

Reviews of marking and moderation resulting in grade changes of 2 grades or more

Summer 2016 examination series



July 2017

Ofqual/17/6254

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Executive summary

Grade changes of 2 grades or more at qualification level are rare when considered in the context of the number of post-results reviews and the number of qualifications awarded each exam series. In summer 2016, 6,687,000¹ GCSE, AS, and A level qualifications were awarded in England, and 401 qualifications had a grade change of 2 grades or more. While this represents less than 0.01% of all qualifications awarded, grade changes of 2 grades or more represent unacceptable error in the system.

Changes of 2 grades or more are typically the result of large mark changes on one or more units within the qualification. Such grade changes are more likely to result from the cumulative effect of smaller mark changes on multiple units, rather than a larger change on one unit. However, it is evident that there is one scenario when some changes of 2 grades are due to small mark changes: when grades change from a B to an A* at A level.

Grade changes of 2 grades or more are more prevalent in some qualification types and subjects than others. In summer 2016, grade changes of 2 grades or more were most common in English, art & design, religious studies, geography, and history. This is likely to reflect the structure and nature of these assessments, since some assessments are inherently more subjective than others.

The most common reasons for grade changes of 2 grades or more, as provided by the exam boards, related to marking error and issues with original moderation, but administrative errors were also reported. We intend to continue collecting data on reviews of marking and moderation that result in grade changes of 2 grades or more each summer to allow us to identify any emerging trends over time and take appropriate action as necessary.

¹ The figures in this paragraph are rounded to the nearest hundred.

Background

In summer 2016, there was decreased use of post-results marking and moderation services² by GCSE, AS, and A level students compared to summer 2015. Around 6,687,000³ GCSE, AS, and A level qualifications were awarded in England: 392,700 unit⁴ level reviews were requested, relating to 343,000 qualification grades⁵. Of these, 62,800 had their grades changed. This represents 0.9% of all grades awarded and 18 per cent of all grades challenged. The vast majority of grade changes were by one grade. However, 401 qualifications had grade changes of 2 grades or more. This represents 0.1% of all grades challenged and 0.6% of all grades changed.

Since summer 2015, Ofqual has collected detailed data on post-results review services, including additional data for students whose qualification result changed by 2 grades or more. This report provides an overview of the data relating to qualification grade changes of 2 grades or more for GCSEs, AS, and A levels in England⁶ in summer 2016. The report relates to data collected from AQA, OCR, Pearson, and WJEC, and refers to reviews at both the unit and qualification level. The report also provides more information about the reasons for the grade changes⁷.

² Collectively referred to throughout this report as 'reviews' and formerly known as enquiries about results.

³ The figures in this paragraph are rounded to the nearest hundred.

⁴ Qualifications consist of multiple units or components. They will be referred to as units throughout this report.

⁵ Reviews are submitted at the unit level but each qualification is made up of multiple units, meaning that students can submit more than one enquiry for each qualification.

⁶ Analysis from 2015 was published in May 2016 and includes data from England, Northern Ireland, and Wales (see <https://www.gov.uk/government/consultations/markings-reviews-appeals-grade-boundaries-and-code-of-practice>). From 2016 onwards, data will be reported for England only.

⁷ Exam boards are currently required to record reasons for reviews of marking decisions and to provide them to centres on request. From 2020, exam boards will be required to provide reasons for reviews of marking decisions to centres automatically (see <https://www.gov.uk/government/consultations/changes-to-regulations-for-enquiries-and-appeals>). Some exam boards have already begun implementing this.

Results

Service types associated with grade changes of 2 grades or more

In total, there were 607 unit reviews relating to qualification grade changes of 2 grades or more for GCSEs, AS, and A levels in summer 2016. The unit reviews associated with grade changes of 2 grades or more covered the 3 review types that exam boards offer as part of their post-results service: a clerical re-check (service 1), a review/priority review of marking⁸ (service 2/2P), and a review of moderation of the school or college's internal assessment (service 3).

Grade changes of 2 grades or more were most frequently associated with reviews of marking (service 2 or service 2 priority requests), followed by reviews of moderation (service 3), and clerical checks (service 1; Table 1). This pattern remained consistent when only units where a raw mark⁹ change had occurred were considered (ie units that actually contributed to the grade change; Table 1). There were, however, differences by qualification type (Table 2). At AS and A level, grade changes of 2 or more were much more frequently associated with reviews of marking (service 2 or service 2 priority requests) than reviews of moderation (service 3), while at GCSE (full course) they were more frequently associated with reviews of moderation¹⁰. There were very few qualification grade changes of 2 grades or more associated with a clerical re-check (service 1 review).

⁸ A priority review of marking is a faster service available at A level when a student's university place depends on the outcomes, and at GCSE (Pearson only) where a student's place in further education depends on the outcome.

⁹ The raw mark refers to the mark on the script awarded by the examiner. For modular specifications (or those qualifications that were formerly modular), raw marks are converted to uniform marks (UMS) so that marks can be combined across examination series. A student's subject grade is awarded based on the total number of UMS marks that they achieve.

¹⁰ This might be due to differences in the components that make up each qualification, ie some have components that are moderated while others have all written units.

Reviews of marking - 2 grade changes

Table 1. *Number of reviews by service type involved in qualification grade changes of 2 grades or more*

Service	Unit reviews	% of unit reviews	Unit reviews with raw mark change	% of unit reviews with raw mark changes
Service 1	6	1	6	1
Service 2	326	54	291	52
Service 2 priority	45	7	41	7
Service 3	230	38	225	40
Total	607	100	563	100

Table 2. *Number of reviews by service type involved in qualification grade changes of 2 grades or more by qualification type*

	A level		AS level		GCSE full course		GCSE short course	
	Unit reviews	% of unit reviews	Unit reviews	% of unit reviews	Unit reviews	% of unit reviews	Unit reviews	% of unit reviews
Service 1	1	1	2	1	3	1	0	0
Service 2	42	47	153	62	113	45	18	90
Service 2 priority	22	25	20	8	3	1	0	0
Service 3	24	27	72	29	132	53	2	10
Total	89	100	247	100	251	100	20	100

Level of qualifications with grade changes of 2 grades or more

The 607 unit reviews associated with a grade change of 2 grades or more related to 401 unique qualifications¹¹. This represents less than 0.01% of the 6,687,000 qualifications awarded in summer 2016. GCSE full course was the qualification most commonly associated with a grade change of 2 grades or more, closely followed by AS level (Table 3). The number of grade changes of 2 grades or more were smaller for A level and GCSE short course.

To some extent, the differences in the number of grade changes by qualification type are likely to reflect the entries for each qualification type, since the entries at AS level and GCSE full course are greater than at A level, which are in turn greater than GCSE short course. It is also likely to reflect the structure and availability of the assessments in each qualification type. Since 2014, GCSEs have been sat in a linear manner in England, meaning that all units or components are sat in the series that students certificate in. Likewise, students sit the entire AS level qualification in the series in which they certificate. As such, every unit or component can be challenged when students certificate. In contrast, at A level, the majority of students will have sat 50% of the qualification (the AS units) the previous summer, meaning that only 50% of the qualification could be subject to review¹². This limits the impact of any mark changes, unless students are also sitting or re-sitting the AS units when they certificate at A2, although this will be a minority.

Table 3. *Number of qualifications changed by 2 grades or more by qualification type*

Qualification	Number of qualifications challenged
A level	61
AS level	156
GCSE full course	165
GCSE short course	19
Total	401

¹¹ Each qualification is made up of several units meaning that multiple enquiries can contribute to a grade change at the qualification level.

¹² This will be changing from summer 2017 with the introduction of reformed A levels in England. AS and A2 level will be decoupled meaning that the AS units will not count towards the A level grade, and students will sit all of their A level units in the series that they certificate in.

Number of unit reviews associated with grade changes of 2 grades or more

The 607 unit level reviews associated with a grade change of 2 grades or more were distributed across 401 qualifications. Table 4 shows the number of unit reviews per qualification associated with a qualification grade change of 2 grades or more, by qualification type. Note that where there are multiple unit reviews per qualification, it is not necessarily the case that all of the reviews directly contributed to the grade change. Rather, it could be that one unit had a mark change and the other(s) had a mark change in a different direction, or did not change at all. Furthermore, some qualifications comprise a greater number of units or components than others. This effectively increases the number of unit results that can be challenged.

As shown in Table 4, for nearly all of the grade changes of 2 grades or more, one or 2 units in the qualification were reviewed. However, this varied by qualification type. For A level and GCSE (short course¹³), most grade changes of 2 grades or more were associated with a review of just one unit in the qualification, while for AS and GCSE (full course), grade changes of 2 grades or more tended to be associated with reviews of one or 2 units.

Table 4. *Number of reviews for qualification grade changes of 2 grades or more by qualification type*

Number of unit reviews	A level	AS level	GCSE full course	GCSE short course	Total
1	39	65	80	18	202
2	19	91	84	1	195
3	0	0	1	0	1
4	3	0	0	0	3
Total	61	156	165	19	401

¹³ Some GCSE short courses are made up of just one unit.

Where there were grade changes of 2 grades or more at qualification level, a grade change could have resulted from a combination of mark changes on multiple units, or a mark change on one unit. Table 5 explains this further and shows how many units in each qualification contributed to each grade change. This demonstrates that where there were multiple unit reviews per qualification, the grade change typically resulted from changes on multiple units. For example, where there were reviews for 2 units of a qualification, in 81% of cases, the grade change was due to a combination of raw mark changes on both units. This suggests that when multiple units are reviewed, grade changes of 2 grades or more are more likely to result from the cumulative effect of mark changes on multiple units, than a mark change on a single unit

Table 5. *Number of units contributing to a qualification grade change of 2 grades or more at qualification level*

Total number of unit reviews	Number of units with raw mark change				Total
	1	2	3	4	
2	36	158	-	-	194
3	1	0	0	-	1
4	0	1	0	2	3

Note. Data for one candidate with reviews for 2 units have been removed as there were no changes in raw marks for either unit. This was due to a missing script meaning that UMS marks were estimated.

Subjects with grade changes of 2 grades or more

Overall, the subjects most commonly associated with grade changes of 2 grades or more were English (including English/English language/English literature), art and design (all endorsements), religious studies, geography, and history (Table 6). These 5 subjects account for 74% of all qualifications that changed by 2 grades or more, and tended to be among the most common subjects to have grade changes of 2 grades or more in 2016 (with the exception of geography). There was little variation between qualification types, with the exception of GCSE (short course) where religious studies experienced the greatest number of qualification grade changes of 2 grades or more. This is likely due to the availability of short course qualifications (ie only some subjects are available as short courses) and the high uptake of the short course option in religious studies.

To some extent, these patterns are likely to represent the nature of the subjects. The subjects that have experienced the most grade changes of 2 grades or more tend to be those subjects that contain long essay questions. Many view such extended writing tasks as essential for valid assessment of these subjects, yet are more challenging to mark.

Table 6. *Number of qualifications with grade changes of 2 grades or more by subject and qualification type (5 most frequent subjects)*

Subject	A level	AS level	GCSE full course	GCSE short course	Total
English	14	40	61	0	115
Art and design	10	36	53	1	100
Religious studies	2	10	10	19	41
Geography	4	18	2	0	24
History	3	11	3	0	17

Magnitude of grade changes

As in 2015, the majority of grade changes of 2 grades or more were increases of 2 grades, regardless of the qualification type (Table 7). Indeed, grade changes of more than 2 grades were extremely rare, representing 23 cases out of a total of nearly 7 million qualifications that were awarded in summer 2016. There was one instance of a qualification grade changing by 5 grades at AS level, and one changing by 6 grades at GCSE (full course). The 5 grade change was due to an administrative error whereby the wrong mark was input for one unit. The 6 grade change was due to marking error on one unit¹⁴.

Grade changes of 2 grades or more were typically in an upwards direction (99% of all grade changes of 2 grades or more). There were, however, 5 cases where the grade decreased and these were all by 2 grades. In the context of large grade changes, the patterns observed are perhaps not unexpected, since reviews are more likely to be made for students who have received a much lower grade than anticipated.

¹⁴ It is possible that a 'special consideration' may have also been applied. Currently, if a 'special consideration' has been applied in addition to there being a marking review, these data are reported together. In the future, we will be able to disentangle these.

Table 7. *Magnitude of grade changes at qualification level*

Grade change	A level	AS level	GCSE full course	GCSE short course	Total
Decrease 2 grades	0	4	1	0	5
Increase 2 grades	59	142	153	19	373
Increase 3 grades	1	9	8	0	18
Increase 4 grades	1	0	2	0	3
Increase 5 grades	0	1	0	0	1
Increase 6 grades	0	0	1	0	1
Total	61	156	165	19	401

Qualification mark changes associated with a qualification grade change of 2 grades or more

In addition to the magnitude of the grade changes, the change in raw and uniform mark scale (UMS)¹⁵ marks at qualification level that resulted in a qualification grade change of 2 grades or more were also analysed. While this provides some insight into the scale of any mark changes, there are a number of factors to be considered. For example, when considering changes in raw marks, it is difficult to make comparisons across qualifications, since one raw mark will not equate to the same number of UMS marks for every qualification. This depends on the position of the grade boundaries. As such, each qualification will require a different change in the number of raw marks to bring about a grade change of 2 grades or more. In addition, the unit raw mark changes do not include any issues that are rectified at the qualification level, for example the addition of marks due to the late application of special consideration, meaning that there are cases where the students' raw marks do not change, but the total UMS mark and the qualification grade do. Focusing upon the change in qualification level UMS marks overcomes these factors to some extent, but the issue that different numbers of raw marks are required to bring about a grade change of 2 grades or more remains, since this will depend on the total UMS marks for the qualification.

Bearing these factors in mind, Figure 1¹⁶ shows a summary of the raw mark changes at qualification level that resulted in a qualification grade change of 2 grades or more. Where there are multiple units contributing to a grade change, the raw marks are summed. As shown, there is a large range in the number of raw mark changes, from -51 to +64 raw marks. On average, an absolute raw mark change of 17.85 was associated with a qualification grade change of 2 grades or more.

¹⁵ Raw marks are converted to UMS marks for modular qualifications so that marks can be combined across examination series. A student's subject grade is awarded based on the total number of UMS marks that they achieve. There are no UMS marks for reformed linear A and AS level qualifications. (Reformed AS levels were introduced in some subjects from 2016.)

¹⁶ These analyses include 5 cases where the raw mark did not change but the qualification grade did. Where reasons were provided for these changes it was apparent that most of these were due to issues that were rectified at the qualification level (UMS marks) but not the unit (raw mark) level, eg missing scripts.

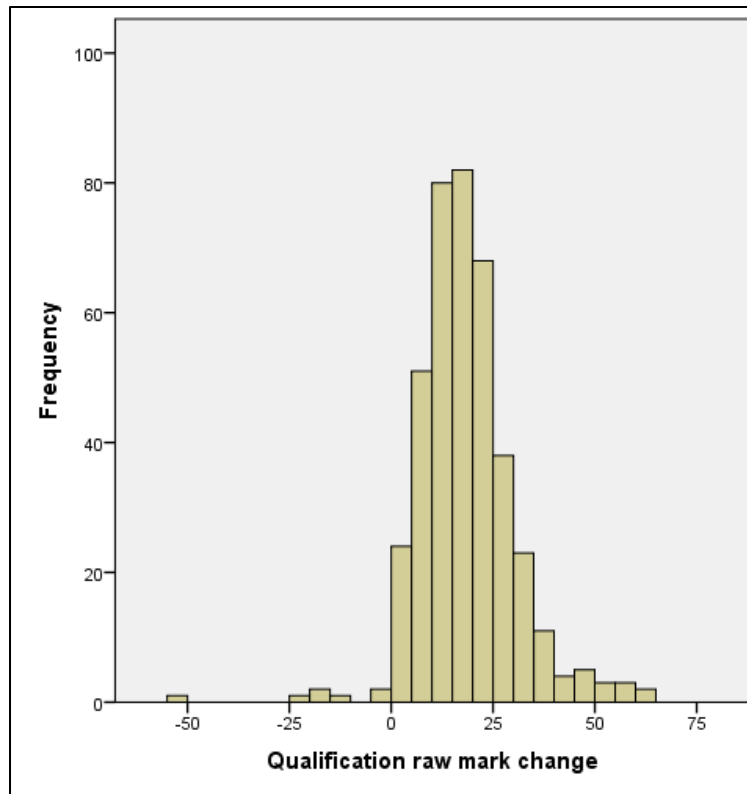


Figure 1. Qualification raw mark changes for grades changes of 2 grades or more

Figure 2 shows a summary of the UMS mark changes at qualification level that resulted in a grade change of 2 grades or more. Since reformed qualifications and legacy (linear) GCSE mathematics do not use UMS marks (they are linear in structure), this data only refers to 295 qualifications¹⁷. As shown in Figure 2, the mark changes range from -69 to +162 UMS marks. These differences are greater than the raw mark changes illustrated in Figure 1, but this is not unexpected since the total UMS marks per unit are typically higher than the total raw marks per unit to avoid scaling down when converting from raw to UMS marks. For the UMS marks, the average absolute mark change associated with a qualification grade change of 2 grades or more was 35.44 marks.

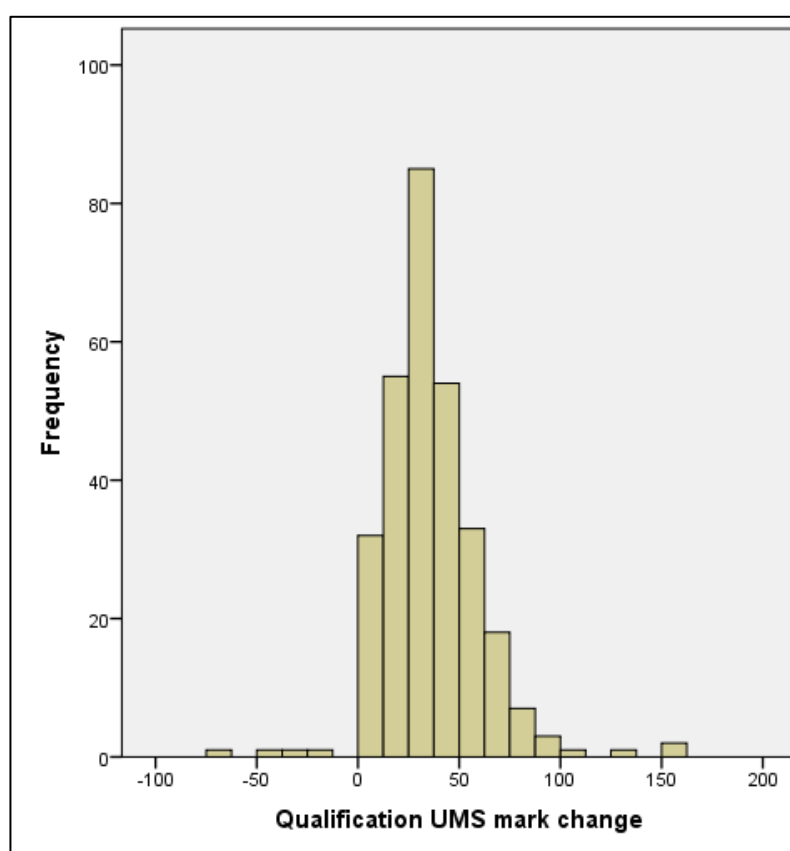


Figure 2. Qualification UMS mark changes for grade changes of 2 grades or more

¹⁷ Reformed linear qualifications were first awarded in summer 2016 for 13 AS subjects.

Unit mark changes associated with a qualification grade change of 2 grades or more

The analyses described in the previous section consider the raw and UMS mark changes at the qualification level. Where multiple unit reviews are made for a single qualification, such changes could be due to the cumulative effect of mark changes on multiple units. Indeed, as shown in Table 5, where 2 units were associated with a grade change, both units had a change of mark in the majority of cases.

Figure 3 shows the raw mark change at unit level for units associated with a qualification grade change of 2 grades or more. The average raw mark associated with a change of 2 grades or more was 11.79 at the unit level. While there are some large changes in marks, there are also many relatively small mark changes. Indeed, for 89 of the 607 units associated with a qualification grade change of 2 grades or more (15%), the mark change is less than or equal to 3 raw marks.

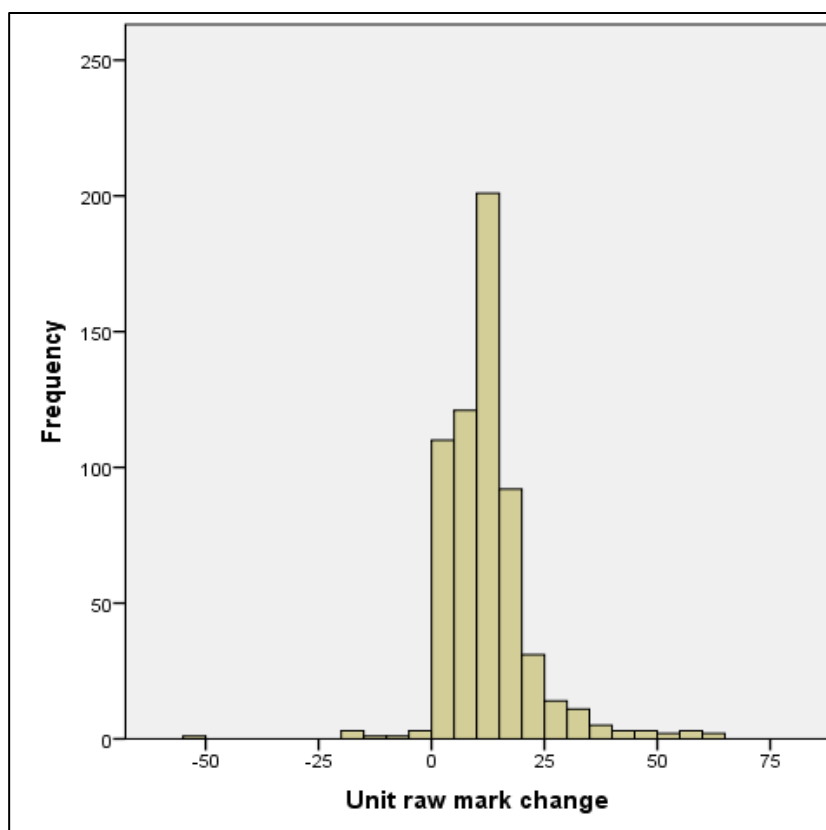


Figure 3. Unit raw mark changes for grade changes of 2 grades or more

Original qualification grade

Tables 8 to 10 show the original qualification grade for grade changes of 2 grades or more for A level, AS level, and GCSE (full course), respectively. It is apparent that the patterns are quite different at each qualification level. For A level, the majority of grade changes of 2 grades or more were associated with an original qualification grade B (85%; see later discussion), while at AS level, qualification grade changes of 2 grades or more were most frequently associated with original qualification grades C and D (32% each). At GCSE (full course), grade changes of 2 grades or more were most frequently associated with an original qualification grade B (56%)¹⁸.

¹⁸ Of the 19 GCSE short course qualifications reviewed, 13 were associated with an original grade B. Original grades C and D both accounted for 3 qualifications. All of these increased by two grades.

Table 8. Original qualification grade associated with grade changes of 2 grades or more – A level

Original qualification grade	Decrease 2 grades	Increase 2 grades	Increase 3 grades	Increase 4 grades	Increase 5 grades	Increase 6 grades	Total
B	0	52	-	-	-	-	52
C	0	3	1	-	-	-	4
D	0	3	0	1	-	-	4
E	0	1	0	0	0	-	1
F	0	0	0	0	0	0	0
G	-	0	0	0	0	0	0
U	-	0	0	0	0	0	0
Total	0	59	1	1	0	0	61

Table 9. Original qualification grade associated with grade changes of 2 grades or more AS level

Original qualification grade	Decrease 2 grades	Increase 2 grades	Increase 3 grades	Increase 4 grades	Increase 5 grades	Increase 6 grades	Total
B	1	0	-	-	-	-	1
C	3	47	0	-	-	-	50
D	0	45	5	0	-	-	50
E	0	34	2	0	0	-	36
F	0	0	0	0	0	0	0
G	-	0	0	0	0	0	0
U	-	16	2	0	1	0	19
Total	4	142	9	0	1	0	156

Table 10. Original qualification grade associated with grade changes of 2 grades or more GCSE (full course)

Original qualification grade	Decrease 2 grades	Increase 2 grades	Increase 3 grades	Increase 4 grades	Increase 5 grades	Increase 6 grades	Total
B	0	93	-	-	-	-	93
C	0	29	0	-	-	-	29
D	0	20	2	1	-	-	23
E	1	5	3	1	0	-	10
F	0	4	2	0	0	0	6
G	-	1	1	0	0	1	3
U	-	1	0	0	0	0	1
Total	1	153	8	2	0	1	165

As shown in Table 8, at A level, the majority of the grade changes of 2 grades or more were from a B to an A* (85%). In many ways, A* in the existing A level qualifications is a special case since the A* rules¹⁹ mean that it is possible for a relatively small mark change to move a grade B directly to an A*. This is illustrated in Figure 4 (reproduced from Sutch and Wilson, 2013), which shows the relationship between A level grade and contributing UMS marks from AS and A2. Students in burgundy have received a grade B (ie those below the solid diagonal line), yet some of these students (particularly in art, history and English literature) are in an area of the graph bordering the segment with the A* students (the upper left, just below the UMS 90% line). These students need just a few more A2 UMS marks to push them over the boundary into the A* category, meaning that a 2 grade change could result from a very small mark change.

¹⁹ To achieve an A* in the existing A level qualifications students must a) achieve a grade A overall (equivalent to 320 UMS on a 4 unit A level) and b) have at least an average of 90% of available UMS for A2 examinations (equivalent to 180 UMS or more for a 4 unit A level). In the reformed A level qualifications (first awarded in some subjects in 2017) there is no UMS so exam boards will use predictions to identify an overall subject-level grade boundary for A* and students who achieve that mark or higher will get an A* (see <https://ofqual.blog.gov.uk/2017/03/31/setting-a-in-the-new-a-levels/>).

Examination of the 2016 reviews of marking and moderation data illustrates this point. There are 4 examples of students receiving an increase of just one raw mark (equating to an increase of 2 or 3 UMS marks) at qualification level that resulted in their qualification grade changing from a B to an A*. Additionally, the average absolute UMS mark change at qualification level for students moving from a B to an A* was 20.98 UMS marks (min = 2, max = 56), compared to an average UMS change of 35.44 marks for all students with a grade change of 2 grades or more (see Figure 2). Clearly, some of the changes from a B to an A* (particularly the cases cited above) are not examples of a large mark change.

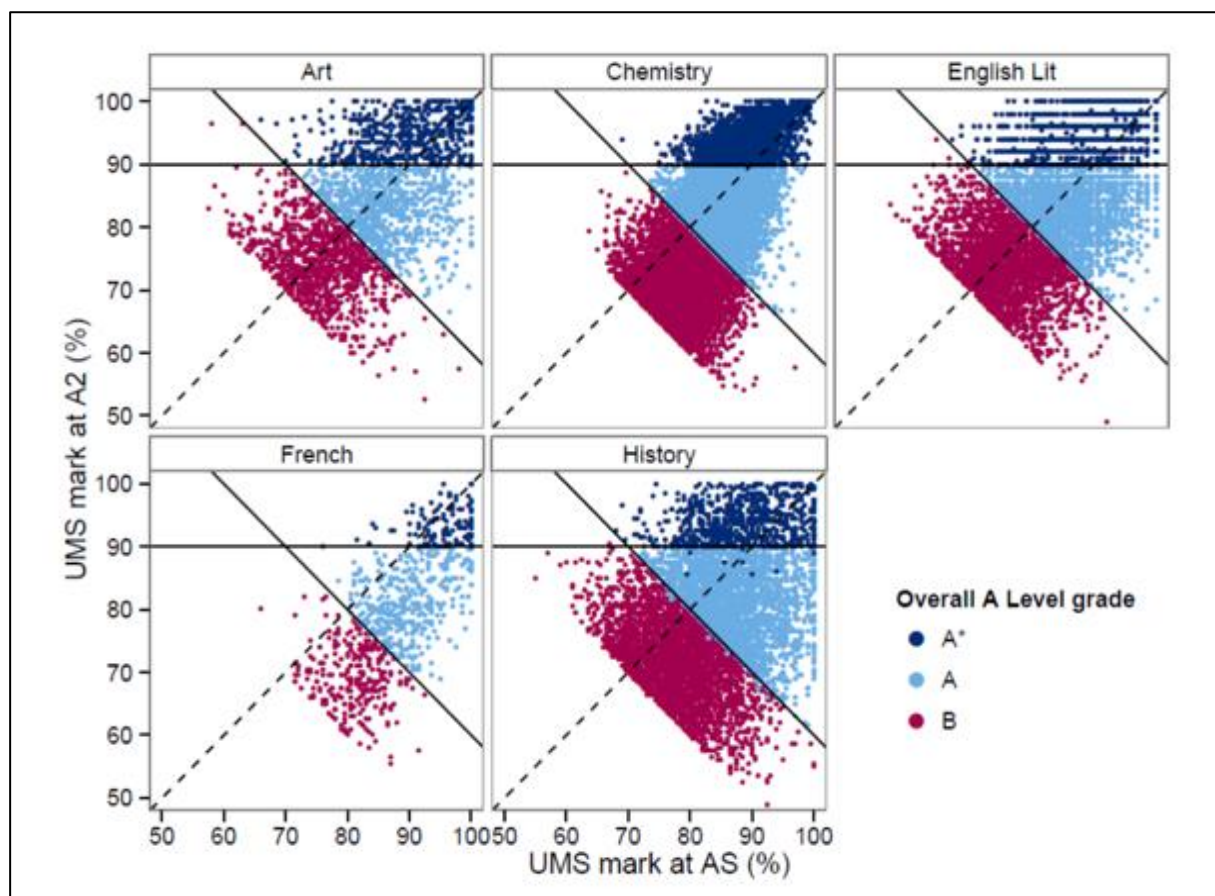


Figure 4. Relationship between A level grade and UMS score (reproduced from Sutch and Wilson, 2013)

Explanations provided by exam boards

In addition to the data described above, exam boards were asked to provide the reasons for grade changes of 2 grades or more. In the past, exam boards do not appear to have systematically collected or stored information on grade changes of 2 grades or more. This means that this information has not been readily available and was only provided for some reviews in 2015. Exam boards are now required to record reasons for their reviews of marking decisions and provide these to centres if requested. New requirements are being introduced meaning that exam boards will automatically have to provide reasons for all post-results review decisions from the summer 2020 exam series onwards²⁰. Some exam boards are already beginning to provide these.

In total, reasons were provided for 558 unit reviews (out of a total of 607 reviews; 46 units did not have a change in raw marks, and 3 reasons were unclear). It is worth considering that these reasons were provided at the unit (ie review) level and not the qualification level. Thus, where multiple units contributed to a grade change, the reasons might not be the same for every unit in that qualification, and only one unit might have actually contributed to the grade change. Furthermore, multiple explanations are possible for a change on an individual unit, for example, a large grade change could result from a review of marking that also uncovered a clerical/administrative error. Finally, there are some cases where in addition to the post-results review, special consideration was applied to the outcomes, meaning that the mark change can be due to a combination of the two.

The reasons provided for the mark change in the 558 unit reviews have been classified into 5 broad categories: administrative error; marking error; issue with original moderation; missing scripts/pages, and work not seen/not marked. The most common explanations for a mark change were related to marking errors (51%; Table 11). A number of these explanations refer to the misapplication of levels based mark schemes. This is perhaps not surprising given that the subjects typically associated with a grade change of 2 grades or more are likely to contain extended response items that use levels of response mark schemes. Issues with original moderation accounted for 39% of explanations given for reviews. Where an administrative error occurred, the reasons for the changes varied considerably and included the following: errors inputting marks; an administrative error resulting in a script not being fully marked; a student incorrectly marked as absent; and students' marks wrongly recorded as those of other students with similar names.

²⁰ <https://www.gov.uk/government/consultations/changes-to-regulations-for-enquiries-and-appeals>

Table 11: *Reasons for mark changes by review (categorisation based on explanation provided by exam board)*

Reason	Number of reviews	% of reviews
Administrative error	43	8
Issue with original moderation	220	39
Marking error	282	51
Missing script/pages	8	1
Work not seen/not marked	5	1
Total	558	100

References

Sutch, T. and Wilson, F. (2013). *Reaching for the A*: Exploring the extent and effect of resitting at A-level*. Research Matters: A Cambridge Assessment Publication, 16, 40-48.

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