

Summer 2017 GCSE, AS and A level exams

A summary of our monitoring



August 2017

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This document summarises the actions we have taken in monitoring the summer 2017 GCSE, AS and A level examinations, a summary of out of tolerance awards, and a summary of actions taken to address the more serious question paper errors.

Maintaining standards

Our aim in monitoring the GCSE, AS and A level awards is to achieve a level playing field for students, so that it is no easier or harder to achieve a grade in a subject with one exam board than another. To do this, we agree with exam boards the basis for statistical predictions using prior attainment for the cohort: AS and A level predictions are based on GCSE prior attainment, and GCSE predictions are based on Key Stage 2 prior achievement. We then monitor how closely the exam boards' results are to those predictions.

As in previous years, we set reporting tolerances around those predictions for legacy and non-reformed qualifications, and exam boards were required to provide additional evidence to support any awards that were out of tolerance. For reformed GCSE, AS and A level awards, we agreed that exam boards should meet predictions as closely as possible. Again, it was possible for exam boards to set boundaries that led to an award away from prediction but they had to provide supporting evidence to do so. Section 4 of this report provides further details on the subjects where a legacy or unreformed qualification was out of tolerance this summer, and the subjects where a reformed qualification was not as close as possible to prediction.

We pay close attention to the way in which different exam boards' grade standards in a subject are aligned. Ahead of results being issued, we meet with the exam boards to review the emerging results. This enables us to judge whether standards have been maintained at overall subject level. Where we believe that exam boards' grade standards are not aligned within a subject, we have the power to require them to bring their award into line with other boards. We did not need to take any action to intervene in awards this summer.

Ahead of this summer's awards in the new GCSEs, we discussed with exam boards the qualifications that would be used as the baseline to set standards in the new 9-1 GCSEs. In recent years, there have been substantial entries for international GCSEs in English language and we considered whether that the baseline for 2017 GCSEs ought to include international GCSEs in 2016. We weighed up the arguments for and against, and concluded that the predictions for the reformed GCSEs should be based on GCSE outcomes in 2016 as it was the GCSE standard that was to be maintained. We wrote to exam boards to explain our decision.

Setting standards in new GCSE, AS and A level qualifications

In England, there were new GCSE, AS and A level qualifications in some subjects this summer.¹ For the new qualifications, we agreed with exam boards that they should carry forward standards by using statistical predictions. Our intention was that, in general, a student who would have achieved a particular grade on the previous qualification would achieve the same or equivalent grade on the new qualification.

Statistical predictions are the most effective way to carry forward grade standards to new qualifications, so that students in the first cohort of a new qualification are not unfairly disadvantaged. However, in the reformed qualifications, senior examiners were also asked to check whether the quality of student work at the grade boundaries suggested by the statistical predictions was acceptable (at grade A or E for AS and A level, and at grade 7, 4 and 1 for GCSE). To ensure that exam boards were following these requirements in the same way, we worked with exam boards to develop a set of principles, with which they all agreed.²

¹ There were also new qualifications awarded in Wales and Northern Ireland this summer. However, we do not regulate these new qualifications so they are not part of our monitoring.

² See appendix 3 of the data exchange document

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/620964/Summer_2017_data_exchange_procedure.pdf

Question paper errors

We expect exam papers to be error-free. But we recognise that the production of over 2,200 question papers is a complex process which can be subject to human error. When errors happen, we expect the exam board to do everything it can to minimise the impact on students.

This summer, the small number of errors as a proportion of the total number of papers was similar to previous years. We monitored closely the actions that the exam boards took to minimise the impact of the errors. We will report in more detail on errors when we report on the summer exam series.

Every error is different, because of where it is in the paper, the number of marks involved, whether it's an optional question, and so on. This means there is no one solution that works for all errors. Exam boards have a range of possible options available to them, including adapting the marking to take account of students who might approach the question differently because of the error, adjusting the marks or giving all students full marks for the affected question, and we expect them to use those appropriately to minimise the impact on students.

The most serious and unacceptable error this summer occurred in OCR's GCSE English literature Paper 2 (J352/02). In this paper, students were required to answer one question in Section B from a choice of Shakespeare plays and one question in Section A on poetry. Both questions were worth 40 marks each. Question 4 on *Romeo and Juliet* asked "How does Shakespeare present the ways in which Tybalt's hatred of the Capulets influences the outcome of the play?" However, "Capulets" should have read "Montagues". OCR did not spot before the exam was taken.

This was an optional question and was attempted by just over 4,000 of the 14,000 students entered for OCR GCSE English literature. OCR adjusted the mark scheme so that students would be rewarded if they answered the question as intended (Montagues) or as it was written (Capulets). OCR carried out detailed analysis of the marks students achieved on the question to see whether students' marks were in line with their marks on other questions in Papers 1 and 2. They also did the same for question 5, the alternative question on *Romeo and Juliet* (because students who were confused by the error might have felt they had no choice but to answer the alternative question). This analysis suggested that some students had been adversely affected by the error. OCR therefore calculated an 'assessed mark' for question 4 and question 5, based on their marks on other questions on Paper 1 and Paper 2, and awarded that mark where it was higher than the mark students had been given for their response to the question.

We monitored OCR's actions very closely, we reviewed their analysis and we observed the award meeting to set grade boundaries. We concluded that OCR's actions to ameliorate the impact of the error were appropriate.

In the English literature error detailed above, most students were able to provide a response to the question. However, there were also a small number of errors where students were unable to answer the question, either because there was no correct answer from the available information, or because vital information was missing. In these cases, which were for relatively small mark totals, exam boards mitigated the impact on students by discounting the question and giving every student the marks for that question.

There were also a number of errors where the exam board's analysis showed that there had been little or no impact on students' ability to answer the question. In some cases, exam boards adjusted the marking to accommodate a wider range of responses, but in other cases they did not need to take any action.

Summary of awarding outcomes

Exam boards report data to us from each of their awards³. For legacy and unreformed qualifications, where the actual and predicted outcomes for a specification differ beyond a given reporting tolerance (that depends on entry size), the exam board must inform us and provide additional information to support an out of tolerance award.

The reporting tolerances for legacy and unreformed qualifications are as follows.

Matched entry ⁴	Reporting tolerance
500 or less	Not applicable
501 – 1,000	±3%
1,001 – 3,000	±2%
3,001 or more	±1%

The above reporting tolerances apply to the following grades:

- GCSE – grades A and C
- AS – grade A
- A level – grade A

For A*, the allowable tolerance between predicted and actual outcomes is ± 2%.⁵

Where proposed outcomes were outside the reporting tolerance, at one or more grades, these were reported to us.

For reformed GCSE, AS and A level qualifications where the matched entry was greater than 500 and outcomes were not as close as possible to the prediction, the exam board had to inform us and provide additional information to support the award.

³ More detail on the reporting procedures and tolerances can be found in our data exchange procedures document.

⁴ Matched entry refers to the number of students who can be matched to their prior attainment (GCSE or Key Stage 2).

⁵ For qualifications where there were more than 500 matched entries and more than 100 of the matched entries obtained grade A cumulative overall. The only exception to this is A level French, German and Spanish, where the reporting tolerance is for there to be no decrease on outcomes compared to prediction.

This applied to the following grades:

- GCSE – grades 9, 7 and 4
- AS – grades A and E
- A level – grades A*, A and E

This summary includes only AQA, OCR, Pearson and WJEC/Eduqas awards.⁶ Prior to 2016 we have also reported out of tolerance awards from CCEA. However, we do not regulate GCSEs, AS or A levels awarded in Northern Ireland and CCEA no longer offers its qualifications to students in England.

For comparison, a summary of out of tolerance awards for 2016 is reported in Appendix 1.

Table 1. Total number of specifications reviewed in 2016 and 2017 from AQA, OCR, Pearson and WJEC/Eduqas

	2017				2016			
	Overall	A level	AS	GCSE	Overall	A level	AS	GCSE
Number of awards reviewed	772	243	280	249	702	190	263	257
Number of awards reviewed against a prediction	439	125	118	196	526	131	176	208
Number of awards outside of reporting tolerances or not as close to prediction as possible	27	5	3	19	33	2	4	27

Table 2 shows the out of tolerance awards for legacy and unreformed A level qualifications at grades A* and A, and our classification of the evidence provided by the respective exam board for the out of tolerance award, according to the reasons outlined as part of the summer 2017 data exchange procedures.⁷

⁶ As we do not regulate reformed GCSE, AS and A level qualifications in Wales, these qualifications are not part of our monitoring.

⁷ <https://www.gov.uk/government/publications/data-exchange-procedures-for-a-level-gcse-level-1-and-2-certificates/reviewing-gcse-outcome-data-received-from-awarding-organisations-as-part-of-the-data-exchange-procedures-november-2015>

In summary, the classifications are as follows:

- Technical – a technical reason for being out of tolerance, such as where it is not possible to meet predictions for all grade boundaries in a specification
- Aligning standards – where exam boards have evidence to support an adjustment to standards
- Cohort – where the cohort for a specification is different from previous years in a way that might make predictions less reliable
- Other – any other relevant factor

Table 2. A level (unreformed and legacy) out of tolerance specifications

	Reporting tolerance	Difference between actual and predicted outcome		Rationale
		A*	A	
Mathematics	1% (2% at A*)	Above		Technical
German	3% (2% at A*)		Above	Cohort

Table 3 shows the reformed A level awards that were not as close to prediction as possible and our classification of the evidence provided by the respective exam board for each award. Reformed A level qualifications were available in 13 subjects⁸ this summer.

Table 3. A level (reformed) specifications not as close as possible to prediction

	Grade			Rationale
	A*	A	E	
Chemistry			Below	Cohort
Computer science			Below	Cohort
English language			Below	Cohort

Table 4 shows the out of tolerance awards for legacy and unreformed AS qualifications at grade A, and our classification of the evidence provided by the respective exam board for the out of tolerance award, according to the reasons outlined as part of the summer 2017 data exchange procedures.

⁸ Art and design, biology, chemistry, computing, economics, English language, English language and literature, English literature, history, physics, psychology and sociology.

Table 4. AS (unreformed and legacy) out of tolerance specifications

	Reporting tolerance	Difference between actual and predicted outcome		Rationale
		A		
Religious studies	2%	Below		Cohort

Table 5 shows the reformed AS awards that were not as close to prediction as possible and our classification of the evidence provided by the respective exam board for each award. Reformed AS qualifications were available in 24 subjects⁹ this summer.

Table 5. AS (reformed) specifications not as close as possible to prediction

	Grade		Rationale
	A	E	
Art and design	Below		Technical
Art and design		Above	Cohort

Table 6 shows the out of tolerance awards for legacy and unreformed GCSE qualifications at grades A*, A and C, and our classification of the evidence provided by the respective exam board for the out of tolerance award, according to the reasons outlined as part of the summer 2017 data exchange procedures.

Table 6. GCSE (unreformed and legacy) out of tolerance specifications

	Reporting tolerance	Difference between actual and predicted outcome			Rationale
		A*	A	C	
Biology	1% (2% at A*)		Above		Other factor
Dance	1% (2% at A*)			Above	Aligning standards
D&T electronic products	2%		Above	Above	Cohort
Engineering	1% (2% at A*)			Above	Aligning standards

⁹ Art and design, biology, chemistry, computing, economics, English language, English language and literature, English literature, history, physics, psychology and sociology (phase 1 reform subjects); Classical Greek, dance, drama and theatre, French, geography, German, Latin, music, physical education, religious studies, Spanish (phase 2 reform subjects).

Performing arts	2%	Above			Technical
Religious studies A	1% (2% at A*)	Above	Above	Above	Technical
Classical civilisation	3% (2% at A*)	Above	Above		Cohort
Further add science A	3% (2% at A*)	Below	Below	Below	Technical
Latin	2%	Above	Above	Above	Aligning standards
Media studies	1% (2% at A*)			Above	Cohort
Arabic	3% (2% at A*)	Below	Below		Cohort
Computer science	1% (2% at A*)		Below		Cohort
Urdu	3% (2% at A*)	Above			Technical
Additional science	1% (2% at A*)			Below	Cohort
D&T product design	2%			Above	Cohort
Home economics: child dev	2%		Above	Above	Cohort
Home economics: food	2%			Above	Cohort
Science A	2%			Below	Cohort

Table 7 shows the reformed GCSE awards that were not as close to prediction as possible and our classification of the evidence provided by the respective exam board for each award. Reformed GCSE qualifications were available in three subjects¹⁰ this summer.

Table 7. GCSE (reformed) specifications not as close as possible to prediction

	Grade			Rationale
	9	7	4	
Mathematics			Below	Cohort

¹⁰ English language, English literature and mathematics.

Appendix 1

A level out of tolerance specifications 2016

	Reporting tolerance	Difference between actual and predicted outcome		Rationale
		A*	A	
Art and design	1% (2% at A*)		Above	Technical
Physical education	3% (2% at A*)		Above	Technical

AS out of tolerance specifications 2016

	Reporting tolerance	Difference between actual and predicted outcome		Rationale
		A		
Communications and culture	1%	Above		Technical
Chemistry	3%	Below		Technical
Economics	2%	Below		Technical
History	2%	Below		Technical

GCSE out of tolerance specifications 2016

	Reporting tolerance	Difference between actual and predicted outcome			Rationale
		A*	A	C	
Art and design (All)	1% (2% at A*)			Above	Technical
Methods in mathematics	2%	Above	Above		Cohort
Performing arts	1% (2% at A*)			Above	Technical
Dance	1% (2% at A*)			Above	Aligning standards
Religious studies A	1% (2% at A*)	Above	Above	Above	Technical
Further add science	1% (2% at A*)	Above	Below	Below	Technical
Expressive arts	3% (2% at A*)			Above	Technical
Music	1% (2% at A*)			Above	Technical
Media studies	1% (2% at A*)			Above	Technical
Classical civilisation	3% (2% at A*)		Above	Above	Cohort
Latin	2%	Above	Above	Above	Aligning standards

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Computing	1% (2% at A*)			Below	Cohort
Further add science A	3% (2% at A*)	Below	Below	Below	Technical
Computer science	2%	Below	Below	Below	Cohort
Arabic	3% (2% at A*)	Below	Below		Cohort
Further add science	1% (2% at A*)		Below	Below	Technical
Home economics: child dev	2%		Above	Above	Cohort
Drama	1% (2% at A*)			Above	Cohort
Art and design (all)	1% (2% at A*)			Above	Technical
D&T product design	2%		Above	Above	Cohort
Mathematics	1% (2% at A*)			Below	Cohort
Home economics: food	2%			Above	Cohort
Science A	1% (2% at A*)			Below	Cohort
Computer science	2%		Below	Below	Cohort
Health and social care	3% (2% at A*)	Above	Above	Above	Cohort
Applications of mathematics	3% (2% at A*)		Above		Cohort
Methods in mathematics	3% (2% at A*)			Above	Cohort

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Any enquiries regarding this publication should be sent to us at:

Office of Qualifications and Examinations Regulation
Spring Place
Coventry Business Park
Herald Avenue
Coventry CV5 6UB

Telephone 0300 303 3344
Textphone 0300 303 3345
Helpline 0300 303 3346