**Freedom of Information Request: Grade Boundaries (June 8th 2021)**

**Original Request**

*‘The SQA document ‘A Guide to Setting Grade Boundaries’, describes who is involved in awarding meetings, what their roles are, and the sequence of standing agenda items. It does not describe precisely how the grade boundaries are adjusted other than as a vague statement that “Grade boundaries are set in line with the intended demand of the assessment. If the assessment did not function as intended, the grade boundaries are adjusted appropriately” (page 4). There is only one way to interpret this which is that if the exam resulted in more or fewer candidates achieving certain marks then the grade boundaries are moved to keep the proportions in line with a pre-defined statistical distribution. In essence, norm referencing in used to determine grades.*

*Setting grade boundaries after the exam is not equitable nor defensible. Looking at marks and then deciding whether the exam is notionally hard or easy inevitably means that individual candidates will be disadvantaged. Best practice is for boundaries to be set before the exam. The Angoff process uses subject specialists to set grade boundaries and objectively normalises the difficulty of the exam year on year. This process is often used in universities and other institutions to maintain standards. In the National Qualifications 2020 Awarding ? Methodolgy Report it is stated that “during awarding meetings each year grade boundaries are set following a consideration of qualitative and quantitative information, for the current year and the three previous years” (page 3) without describing the nature of this information. On the same page of the Report it is stated that “the SQA does not explicitly use norm referencing” (page 3). This statement is ambiguous. Either the SQA uses norm referencing implicitly to set grade boundaries and is trying hide the fact; or that the SQA does not use norm referencing.*

*Examples given in the Report appear to suggest that norm referencing is used. For example, candidates are placed in rank order to determine their grade. Rank ordering implies that the grade boundaries were based on fixed proportions of the cohort being including in a grade. Consequently, a candidate close to, but above, a grade boundary could have been awarded the lower grade simply because more candidates had marks that were higher than them. This is exemplified by Table 17 and Figure 6 (page 35). Either a candidate achieved a given standard (notionally 70% and above to be awarded an A grade) or they did not: where they lay on the statistical distribution of marks should not be a consideration. The Annual Statistical Reports for 2016 through to 2019 show remarkable consistency in the percentage of candidates achieving the different grades from A to D for all levels of qualifications and across all subjects. This is unlikely to be the case if norm referencing is not used since the proportion of candidates achieving each grade would vary year on year. Given the evidence and comments above, there are grounds to believe that the SQA does indeed apply norm referencing to set grade boundaries and so disadvantage some candidates*.

To fulfil its obligations defined in the FOISA, the SQA needs:

1. To provide a precise and full description of how the grade boundaries are actually determined from year to year.

2. To answer why the annual percentage of the different grades (A to D) for each of the National 5, Higher, and Advanced Higher National Qualifications and across subjects is remarkably consistent year on year if norm referencing is not used?

3. To give a full explanation as to why the grade boundaries are determined after the exams have been taken and marked.

4. To explain and justify why the grade boundaries are not set before an exam is taken using, for example, the Angoff process.

**Draft Response v3 (25th June 2021)**

‘[A Guide to Setting Grade Boundaries](https://www.sqa.org.uk/files_ccc/A_Guide_to_Setting_Grade_Boundaries_v1.3.pdf)’ - Document referenced in FOI request

**1) To provide a precise and full description of how the grade boundaries are actually determined from year to year:**

Awarding is the process by which the marks required to attain particular grades (grade boundaries) within a course are decided. It is one of a range of quality assurance procedures that SQA has in place to ensure that candidates being assessed for SQA qualifications are given the grade that they deserve.

There is no perfect or universally agreed way to set grade boundaries for the purpose of maintaining standards over time. Practice varies across awarding bodies and other similar institutions around the world. The strengths and weaknesses of different approaches continue to be documented and debated in the academic literature (eg Cizek 2007, 2012; Eds Baird, Isaacs, Opposs and Gray 2018) . As with other organisations, the approach adopted by SQA has evolved over time and will continue to do so in response to our experience of its use and our review and evaluation of the suitability of alternative approaches.

Every SQA course assessment is set to recognise levels of attainment of skills, knowledge, and understanding as outlined in each course specification. For Graded National Courses at National 5, Higher and Advanced Higher most course assessments contain a question paper and coursework component both of which are marked by SQA. The final grade awarded is based on the total score for all components of a course assessment.

The demand of the assessment is set before it is taken by candidates, in line with the sampling strategy for the course with the appropriate levels of differentiation between A and C grades. Notional grade boundaries are used as a guide to question paper setters as a ‘target’ to try to ensure as much fairness of experience for learners taking qualifications between cohorts in different years.

As SQA does not pre-test items used in the assessment of its Graded National Courses we have no statistical information on the level of difficulty of the items that comprise the course assessments. There is no single statistical indicator of demands and no objective scales for assessing them. Demands are only comparable through expert judgement so the examinations are set in line with levels of demand within the course using expert judgement.

Grade boundaries are set to reflect the appropriate attainment of skills, knowledge, and understanding across the grade descriptions for the course. Grade descriptions and notional grade boundaries are outlined in the course specification and are already in place before assessment takes place. Notional grade boundaries are as follows:

Grade A — 70% of maximum marks available

Grade B — 60% of maximum marks available

Grade C — 50% of maximum marks available

Grade D — 40% of maximum marks available  (previously 45% prior to the Revised National Qualifications resulting from the removal of units from Graded National Courses between 2017 and 2019)

SQA uses the awarding process to ensure that the national standard is maintained over time for these courses. SQA’s Principal Assessors (appointees who are contracted to work for SQA on a part-time basis and whose main role will generally be in teaching and assessing SQA’s qualifications in one of our centres) and Qualification Managers (internal SQA staff) work together with other appointees to develop and quality assure the course assessments, both coursework and examination. As noted above during this process notional grade boundaries are used as a guide to question paper setters as a ‘target’.

Following completion of the assessment by candidates and of the subsequent marking and quality assurance procedures, awarding meetings are held to determine grade boundaries for the whole course, not at component level.

The key principle of awarding is to determine if the assessment has performed as expected when it was set, and to set grade boundaries that take the difficulty of the assessment into account. As noted above there is no consensus on the best way of doing this and so practice varies across qualification awarding bodies and similar institutions.

Within SQA one awarding meeting is generally held for each Graded National Course and at each meeting only the Course in question is the subject of decision making. Decisions on the appropriate grade boundaries are made by a Panel comprising external subject specialists, appointed by SQA, and SQA staff, who have subject, assessment, and/or statistical expertise. These arrangements mean that multiple sources of evidence are considered. Each Awarding Panel meeting is chaired by a member of SQA’s Senior Management Team and follows a common agenda and process.

Awarding Panel meetings are held to assess the extent to which the intentions of the assessment have been met and to set grade boundaries accordingly. The grade boundary decisions must be justified by information on the performance of the assessment instruments. If the assessment has functioned as expected, the grade boundaries will remain at or close to the notional boundaries noted above. However, if the assessments posed an unintended level of demand, the grade boundaries will be adjusted to reflect that level of difficulty to ensure that an A this year is equivalent to an A in previous years for the level of performance and for the purposes of fairness. The purpose of providing grades is for end users to be able to interpret those results and make decisions about them for various purposes. With norm referencing this is very difficult to justify from a fairness point of view across cohorts – because it focuses on the same proportions of outcomes, rather than on same attainment.

Each Awarding Panel meeting is also provided with a statistical information pack which contains summary information on the cohort of candidates sitting the assessment and includes a broad overview of candidate performance (in terms of marks achieved). This data could highlight any unexpected performance which may need to be discussed further.

Analysis of this data is primarily provided by the Principal Assessor for the course supported by SQA’s Statisticians. The Principal Assessor uses their professional judgement and experience, along with that of the other members of the awarding meeting, to determine how the assessment instrument has performed in relation to the intended difficulty.

The other key statistical information which SQA uses to judge assessment performance for each subject and level contains information such as the average mark nationally for each assessment component.   The Awarding Panel Meeting will also look at a statistical item analysis of the performance of each question where this is available.

Also a variety of other sources of information are used in Panel meetings to explore assessment issues and possible grade distributions, and to support the decision-making process. This includes information on the intentions of the Principal Assessor in setting the assessments (e.g. whether they were seeking to set them at the same level of difficulty as in previous years or to make adjustments to reflect any issues noted in previous years’ assessments) and on any changes in the approach to or personnel involved in setting and/or marking the assessments. In some cases a script scrutiny process is used to review samples of work from candidates to inform the decision making process.

Grade boundary decision making is based on the professional judgement made on the difficulty of the assessment instrument. If the Panel, informed by the Principal Assessor, determines that the course assessment has functioned as intended, then the grade boundaries will be broadly in line with the notional grade boundaries, otherwise, they will be adjusted to take account of the identified issues. The final decision on the grade boundaries is agreed and signed off by the Panel Chair and the Principal Assessor. Depending on the complexity of the issues raised during Panel meetings discussion can be protracted. In the unlikely event that a decision cannot be made during the meeting, then an escalation process is in place for members to follow. All decisions must be justified and be supported by information collected throughout the awarding procedure.

The 2019 Grade Boundary tables can be accessed [here](https://eur01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.sqa.org.uk%2Fsqa%2F91418.html&data=04%7C01%7CAlastair.Duthie%40sqa.org.uk%7Cb70069a0178242a09ebe08d92a51a161%7C2bc4b4d8b4154f6c8bb82c2985d7171f%7C0%7C0%7C637587352459991587%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C1000&sdata=DO0XS%2FZD7PgB570Xn08hOklitkowEXM1LN4jh%2Bthb8k%3D&reserved=0). Select Grade Boundaries 2019 for a list of the marks for each grade boundary in 2019. Course Reports are produced each year. These are written up each year after the Awarding Meetings (details of these are provided in the document [A Guide to Setting Grade Boundaries](https://eur01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.sqa.org.uk%2Fsqa%2Ffiles_ccc%2FA_Guide_to_Setting_Grade_Boundaries_v1.3.pdf&data=04%7C01%7CAlastair.Duthie%40sqa.org.uk%7Cb70069a0178242a09ebe08d92a51a161%7C2bc4b4d8b4154f6c8bb82c2985d7171f%7C0%7C0%7C637587352459991587%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C1000&sdata=lveHr0eBeY1quXYL6MGZ1Yfi8O7oVC06iQwEEXpNIMs%3D&reserved=0) which is referenced in your original request). The Course Report provides information on the performance of the year’s cohort and is provided as a guide for those who may be preparing candidates for future assessments in this subject. Here is a link to the [Course Report](https://eur01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.sqa.org.uk%2Ffiles_ccc%2F2019N5CourseReportEnglish.pdf&data=04%7C01%7CAlastair.Duthie%40sqa.org.uk%7Cb70069a0178242a09ebe08d92a51a161%7C2bc4b4d8b4154f6c8bb82c2985d7171f%7C0%7C0%7C637587352460001539%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C1000&sdata=cQrrSbPqqsuzCeOJDNNnsWGVtbqscMyNmAJUpiy8WXI%3D&reserved=0) for National 5 English in 2019. If you are interested in the Course Reports for other subjects here is a link to the [National Qualifications](https://eur01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.sqa.org.uk%2Fsqa%2F45625.3728.html&data=04%7C01%7CAlastair.Duthie%40sqa.org.uk%7Cb70069a0178242a09ebe08d92a51a161%7C2bc4b4d8b4154f6c8bb82c2985d7171f%7C0%7C0%7C637587352460001539%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C1000&sdata=qLNc5AOi6Vl864Cm8Xhmq7wmfRS2ywd68a5n5Y5J2DE%3D&reserved=0) pages. Select the subject and then the required level and the Course Report is listed on this page.

**2) To answer why the annual percentage of the different grades (A to D) for each of the National 5, Higher, and Advanced Higher National Qualifications and across subjects is remarkably consistent year on year if norm referencing is not used?**

The consistency in the annual percentage of grades awarded across subjects is achieved using the approach outlined above. SQA does not use a norm-referencing approach to setting and maintaining standards. Such an approach relies purely on statistical information when making decisions about grade boundaries without regard to performance of students in one year to previous years or the functioning of the assessment.

Instead, and as outlined above, our approach to awarding utilises a range of qualitative and quantitative information. Statistical information on the cohort sitting the assessment is used as just one of several sources of information to ensure that the resultant grade distributions can be justified. By reviewing this wider range of evidence, the Panel can determine whether the assessment instrument has performed as expected.

This approach has been referred to as attainment-referencing or weak-criterion referencing (see Jo-Anne Baird & Lena Gray (2016) The meaning of curriculum-related examination standards in Scotland and England: a home–international comparison, Oxford Review of Education, 42:3, 266-284, DOI: 10.1080/03054985.2016.1184866). This approach seeks to maintain a consistent national standard that is representative of each candidate’s knowledge and understanding. It aims to maintain stability in the assessment system by including an awareness of achievement by previous cohorts. Again it is important to stress that the purpose of providing grades is for end users to be able to interpret those results and make decisions about them for various purposes. With norm referencing this is very difficult because there is no way of independently differentiating performance between cohorts.

Parallel to the awarding process, SQA also operates a Monitoring Standards programme that aims to ensure the national standard of its qualifications remains the same over time, by reviewing the national standard of each subject every five years.

**3) To give a full explanation as to why the grade boundaries are determined after the exams have been taken and marked.**

Please see the answer to question 1 above. Notional grade boundaries are used as a guide to question paper setters as a ‘target’ to try to ensure as much consistency of experience for learners taking qualifications between cohorts in different years. These notional grade boundaries are only adjusted if the assessment instrument has not operated as expected.

**4) To explain and justify why the grade boundaries are not set before an exam is taken using, for example, the Angoff process.**

As outlined in our answer to question 1 above, our approach to awarding ensures that notional grade boundaries are adjusted if the assessment instrument is deemed to have not operated as expected based on the evidence. Also as noted above this is based on the practice that notional grade boundaries are used as a guide to question paper setters as a ‘target’ to try to ensure as much consistency of experience for learners taking qualifications between cohorts in different years. In an approach that is similar to the Angoff method, subject experts then use a range of evidence to determine how this may have affected the examination. While the Angoff method may take place before the assessment has been undertaken, it is often (perhaps more often) performed afterwards and often takes into account item functioning information that is only available after the assessment has been delivered and marked. As with every standard maintaining methodology, there is research and analytical literature which discusses its strengths and weaknesses.