was applied to Foundation and Higher levels, with Table 6 showing the principal learning aggregated grade boundaries for all levels and points per unit grade options.

Table 6: Principal learning qualification grade boundaries by points per unit grade, at Foundation, Higher and Advanced levels

Unit points/grade			Principal learning grade boundary					
	ratio	Max	A*	A	B	C	D	E
Advanced	1:1	126 (7x18)	126	108	90	72	64	36
	2:1	252 (14x18)	234	198	162	126	90	54
	3:1	378 (21x18)	342	288	234	180	126	72
	4:1	504 (28x18)	450	378	306	234	162	90
Higher	1:1	70 (5x14)	70	56	42	28		
	2:1	140 (10x14)	126	98	70	42		
	3:1	210 (15x14)	182	140	98	56		
	4:1	280 (20x14)	238	182	126	70		
Foundation	1:1	32 (4x8)	32	24	16			
	2:1	64 (8x8)	56	40	24			
	3:1	96 (12x8)	80	56	32			
	4:1	128 (16x8)	104	72	40			

[11] Note that using a one point per grade scheme results in a situation whereby the overall A* boundary = Maximum available points. Therefore, only candidates who achieve A* in all of their units will receive an overall A*, which clearly would exacerbate the effects of aggregation on limiting the number of candidates receiving an A* grade at qualification level.

The above rules were then applied to the generated dataset in a range of scenarios with varying combinations of unit weightings, boundaries and outcomes across the three levels and the four points per grade options. In terms of setting unit grade boundaries prior to aggregation, top (A*) and bottom (B, C or E) unit boundaries were set manually and intervening boundaries were interpolated. At levels 1, 2 and 3, a number of unit weighting combinations were modelled and for each combination, two top and bottom boundary scenarios were set.

The first set A* at unit level such that the unit cumulative percentage outcome averaged around 10 per cent, with the bottom boundary (B, C or E) averaging approximately 70 per cent. The second scenario had A* cumulative percentage set at an average of around 20 per cent or higher, with the bottom boundary set at approximately 80 per cent. Setting the top boundary such that over 20 per cent of candidates achieved the top grade at unit level illustrated the effects of providing some compensation at unit level for aggregation effects arising from the aggregation of units at qualification level.

Given the large number of scenarios modelled, only a selection of outcomes is presented to illustrate the effects of aggregation upon principal learning outcomes. It is apparent from Tables 7, 9 and 11, which have unit level A* cumulative percentage outcome averaging around 10 per cent, that the aggregation effects are striking, particularly at the Advanced level (see Table 11).

Table 7: Foundation 4 x 60GLH unit boundaries, unit cumulative percentage outcomes and principal learning cumulative percentage outcomes

Unit grade boundaries

	Unit 1	Unit 2	Unit 3	Unit 4
Max.	60	60	60	60
A*	55	56	57	52
A	44	43	43	42
B	33	31	30	32

Unit cumulative % outcomes

	Unit 1	Unit 2	Unit 3	Unit 4
A*	9.5	6.6	5.4	13.9
A	36.1	38.5	39.8	41.7
B	68.6	75.9	74.8	72.6

Principal learning cumulative % (4 x 60GLH units aggregated)

	Points per grade ratio			
	1:1	2:1	3:1	4:1
A*	0.0	0.8	1.5	2.1
A	19.7	29.4	33.7	36.5
B	66.4	76.3	79.0	80.5

Table 8 below presents the same Foundation model dataset shown in Table 7 above, but with A* unit boundaries set such at such a high level that the average unit cumulative percentage at A* is approximately 31 per cent (approximately 83 per cent for B). Although extreme, this example of unit level allowance for aggregation effects resulted in aggregated principal learning cumulative percentage outcomes that are possibly more in line with what might be found in other existing qualifications.

Table 8: Foundation 4 x 60GLH unit grade boundaries, unit cumulative percentage outcomes and principal learning cumulative percentage outcomes (with high unit A* cumulative percentage)

Unit raw mark grade boundaries

	Unit 1	Unit 2	Unit 3	Unit 4
Max.	60	60	60	60
A*	47	48	47	41
A	37	37	36	34
B	28	26	25	27

Unit cumulative % outcomes

	Unit 1	Unit 2	Unit 3	Unit 4
A*	28.1	24.6	28.1	45.1
A	58.2	60.0	60.3	66.5
B	81.7	85.0	84.2	82.3

Principal learning cumulative % (4 x 60GLH units aggregated)

	Points per grade ratio			
	1:1	2:1	3:1	4:1
A*	5.1	13.0	15.5	16.7
A	52.1	59.5	62.7	63.9
B	81.6	88.4	89.4	90.4

Tables 9 and 10 present the modelling outcomes at the Higher level. The first example (Table 9) has A* cumulative percentages at unit level set at around an average of 10 per cent, with C averaging about 73 per cent. It is apparent that no candidates would achieve an A* in this example. The results shown in Table 10 have A* unit boundaries set at a level that produces an average unit cumulative percentage at A* of approximately 34 per cent (approximately 83 per cent for C). Although extreme, this example of unit level allowance for aggregation effects resulted in aggregated principal learning cumulative percentage outcomes that more closely resemble outcomes seen in existing qualifications that use a similar grading structure and nomenclature.

Table 9: Higher 7 x 60GLH unit grade boundaries, unit cumulative percentage outcomes and principal learning cumulative percentage outcomes (with low unit A* cumulative percentage)

Unit grade boundaries

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7
Max.	60	60	60	60	60	60	60
A*	55	56	57	52	54	52	55
A	47	47	48	45	46	45	46
B	40	39	39	38	39	38	38
C	33	31	30	32	32	32	30

Unit cumulative % outcomes

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7
A*	9.5	6.6	5.4	13.9	9.6	14.6	9.0
A	28.1	27.0	24.4	31.8	31.9	34.1	29.8
B	50.2	52.9	51.4	55.5	52.4	58.0	57.4
C	68.6	75.9	74.8	72.6	71.2	72.3	76.2

Principal learning cumulative % (7 x 60GLH units aggregated)

	Points per grade ratio			
	1:1	2:1	3:1	4:1
A*	0.0	0.0	0.1	0.2
A	8.3	17.5	20.3	21.8
B	45.7	51.9	55.3	56.0
C	71.7	80.4	83.3	84.1

Table 10: Higher 7 x 60GLH unit grade boundaries, unit cumulative percentage outcomes and principal learning cumulative percentage outcomes (with high unit A* cumulative percentage)

Unit raw mark grade boundaries

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7
Max.	60	60	60	60	60	60	60
A*	47	48	47	41	46	40	47
A	40	40	39	36	39	35	39
B	34	33	32	31	33	31	32
C	28	26	25	27	27	27	25

Unit cumulative % outcomes

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7
A*	28.1	24.6	28.1	45.1	31.9	51.7	27.7
A	50.2	48.8	51.4	61.7	52.4	66.2	53.5
B	65.7	71.3	70.2	74.9	69.2	74.2	72.5
C	81.7	85.0	84.2	82.3	81.4	81.5	84.6

Principal learning cumulative % (7 x 60GLH units aggregated)

	Points per grade ratio			
	1:1	2:1	3:1	4:1
A*	0.8	7.8	11.2	13.2
A	43.7	50.7	52.7	53.8
B	69.1	74.1	75.7	76.1
C	86.0	91.4	92.7	93.2

Tables 11 and 12 below present the modelling outcomes for the Advanced level. As per the previous models, the first example (Table 11) has A* cumulative percentages at unit level set at around an average of 13 per cent, with E averaging about 68 per cent. It is apparent that no candidates would achieve an A* in this example, in fact very few would achieve an A grade at the principal learning qualification level.

The results shown in Table 12 have A* unit boundaries set at such a level that the average unit cumulative percentage at A* is approximately 30 per cent (approximately 75 per cent for E). Even with such an extreme example of unit level allowance for aggregation effects, aggregated principal learning cumulative percentage outcomes are relatively low. Note that, as regression effects were most severe at the Advanced level principal learning, further exploratory modelling conducted to date has focused mainly on that level.

Table 11: Advanced 4 x 90, 3 x 60GLH unit grade boundaries, unit cumulative percentage outcomes and principal learning cumulative percentage outcomes (with low unit A* cumulative percentage)

Unit raw mark grade boundaries

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7
Max.	90	90	90	90	60	60	60
A*	83	81	84	79	55	53	55
A	76	74	76	73	50	48	49
B	69	67	69	67	45	43	44
C	63	61	62	61	40	39	39
D	57	55	55	56	35	35	34
E	51	49	48	50	30	31	29

Unit cumulative % outcomes

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7
A*	8.0	11.6	7.4	12.3	15.8	20.6	15.5
A	17.3	20.1	18.8	22.5	27.9	31.3	31.2
B	29.8	34.4	32.3	35.2	38.1	40.9	42.2
C	43.6	47.9	45.9	46.7	48.3	48.9	51.4
D	58.6	61.2	60.4	56.8	57.1	55.6	58.6
E	69.3	72.0	73.4	69.6	65.0	63.6	66.8

Principal learning cumulative % (4 x 90, 3 x 60GLH units aggregated)

	Points per grade ratio			
	1:1	2:1	3:1	4:1
A*	0.0	0.0	0.0	0.0
A	1.1	1.7	2.1	2.5
B	10.6	15.3	18.0	19.3
C	35.5	42.4	45.0	46.9
D	62.3	71.2	73.9	76.0
E	88.9	94.3	96.2	96.4

Table 12: Advanced 4 x 90, 3 x 60GLH unit grade boundaries, unit cumulative percentage outcomes and principal learning cumulative percentage outcomes (with high unit A* cumulative percentage)

Unit raw mark grade boundaries

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7
Max.	90	90	90	90	60	60	60
A*	72	70	73	68	47	48	47
A	66	64	67	63	43	43	42
B	61	59	61	58	39	38	37
C	56	54	55	53	35	33	32
D	51	49	49	49	31	29	28
E	46	44	43	45	27	25	24

Unit cumulative % outcomes

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7
A*	23.9	28.1	23.5	32.7	33.8	31.3	35.5
A	36.2	39.5	36.4	42.4	42.9	40.9	45.8
B	49.8	52.3	46.8	52.8	50.7	51.4	54.2
C	60.6	63.1	60.4	63.1	57.1	60.6	61.9
D	69.3	72.0	71.6	71.5	63.4	66.0	68.0
E	76.5	80.0	80.5	77.3	68.4	70.5	73.1

Principal learning cumulative % (4 x 90, 3 x 60GLH units aggregated)

	Points per grade ratio			
	1:1	2:1	3:1	4:1
A*	0.3	1.1	1.4	2.0
A	8.1	13.2	15.8	16.6
B	34.2	42.0	43.5	45.1
C	59.9	65.7	68.8	70.0
D	81.4	86.8	88.7	89.4
E	95.9	98.0	99.0	99.0

It was apparent from the modelling results that aggregation effects were striking, particularly at the Advanced level, with a marked reduction in the number of candidates achieving the top grade at qualification level compared with the average number of candidates achieving that grade at unit level.

Table 13 below shows cumulative percentage outcomes for each of seven units (4 x 90, 3 x 60GLH units) and outcomes following weighting and aggregation to qualification level for one, two, three and four points per grade schemes. Aggregation effects were so severe that, despite the fact that unit level A* cumulative percentage outcome averaged over 13 per cent, no candidates achieved A* and only about 2 per cent achieved grade A at qualification level. Similar patterns were evident at levels 1 and 2, with the setting of unit A* at around 10 per cent resulting in fewer than 2 per cent of candidates achieving an overall A* grade (approximately 30 per cent at grade A and 75 per cent at B) at Foundation level. Less than 1 per cent of candidates achieved A* overall (approximately 17 per cent at grade A, 50 per cent at B, 80 per cent at C) at Higher qualification level. Aggregation effects were largely uniform

regardless of the number of units aggregated, which varied between four and ten units.

Table 13: Advanced 4 x 90, 3 x 60GLH unit and principal learning cumulative percentage outcomes (with low unit A* cumulative percentage)

Unit cumulative % outcomes

	Unit 1	Unit 2	Unit 3	Unit 4	Unit 5	Unit 6	Unit 7
A*	**8.0**	**11.6**	**7.4**	**12.3**	**15.8**	**20.6**	**15.5**
A	17.3	20.1	18.8	22.5	27.9	31.3	31.2
B	29.8	34.4	32.3	35.2	38.1	40.9	42.2
C	43.6	47.9	45.9	46.7	48.3	48.9	51.4
D	58.6	61.2	60.4	56.8	57.1	55.6	58.6
E	**69.3**	**72.0**	**73.4**	**69.6**	**65.0**	**63.6**	**66.8**

Principal learning cumulative % (4 x 90, 3 x 60GLH units aggregated)

	Points per grade ratio			
	1:1	2:1	3:1	4:1
A*	**0.0**	**0.0**	**0.0**	**0.0**
A	1.1	1.7	2.1	2.5
B	10.6	15.3	18.0	19.3
C	35.5	42.4	45.0	46.9
D	62.3	71.2	73.9	76.0
E	**88.9**	**94.3**	**96.2**	**96.4**

To explore ways of minimising the severe regression effects, it was decided to apply a different method of converting unit grades to points. Consequently, a mapping method was developed, which is less UMS-like and uses a look-up table approach. Rather than allocating a point to each unit grade, multiplying a unit weighting factor and then aggregating, this approach combined the point allocation and unit weighting process within the look-up table. Table 14 below shows how this was applied to Advanced principal learning units.

Table 14: Look-up table for Advanced principal learning unit grades, points and weightings

Unit grade	30GLH unit points	60GLH unit points	90GLH unit points	120GLH unit points
A*	6	12	18	24
A	5	11 10	17 16 15	23 22 21 20
B	4	9 8	14 13 12	19 18 17 16
C	3	7 6	11 10 9	15 14 13 12
D	2	5 4	8 7 6	11 10 9 8
E	1	3 2	5 4 3	7 6 5 4
U	0	1 0	2 1 0	3 2 1 0

Using this method, principal learning boundaries were set such that an aggregated grade boundary is equivalent to the total of all unit points at that grade. For example, a candidate must achieve the equivalent point score of getting all As at unit level to achieve a principal learning overall A grade. The following example shows the principal learning grade boundaries for an Advanced principal learning comprising four 90GLH units and three 60GLH units. Note that this scheme results in a situation whereby the overall A* boundary equals the maximum available points (as does the one point per grade scheme used in preceding modelling). Therefore, only candidates who achieve A* in all of their units will receive an overall A*, which clearly would exacerbate the effects of aggregation on limiting the number of candidates receiving an A* grade at qualification level.

Table 15: Advanced principal learning grade boundaries comprising four 90GLH units and three 60GLH units

Unit grade	(4 x90GLH points)	+	(3x60GLH points)	=			Principal learning boundary
Max.	(4x18)	+	(3x12)	=	72+36	=	108
A*	(4x18)	+	(3x12)	=	72+36	=	108
A	(4x15)	+	(3x10)	=	60+30	=	90
B	(4x12)	+	(3x8)	=	48+24	=	72
C	(4x9)	+	(3x6)	=	36+18	=	54
D	(4x6)	+	(3x4)	=	24+12	=	36
E	(4x3)	+	(3x2)	=	12+6	=	18

To model this method of determining principal learning boundaries, the above Advanced principal learning datasets as shown in Table 11 (relatively severe unit A* cumulative percentage, average approximately 13 per cent) and Table 12 (relatively lenient unit A* cumulative percentage, average approximately 30 per cent) were used. Three A* scenarios were used: principal learning A* set at the maximum (= 108, from above points table), principal learning A* set at the midway point between A and A* grade boundaries (= 96), and A* set at the A boundary (= 90).

The principal learning E boundary was kept constant at 18 points for all scenarios, as were B to D boundaries in scenarios one and two. For the third scenario, the intervening B to D boundaries were interpolated to accommodate the necessary shift in the A boundary. Tables 16 and 17 below show the principal learning aggregated outcomes for the relatively severe unit A* and relatively lenient unit A* models, respectively. The right hand section of each table repeats principal learning cumulative percentage outcomes taken from Tables 11 and 12 above purely for comparative purposes.

Table 16: Advanced 4 x 90, 3 x 60GLH principal learning cumulative percentage outcomes (with severe unit A* cumulative percentage, max = 108)

							Points per grade ratio			
Grade	Boundary	Cumulative%	Boundary	Cumulative%	Boundary	Cumulative%	1:1	2:1	3:1	4:1
A*	108	0.0	96	0.8	90	1.7	0.0	0.0	0.0	0.0
A	90	1.7	90	1.7	75	11.9	1.1	1.7	2.1	2.5
B	72	15.0	72	15.0	60	34.2	10.6	15.3	18.0	19.3
C	54	43.8	54	43.8	46	56.9	35.5	42.4	45.0	46.9
D	36	72.7	36	72.7	32	80.1	62.3	71.2	73.9	76.0
E	18	95.8	18	95.8	18	95.8	88.9	94.3	96.2	96.4

Table 17: Advanced 4 x 90, 3 x 60GLH principal learning cumulative percentage outcomes (with lenient unit A* cumulative%, max = 108)

							Points per grade ratio			
Grade	Boundary	Cumulative%	Boundary	Cumulative%	Boundary	Cumulative%	1:1	2:1	3:1	4:1
A*	108	0.3	96	5.4	90	11.5	0.3	1.1	1.4	2.0
A	90	11.5	90	11.5	75	36.1	8.1	13.2	15.8	16.6
B	72	41.3	72	41.3	60	59.0	34.2	42.0	43.5	45.1
C	54	66.4	54	66.4	46	77.2	59.9	65.7	68.8	70.0
D	36	87.9	36	87.9	32	91.0	81.4	86.8	88.7	89.4
E	18	98.7	18	98.7	18	98.7	95.9	98.0	99.0	99.0

As can be seen in Tables 16 and 17, using the mapped points table provides a method of adjusting aggregated grade boundaries that may be better understood and defensible in that it resembles a system that has been used successfully for many years. However, it is apparent that it does not overcome the problem of very few candidates achieving A* at the principal learning level due to aggregation effects. There were only two scenarios that produced principal learning A* cumulative percentages that resemble outcomes seen in existing qualifications that use a similar grading structure and nomenclature: 5.4 per cent with A* set midway between maximum point score and the A boundary, and 11.5 per cent with A* set at the numerical equivalent of the A boundary. However, both of these sets of outcomes arose only with very lenient A* boundaries set at unit level.

Additional modelling

Number of points within the U grade

In following the advice of the Diploma Grading Project Group, all of the above models have allocated the full range of available points within the U grade at unit level. That is, 0–1, 0–2, 0–3 and 0–4 within the unit level U grade in the 1, 2, 3 and 4 points per grade scenarios, respectively.

A number of additional scenarios were modelled to determine the effects of allocating either one point or zero point for a U grade. Table 18 on the next page shows the resultant aggregated B, C and E grade cumulative percentages for a number of examples at Foundation, Higher and Advanced principal learning. Corresponding values are shown for scenarios that used the full range of available points within U at unit level. It is apparent that varying the number of points available with the U grade at unit level has little effect on aggregated cumulative percentages at the Advanced principal learning level. However, as a function of the fewer grades available within the Higher (4 grades) and Foundation (3 grades) qualifications, there is a marked reduction in the number of candidates passing. For example, at Foundation level in the second example's three points per grade option, the number of candidates achieving a B grade drops from 93.0 per cent to 81.1 per cent when a unit grade of U is allocated zero point.

Table 18: Principal learning B, C and E grades boundaries by points per unit grade, at Foundation, Higher and Advanced levels (all, 1 or 0 points available within unit U grade)

Level	Units x GLH	Grade	Points avail. @ U	Cumulative % Points per grade ratio 1:1	2:1	3:1	4:1
Foundation	4x60	B	All	81.6	88.4	89.4	90.4
			1	81.6	83.5	84.4	84.6
			0	75.8	79.7	81.9	82.8
	6x30, 1x60	B	All	82.1	90.8	93.0	94.8
			1	82.1	84.9	86.0	86.7
			0	72.1	78.3	81.1	83.8
Higher	7x60	C	All	86.0	91.4	92.7	93.2
			1	86.0	87.3	87.7	88.4
			0	80.0	84.8	86.0	86.7
	6x30, 4x60	C	All	93.4	97.5	98.1	98.6
			1	93.4	94.7	95.5	95.7
			0	85.6	92.1	93.8	94.5
Advanced	9x60	E	All	90.9	94.0	94.7	95.3
			1	90.9	91.3	91.4	91.6
			0	86.5	89.6	90.7	90.7
	4x90, 3x60	E	All	95.9	98.0	99.9	99.0
			1	95.9	96.4	96.7	96.7
			0	89.0	94.5	95.4	95.6

Generalisability of results of modelling created datasets

Given that all of the modelling conducted was upon pseudo-units created from generated data derived from Applied GCE health and social care, it is questionable whether results could be generalised to actual Diploma awarding data from the different lines of learning. Consequently, a dataset was drawn from the AQA Applied GCE ICT AS June 2007 awards. Given the relatively small cohort and large number of optional units available within the subject, it was not possible to source a sample (taking a comparable number of units to that used in the modelling) that would be large enough to produce meaningful results. Therefore, a dataset was built that comprised 1,000 randomly chosen (from approximately 1,900 on award) AS single award candidates who had certificated on three units. The correlations of these units (0.53, 0.55 and 0.65) were similar to those of the pseudo-units (0.45 to 0.53), as were the skewness statistics (-0.06 to -0.31 vs. -0.47).

Two examples were produced whereby principal learning point scores were aggregated as per the modelling here using the two points per grade scenario, with A* and E boundaries set manually and intervening boundaries interpolated. The first example (Table 19) had the unit A* boundaries set such that the modelled A grade cumulative percentages approximated the AS unit level A grade cumulative percentages on award (ie modelled A cumulative% = awarded A cumulative%). The second example (Table 20) set the unit A* boundaries such that the modelled A* grade cumulative percentages (vs. the A grade in the first example) approximated the

AS unit level A grade cumulative percentages (ie modelled A* cumulative% = awarded A cumulative%). The modelled unit E grade boundaries were kept constant and set such that cumulative percentages approximated those of the AS unit level E grade cumulative percentages. Intervening grade boundaries were interpolated and cumulative percentages were left as is. For comparative purposes, the results below include the AS subject outcomes on award for grades A to E.

Table 19: June 2007 Applied GCE ICT AS single award aggregated using two points per grade option, with modelled unit A cumulative% ≈ award A cumulative%

	Cumulative %				
Grade	Unit 1	Unit 2	Unit 3	Principal learning	AS subject at award
A*	0.4	2.2	3.8	0.0	–
A	2.6	7.1	11.6	2.2	(5.2)
B	8.4	17.1	23.4	9.5	(17.6)
C	19.7	31.4	39.9	24.0	(35.7)
D	34.2	50.1	57.7	45.4	(54.5)
E	55.8	67.2	73.5	75.6	(73.9)

Table 20: June 2007 Applied GCE ICT AS single award aggregated using two points per grade option, with modelled unit A* cumulative% ≈ award A cumulative%

	Cumulative %				
Grade	Unit 1	Unit 2	Unit 3	Principal learning	AS subject at award
A*	2.1	7.1	11.6	0.9	–
A	6.7	15.7	21.4	7.3	(5.2)
B	13.7	26.7	33.5	18.7	(17.6)
C	24.6	40.3	48.5	34.7	(35.7)
D	38.8	53.1	60.3	51.5	(54.5)
E	55.8	67.2	73.5	77.2	(73.9)

Although only three units were aggregated in the above examples, the effects of aggregation are nevertheless apparent. This, in conjunction with the similarities between the generated and operational data, provides clear evidence that the results of modelling reported here can be viewed with some confidence, despite the fact that the datasets were generated 'manually' and derived from one subject rather than sourced from operational data from multiple subjects.

Effects of introducing a hurdle to pass a minimum number of units

The Diploma Grading Project Group rejected the option of requiring candidates to pass each unit or a requisite number of units in the principal learning constituent, as their modelling work found that this hurdle reduced the pass rate at the lower grades by several percentage points. The DASG decided to check that this would indeed be

the case within the current modelling work. Consequently, an example was modelled using an Advanced principal learning qualification comprising four 90GLH and three 60GLH units. Requiring candidates to pass all but one, two or three units incrementally reduced the pass rate by over five percentage points. Further increases in the number of units that candidates were required to pass had a dramatic effect, to the extent that if all seven units had to be passed, only 13.3 per cent of candidates would achieve a principal learning qualification. This aspect of the modelling was not taken any further.

Effects on aggregation effects of using a full Uniform Mark Scale

The Diploma Grading Project Group also rejected the option of using a full Uniform Mark Scale (UMS) in aggregating principal learning units. As with the above issue of introducing a hurdle, the DASG decided to check the effects on aggregation of using a UMS scheme with the current modelling. A UMS scheme was created based on current practices with boundaries of A* = 90%, A = 80%, B = 70%, C = 60%, D = 50% and E = 40% of UMS points, at both unit and qualification level.

Modelling with the same 7-unit Advanced principal learning dataset used in the above analyses of hurdle effects (with average unit A* set at around 10 per cent) produced the following principal learning cumulative percentage outcomes: A* = 0.1%, A = 6.9%, B = 32.9%, C = 64.0%, D = 86.7% and E = 96.9%. This pattern is very similar to the outcomes evident throughout the current modelling using the different points schemes and, given that using a full UMS provides no clear benefit in terms of aggregation effects, this aspect of the modelling was not carried further.

Effects of aggregating principal learning and project constituents to create a Diploma grade

The Diploma Grading Project Group recommended that there be no hurdle requirement for both the principal learning constituent and the project to be passed for a candidate to be awarded a Diploma grade. Therefore, using the same process as the Diploma Grading Project Group, a project grade was aggregated with principal learning unit results to produce an overall Diploma grade.

For the purposes of modelling therefore the project was essentially considered to be another unit to aggregate into a Diploma grade. The same principles of aggregating were applied, with the project constituent simply weighted accordingly and aggregated with existing principal learning units. Given that the examples using an Advanced principal learning constituent exhibited the most severe negative effects of aggregation, a 120GLH unit was aggregated with four 90GLH and three 60GLH Advanced principal learning units to determine the aggregation effects. An example using a low unit A* cumulative percentage gave the following: A* = 0.0%, A = 1.6%, B = 14.1%, C = 41.6%, D = 72.4% and E = 94.7%.

It was clear that outcomes did not differ appreciably from previous modelling examples, indicating that the addition of further units, whether as principal learning units or a project, did not exacerbate the already considerable effects of aggregation.

Effects of using a mapped points model

It was clear that the grade outcome issues seem to be most acute at A* in the Advanced level principal learning and the mapping model described above was revisited to explore ways of alleviating this problem. Proceeding on this basis, the Advanced principal learning grades could be considered such that the Distinction grade is equivalent to the A and A* grade, Merit to C and B, and Pass to E and D. The points assigned to each grade were kept consistent with other points-based models (eg OCR Nationals and BTEC grading systems): Pass = 1 point, Merit = 2 points and Distinction = 3 points. For every 30GLH principal learning unit: E = 2 points, C = 4 points and A = 6 points (with D = 3, B = 5 and A* = 7).

Aggregated grade boundaries were also in line with existing schemes. The minimum requirement for each overall grade boundary was set at the points score equivalent to a pass in all units and achieving the specified grade in at least two-thirds of the units. To achieve a Distinction overall, a candidate would have to pass all units with two-thirds of them at Distinction level. Given that an Advanced principal learning qualification is 540GLH and thereby equivalent to 18 30GLH portions, applying this scheme to an Advanced principal learning qualification results in:

- an overall grade A requiring a minimum of 12 As plus 6 Es, or the equivalent points
- an overall grade C requiring a minimum of 12 Cs plus 6 Es, or equivalent points
- an overall grade E requiring a minimum of 18 Es, or the equivalent points.

Hence, the requirement using this 0–7 scale to be awarded a grade E is 36 points (= 18 x 2), C is 60 (= [12 x 4] + [6 x 2]) and A is 84 points (= [12 x 6] + [6 x 2]). Interpolating gives D at 48 points and B at 72, and A* can be extrapolated to 96 points. The grade/points/grade conversion scheme is presented in Table 21 below.

Table 21: Conversion table for aggregating unit points and grades to principal learning grades and boundaries, derived from the mapping model

Unit grade	Unit points				Principal learning points	Principal learning grade
Max.	7	18xA*s	=	18x7 =	126	Max.
A*	7	12xA*s, 6xEs	=	(12x7)+(6x2) =	96	A*
A	6	12xAs, 6xEs	=	(12x6)+(6x2) =	84	A
B	5	12xBs, 6xEs	=	(12x5)+(6x2) =	72	B
C	4	12xCs, 6xEs	=	(12x4)+(6x2) =	60	C
D	3	12xDs, 6xEs	=	(12x3)+(6x2) =	48	D
E	2	12xEs, 6xEs	=	(12x2)+(6x2) =	36	E

Modelling was conducted using the above scheme on an Advanced principal learning qualification comprising four 90GLH and three 60GLH units, with A* cumulative percentages at unit level set at around an average of 7.6 per cent and E averaging about 85 per cent. Cumulative percentage outcomes were as follows: A* = 6.7%, A = 24.0%, B = 45.6%, C = 69.5%, D = 81.4% and E = 92.6%. This showed that the relatively straightforward style of points system using a 2/3–1/3 rule gives reasonable numbers of candidates achieving A* at the aggregated level. Unfortunately, it is possible for a candidate to get an A* overall in this scenario without achieving a single A* at unit level (eg C, B, A, A, B, A and A). This effect was also apparent at the A and B boundaries.

A similar scheme was applied to model outcomes for levels 1 and 2. At level 2, it was possible for a candidate to get an A* overall without achieving a single A* at unit level. This effect was not evident at any other level 2 boundary or at any boundary at level 1. To counteract this, modelling was then conducted with overall grade boundaries set at one point above the adjacent lower boundary. For example, the minimum points required to achieve an A* in principal learning overall was set at one point higher than the equivalent of achieving As in all units. Essentially, a grade of A* could only be achieved if there was at least one unit level A* in the candidate's unit grade profile, or the points equivalent. While this counteracted the problem at the higher grades, it created other issues at the lower end.

The overall E grade boundary would be set at the equivalent points score for passing all units. For example, assigning one point for each of 18 30GLH units at grade E places the overall E boundary at 18. The overall D grade boundary would then be set at one point above the adjacent lower boundary, that is, the E boundary plus one (eg 18 + 1 = 19). Clearly, this would not provide discrimination at the lower grades and was therefore impractical. As an alternative, this scheme was revised such that the E

boundary was set at the equivalent of all units at E, the A* was set at all units at A plus one point, and the intervening boundaries A through D were then interpolated.

Using this as a basis for determining aggregated ground boundaries and to overcome the problem of aggregation effects, consideration was then given to applying greater weighting to A* at unit level by introducing a maximum unit level point score one point greater than that for A*. For example, in a 30GLH level 3 unit: E = 1 point, D = 2 points, C = 3 points, B = 4 points, A = 5 points and A* = 6 to 7 points (ie, Max. = 7). A level 2 unit would give: C = 1 point, B = 2 points, A = 3 points, A* = 4 to 5 points. A level 3 unit would give: B = 1 point, A = 2 points and A* = 3 to 4 points. Results of modelling this scenario in levels 1 through 3 are presented below in Tables 22 to 24.

Table 22: Advanced principal learning cumulative percentage outcomes, 6 x 90GLH units (18 x 30GLH multiples = 540); principal learning A* = all unit As + 1, E = all unit Es, A–D boundaries interpolated

Unit			Principal learning			
Grade	Points	Avg. Cumulative %	Points	Boundary	Grade	Cumulative %
Max	7		(18x7=)	126		
A*	6	7.6	(18x5+1=)	91	A*	2.2
A	5			76	A	14.4
B	4			61	B	39.3
C	3			46	C	61.9
D	2			32	D	79.3
E	1	85.7	(18x1=)	18	E	92.0
U	0				U	100.0

Table 23: Higher principal learning cumulative percentage outcomes, 7 x 60GLH units (14 x 30GLH multiples = 420); PL A* = all unit As + 1, C = all unit Cs, A–B boundaries interpolated

Unit			Principal learning			
Grade	Points	Avg. Cumulative %	Points	Boundary	Grade	Cumulative %
Max	5		(14x5=)	70		
A*	4	15.1	(14x3+1=)	43	A*	6.9
A	3			33	A	32.0
B	2			23	B	74.0
C	1	84.0	(14x1=)	14	C	95.6
U	0				U	100.0

Table 24: Foundation principal learning cumulative percentage outcomes, 1 x 60 and 6 x 30GLH units (6 x 30GLH multiples = 240); principal learning A* = all unit As + 1, B = all unit Bs, A boundary interpolated

Unit		
Grade	Points	Avg. Cumulative %
Max	4	
A*	3	15.0
A	2	
B	1	83.7
U	0	

Principal learning			
Points	Boundary	Grade	Cumulative %
(8x4=)	32		
(8x2+1=)	17	A*	18.5
	12	A	54.6
(8x1=)	8	B	83.0
		U	100.0

It can be seen that, while this approach reduced aggregation effects at Advanced and Higher principal learning, it over compensated at the Foundation level. There were a greater number of candidates at principal learning A* than the average unit-level outcome.

At this point, a dataset was provided that had been modelled using a very similar grading scheme and that showed much reduced aggregation effects. For example, one model had A* approaching 8 per cent without major adjustments to the overall grade boundaries and without interpolating. It used the same level 3 points per unit grade scheme shown in Table 22 above, that is: E = 1, D = 2, C = 3, B = 4, A = 5, A* = 6 and Max. = 7 for a 30GLH unit. Consequently, some comparative modelling was conducted using a random sub-sample of 1000 cases (from 2824) taken from the BTEC dataset, comparing this to the 1000 cases in the existing level 3 pseudo dataset. Six units were used, each weighted at 90GLH, with unit-level details shown in Table 25 below.

Table 25: Unit level characteristics for level 3 BTEC and pseudo datasets

BTEC						
Unit	**1**	**2**	**3**	**4**	**5**	**6**
Max.	100	100	100	100	100	100
Top mark	100	100	100	100	100	100
Lowest mark	26	21	34	7	1	11
Mean	74	72.6	73.5	67.6	61	67.8
SD	10.8	12.8	12.3	19.4	24.6	17.2
Skew	-0.44	-0.78	0.08	-0.64	-0.37	-0.61

Unit cumulative%	**1**	**2**	**3**	**4**	**5**	**6**
A*	6.2	2.9	8.0	10.3	14.4	7.1
A	30.3	26.0	22.3	27.6	30.7	24.3
B	65.9	59.9	53.0	48.6	41.0	44.9
C	85.0	79.4	82.8	63.1	52.6	63.6
D	94.2	89.6	92.5	72.4	62.2	75.0
E	97.4	96.6	97.3	81.2	71.9	85.3

Pseudo						
Unit	**1**	**2**	**3**	**4**	**5**	**6**
Max.	90	90	90	90	90	90
Top score	89	90	90	89	90	90
Min.	7	1	7	0	1	0
Mean	55.9	55.5	55.9	55.5	55.6	55.8
SD	15.2	15.5	15.6	15.6	16.1	15.5
Skew	-0.20	-0.25	-0.12	-0.28	-0.22	-0.21

Unit cumulative%	**1**	**2**	**3**	**4**	**5**	**6**
A*	14.0	7.3	3.0	4.4	7.4	12.6
A	30.6	22.8	12.7	18.2	18.7	26.2
B	46.5	42.0	29.8	35.1	35.9	44.8
C	62.0	61.1	47.7	54.8	53.3	62.9
D	78.1	76.8	69.4	72.8	70.9	77.5
E	90.1	89.2	86.2	88.3	83.8	90.7

It is apparent from the above table that the units differed substantially between BTEC and pseudo datasets, particularly in terms of the degree of skew and the relative mean marks. The unit correlations also differed between the datasets, with the average BTEC correlation of 0.73 (range 0.64 to 0.89) markedly higher than the pseudo inter-unit correlation of 0.44 (0.41 to 0.49). That the BTEC units exhibited greater variability is likely due to the fact that they are taken directly from 'live' data, rather than generated.

Given that each dataset comprised six units weighted at 90GLH, unit grade points were allocated as shown in the 90GLH column of Table 26 below. The principal learning grade boundaries were determined using the same procedure described above (eg see Table 16), with the only difference to that procedure being the addition of a maximum point score above A*. In this instance, for example, the B principal learning boundary was set at 72 points, with the minimum of six 90GLH units at B equalling 6 x 12 points.

Table 26: Advanced level unit points per grade and principal learning boundaries

Unit	**30GLH**	**60GLH**	**90GLH**	**Principal learning boundaries**
Max.	7	14	21	126
A*	6	12-13	18-20	108
A	5	10-11	15-17	90
B	4	8-9	12-14	72
C	3	6-7	9-11	54
D	2	4-5	6-8	36
E	1	2-3	3-5	18
U	0	0-1	0-2	-

For comparative purposes, unit grade boundaries (A* and E) were then set such that both sets of units had approximately the same average unit outcomes at the A* and E boundaries. Unit point scores were then aggregated and the above principal learning boundaries applied to the BTEC and pseudo datasets. Table 27 below shows the average unit cumulative percentage outcomes and aggregated outcomes for both datasets (see Table 25 above for individual unit outcomes).

Table 27: Average unit cumulative percentage outcomes and aggregated outcomes for Advanced principal learning BTEC and pseudo datasets

Average unit cumulative%		
	BTEC	**Pseudo**
A*	8.2	8.1
A	26.9	21.5
B	52.2	39.0
C	71.1	57.0
D	81.0	74.3
E	88.3	88.1

Principal learning cumulative%		
	BTEC	**Pseudo**
A*	4.7	0.3
A	23.1	8.5
B	48.2	31.1
C	65.6	58.5
D	84.3	83.2
E	96.1	96.9

The above model shows that aggregation effects will vary according to the characteristics of the aggregated units, while reflecting the more severe effects found throughout the current modelling, especially as exhibited at the principal learning A* boundary at level 3. The procedure described above (see Table 26) for determining unit and aggregated grade boundaries was applied to levels 1 and 2, as shown in Table 28 below.

Table 28: Higher and Foundation level unit points per grade and principal learning boundaries

Higher

Unit	**30GLH**	**60GLH**	**Principal learning boundaries**
Max.	5	10	70
A*	4	8-9	56
A	3	6-7	42
B	2	4-5	28
C	1	2-3	14
U	0	0-1	-

Foundation

Unit	**30GLH**	**60GLH**	**Principal learning boundaries**
Max.	4	8	32
A*	3	6-7	24
A	2	4-5	16
B	1	2-3	8
U	0	0-1	-

To determine whether applying the same points per grade schemes to level 1 and 2 would produce similar patterns to that found for level 3, two random sub-samples, each of 1000 cases (from 2824), were drawn from the BTEC dataset. The points schemes (as per Table 28 above) were then applied to the level 1 (1 x 60GLH, 6 x 30GLH) and level 2 (7 x 60GLH) datasets, with the cumulative percentage outcomes presented in Table 29 below.[12]

Table 29: Average unit cumulative percentage outcomes and aggregated outcomes for Higher and Foundation principal learning BTEC datasets

Higher

	Avg. unit cumulative %	Principal learning cumulative %
A*	27.5	12.5
A	56.9	48.2
B	74.6	73.1
C	84.7	90.0

Foundation

	Avg. unit cumulative %	Principal learning cumulative %
A*	27.7	11.1
A	73.1	57.9
B	90.3	90.1

These results confirm that the aggregation effects using the BTEC dataset were uniformly less severe across the three levels, simply as a result of the different characteristics of the BTEC units. More generally, the modelling described in this appendix also confirms that aggregation effects and principal learning cumulative percentage outcomes will vary substantially due to a number of interrelated factors that are, to a large extent, uncontrollable. These factors include:

- variations in the number and weighting of the units to be aggregated
- the inter-unit correlations (ie consistency of candidates' performance across units)
- the number of unit grades
- the number of aggregated grades

[12] The modelling indicated that there could be some slight variation between principal learning aggregated outcomes when comparing principal learning qualifications that comprised different combinations of different unit size. The modelling also indicated that it is possible, although highly unlikely, that a learner could gain the minimum pass for their diploma solely on the basis of their performance on their project or extended project, even if they achieved a U grade in all of their principal learning units. The DASG recommended that both of these issues would need to be revisited when grading scales are reviewed.

- the mapping of raw marks to unit grades
- the mapping of aggregated points to principal learning
- the points per grade scheme that is applied.

With all of this in mind, and taking into account the modelling results described in this appendix, the DASG recommends the scheme outlined in Chapter 4 to allocate points to unit grades and to determine boundaries for the principal learning and Diploma across levels 1, 2 and 3.

Appendix B: Moderation of internally-assessed principal learning units and project qualifications

Common principles and practices

This chapter sets out a number of principles and practices that have been agreed by the awarding bodies and Ofqual to cover the moderation of internally-assessed principal learning units in the Diploma and project qualifications. These principles and practices are intended to be enabling and not to restrict individual awarding bodies from using procedures that go beyond the arrangements described.

It has been agreed that, at least for an initial period, moderation rather than verification will be used. Thus, for a sample of candidates, a moderator will mark work on the same basis as the centre, with the possibility of adjusting the centre's marks for that unit for both sampled and unsampled candidates on the basis of the evidence in the sample. The moderator will not merely decide whether the centre's marking is acceptable or unacceptable.

Throughout this chapter, 'centre' should be taken to mean 'centre or consortium', unless specified otherwise.

This chapter should be read in conjunction with the *Regulatory arrangements for component and Diploma awarding bodies* (published August 2008, Ofqual/08/3761).

1. Instructions and guidance for centres/consortia

i. For principal learning, the awarding body provides training and guidance for domain assessors in task-setting, task-marking and internal standardisation[13].

ii. The awarding body provides parameters and guidance for task-setting and specifies the conditions under which candidates should undertake internally-assessed work.

iii. Each candidate must carry out sufficient work under direct supervision to enable the teacher/internal assessor to authenticate the work as the candidate's own.

iv. The Diploma regulatory arrangements require centres 'to standardise internal assessment across different assessors and assessment sites'. Therefore, within each principal learning unit and project qualification, marking must be standardised. Also, all principal learning units for a level/line of learning must be marked to the same general standard. (See also section 5 below.) Centres must

[13] Similar training is provided with respect to project qualifications, but this is not necessarily directed at domain assessors.

provide a written declaration, which confirms that internal standardisation has been carried out.

v. Centres must provide a written declaration for each candidate that confirms that the candidate's work was conducted under the conditions laid down by the specification and that they are satisfied that the work produced is solely that of the candidate. A record must be kept of any assistance provided, which is outside the normal teaching given to all candidates, and this assistance must be taken into account when the work is assessed.

vi. Centres must obtain from each candidate a signed declaration that authenticates the work produced for internal assessment as the candidate's own.

vii. A mark of zero or absent will be implemented where either the centre or the candidate is unable to confirm the authenticity of the work produced for internal assessment.

2. Principles of moderation

i. The awarding body appoints a team of moderators for each level/line of learning. For principal learning, these moderators should have appropriate expertise in the line of learning as well as in assessment. Each team of moderation is led by a principal moderator, whose responsibilities are listed at the end of this chapter.

ii. The awarding body specifies a deadline by which marks must be formally submitted. The awarding body cannot guarantee to issue results for a centre if marks for some or all candidates at that centre are submitted after the deadline.

iii. For some or all units in each principal learning level/line of learning undertaken by a centre, the work of a sample of candidates is re-assessed by a moderator using the original assessment criteria. Where not all units are to be sampled in a line of learning/level, the units must have been divided into groups so that the units within each group have reasonably similar requirements and assessment criteria. At least one unit for each group must be sampled. Re-assessment by the moderator may take place while assessment by the centre is in progress or after marks have been submitted to the awarding body[14].

iv. A *tolerance* is established for each unit. This tolerance is normally no higher than 6 per cent of the total raw mark for the unit, rounded to the next whole number above (eg 4.1 and 4.8 are both rounded to 5).

[14] The latter procedure is sometimes referred to as 'post-hoc moderation'.

3. Sampling of candidates

i. The awarding body or the moderator on the awarding body's behalf specifies the candidates required for the moderation sample. Where moderation takes place while assessment is underway, the sample may need to be agreed between the moderator and the centre, for example because of work undertaken in groups or because of the timing of activities undertaken for assessment. However, the centre alone must not be responsible for the selection of the sample.

ii. The sample must be selected so as to include work from across the full range (or expected range) of the centre's marks within each sampled unit[15].

iii. For each assessment unit, the minimum number of candidates in the sample is the same as for similar GCE and GCSE units.

iv. A system may be used in which the moderator initially re-assesses a sub-sample of work for a principal learning unit or project qualification from across the full range of the centre's marks. The number of candidates in the sub-sample is at least half of the number in the moderation sample, with a minimum of five (or all candidates if fewer than five).

4. Deciding on the appropriate action for each centre

In 4(i)–(vi) 'unit' means principal learning unit (or set of linked units) or project qualification.

i. When the moderator re-assesses a sub-sample from a unit, the centre's marks for that unit are normally accepted unchanged if the moderator's marks for all candidates in the sub-sample are within tolerance of the centre's marks[16].

ii. Where one or more differences between the moderator's marks and the centre's marks in a unit exceed tolerance, the moderator must re-assess the whole sample. A judgement is then made on the appropriate action. This action

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[15] There may be cases where two or more units have the same assessment criteria and are moderated as if they constituted a single unit. In these circumstances, 'unit' should be taken to mean the set of these two or more linked units.

[16] For example, consider a unit where the tolerance is 4 and a centre for which there are five candidates in the sub-sample. If the differences between the moderator's marks and the centre's marks are 1, 3, 4, -1, 4, then the centre's marks are accepted unchanged. If the differences are 1, 3, 5, -1, 4, then the moderator should re-assess the remaining candidates in the sample.

will normally be to accept the centre's marks or to adjust[17] the centre's marks for that unit.

iii. Judgements of the appropriate action for each centre and of any adjustments required are made by moderators and/or awarding body officers using appropriate computational methods.

iv. Adjustments, when made, are determined on the basis of the pattern of differences between the centre's marks and the moderator's marks in the sample, with a view to bringing the centre's marks into line (ie to reduce the mean of those differences to zero). Mark adjustments should retain the centres rank order.

v. Exceptionally, where one or more differences between the moderator's marks and the centre's marks exceed tolerance and it is not possible to adjust the centre's marks fairly on the basis of the sample because the centre's marking is demonstrably inconsistent, either all marks for that unit are replaced by the moderator's marks (following re-assessment by the moderator of all remaining candidates at the centre) or all work is re-assessed by the centre and the marking then checked again by the moderator. If neither action is feasible, other appropriate steps are taken to protect candidates' interests and the integrity of the assessment.

vi. No candidate should be treated differently by virtue of having been included in the moderation sample.

vii. Where the centre's marking is not accepted for some or all principal learning units and not all units have been sampled, appropriate action will need to be taken for the unsampled units, for example by including them in the moderation process or by requiring the centre to review the assessment of these units in the light of feedback from the sampled units.

5. Project qualifications

i. While the marking of each principal learning unit (or set of linked units) must be standardised across all centres/assessment sites in a consortium, the marking of a project qualification must be standardised within an individual centre. This standardisation applies to all candidates, irrespective of their line of learning (if following a Diploma course), and includes candidates taking the project qualification who are not following a Diploma course.

[17] The term 'scale' is sometimes used instead of 'adjust'.

ii. It is desirable that the sample of work chosen should cover a range of projects carried out at the centre, in terms of subject area and context. This range will normally occur naturally as part of the sampling process and no special steps need be taken to check or amend the sample in this respect.

6. Feedback to centres/consortia

i. Each centre will be sent its final moderated marks.

ii. Each centre will be sent a report on the moderation of its marks.

7. Post-results enquiries

i. The only form of enquiry allowed on internally-assessed units (including project qualifications) is re-moderation, involving a replication of the original process using the original sample, or an extended sample when the awarding body considers this necessary[18].

ii. Consideration will be given to the inclusion of additional candidates' work where the centre has particular concerns, but there is no provision for consideration of the marks of individual candidates.

iii. On the basis of the re-moderation of the sample of work, a judgement is made whether or not to accept the original moderation of the centre's marks. If the original moderation is not accepted, all the mark changes arising from the re-moderation are implemented and revised marks are communicated to the centre. Where candidates are entered for certification in the same series, only improvements to qualification grades are implemented[19].

8. Responsibilities of the principal moderator

A principal moderator is responsible for all internally-assessed units in a level/line of learning and has the following responsibilities.

i. To compile exemplar work, annotated to show how the assessment criteria are to be applied.

ii. To ensure that moderators meet the standardisation requirements and take action if any moderator fails to maintain the required standard.

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[18] At the awarding body's direction, the sample may be different if the original sample is no longer available.

[19] Downward qualification grade changes are not implemented where they arise from post-results mark changes for an internally-assessed unit in the same series in which certification is requested.

iii. To ensure that all moderators correctly interpret and apply the assessment criteria, and that they are using the same criteria provided by the awarding body for the internal assessors.

iv. To monitor the standards, where appointed, of assistant principal moderators, team leaders and moderators and advise on their appointment, training and reappointment.

v. To ensure that appropriate preparatory, follow-up and remedial work with centres is carried out.

vi. To attend the awarding meeting and advise members on how the internally-assessed units functioned and, where appropriate, recommend preliminary mark ranges for the judgemental grade boundaries.

vii. To submit to the chief examiner an evaluation report on issues relating to the performance of the internally-assessed units.