

GCSE 2012

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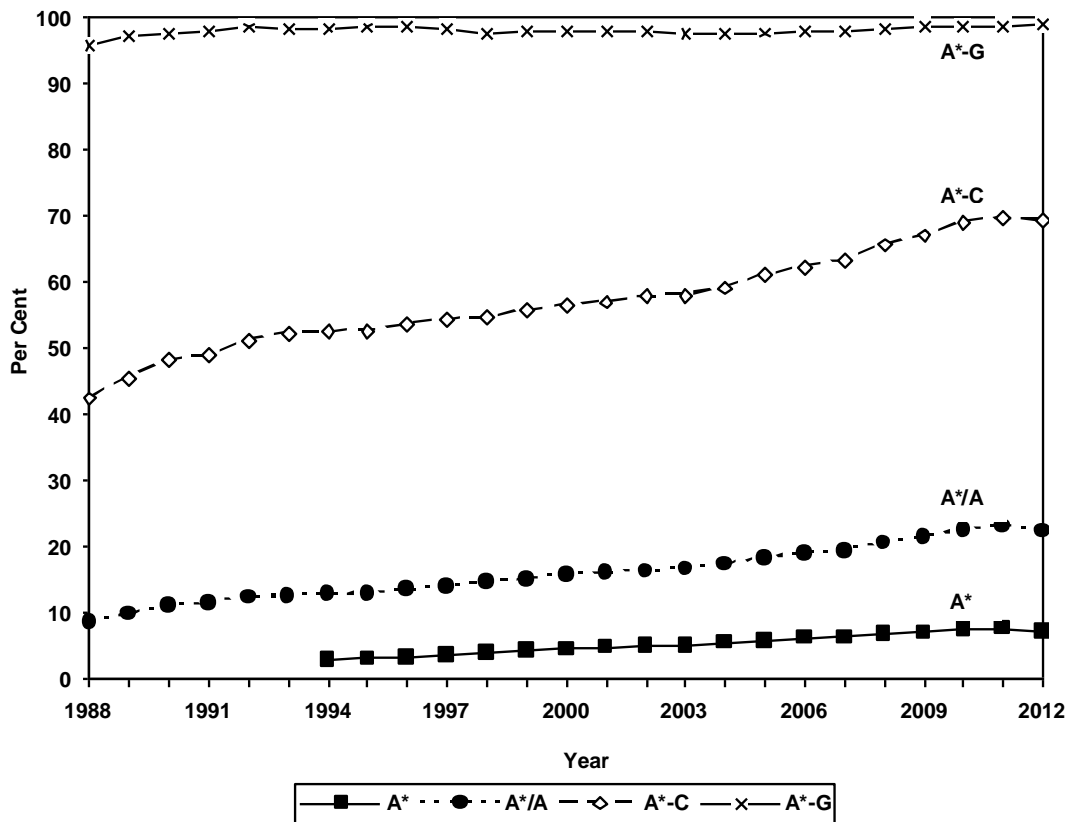
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1. Trends

- 1.1 The GCSE results published on 23 August 2012 have been like no others. From the moment of their release there was turmoil. It was only quieted when a judicial review¹, called by an alliance of pupils, schools, councils and teacher unions, in a judgement issued on 13 February 2013, determined that Ofqual and the exam boards had acted lawfully. There has nevertheless been considerable fallout. A number of pupils and schools feel cheated, Ofqual is making immediate changes to the GCSE examinations, and the separation of GCSEs in England, Wales and Northern Ireland is on the cards.
- 1.2 Charts 1.1 and 1.2 give the bare bones of the results. They show that in 2012, most unusually, there were falls in the percentages of entries awarded A* grades, A*/A grades and A* - C grades. Only the overall total of graded entries, A*-G, continued to nudge upwards. After years of unbroken increases (A*-C had risen from 42.5% in 1988 to 69.8% in 2011), the falls in 2012 came as quite a shock.

Chart 1.1: Trends in GCSE Passes



- 1.3 What seems to have happened is that recently formed regulator, Ofqual², under its newly appointed Chief Executive³, Glenys Stacey, homed in on grade inflation.

¹ Judicial Review before Lord Justice Elias and Mrs Justice Sharp, Neutral Citation Number: [2013] EWHC 211 (Admin), Case Nos: CO/11409/2012 and CO/11413/2012, Date 13/02/2013.

² Ofqual was budded off from the Qualifications and Curriculum Authority in April 2008 but remained part of it till April 2010 when it became fully independent.

³ March 2011.

Ofqual's chosen method was 'comparable outcomes' by which Key Stage 2 results are used to adjust the grade boundaries in the GCSE examination. Using the KS2 results as a predictor, it is claimed, is the best means of ensuring consistency between the different subjects and from year to year. In effect, it becomes very similar to norm referencing in which the proportions of the various grades awarded are pre-set, but it differs in that there is the opportunity to vary those percentages in response to other evidence. Thus after years of unbridled increases a tough new regulator came in clear that her main function is to maintain standards.

Chart 1.2 Data for Trends in GCSE Passes

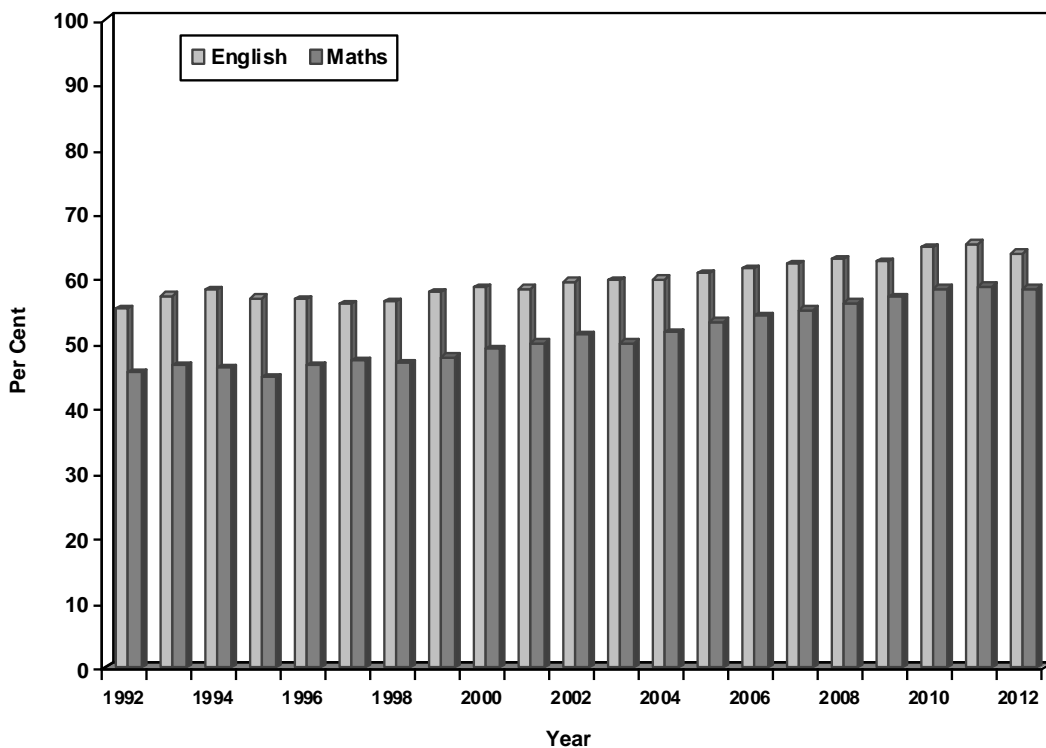
Year	A*	A*/A	A*-C	A*-G	Entries (millions)
1988	-	8.6	42.5	95.8	-
1989	-	9.9	45.6	97.2	-
1990	-	11.1	48.3	97.5	-
1991	-	11.6	49.0	97.9	-
1992	-	12.5	51.3	98.6	5.18
1993	-	12.7	52.4	98.2	4.96
1994	2.9	12.9	52.6	98.5	5.16
1995	3.2	13.0	52.7	98.6	4.97
1996	3.4	13.6	53.7	98.7	5.08
1997	3.6	14.0	54.4	98.5	5.35
1998	4.1	14.7	54.7	97.7	5.41
1999	4.4	15.2	55.8	97.9	5.49
2000	4.6	15.8	56.6	97.9	5.48
2001	4.9	16.1	57.1	97.9	6.63
2002	5.0	16.4	57.9	97.9	5.66
2003	5.1	16.7	58.1	97.6	5.73
2004	5.6	17.4	59.2	97.6	5.87
2005	5.9	18.4	61.2	97.8	5.74
2006	6.3	19.1	62.4	98.1	5.75
2007	6.4	19.5	63.3	98.0	5.83
2008	6.8	20.7	65.7	98.4	5.67
2009	7.1	21.6	67.1	98.6	5.47
2010	7.5	22.6	69.1	98.7	5.37
2011	7.8	23.2	69.8	98.8	5.15
2012	7.3	22.4	69.4	99.0	5.23

1.4 Inevitably, there were teething problems. In the eye of the storm was GCSE English. Here three new qualifications were examined for the first time – English Language, English Literature and English. They were modular and in English Language and English controlled assessment, marked by the teachers themselves, counted for 60 per cent of the award. Maths and English (English Language or English) are the cornerstones of the main measure by which secondary schools are held to account, five GCSEs above C. Failure to get above the crucial threshold can have serious consequences for a school, in extreme cases the head losing his/her job

and the school being closed. Maths, unlike the English exams, has no controlled assessment.

- 1.5 Charts 1.3 and 1.4 trace the pass rates for maths and English from 1992. Chart 1.3 concentrates on passes at grade C and above. While these fell in both subjects in 2012, the drop was much steeper in English. In maths the percentage was the same as in 2010, but in English it fell well below that. If the pass rate, in terms of A*-C grades, in English in 2012 had been the same as that in 2011, 1.5 percentage points higher, an extra 10,000 pupils would have got the crucial C grade. Chart 1.4 disaggregates the higher grades and show that the percentage of A* grades in maths actually rose.

Chart 1.3: English and Maths A*-C Grades in GCSE



- 1.6 There was no complaint about the maths results, but those in English were hotly disputed. Ofqual carried out an immediate investigation, and in an interim report published on 31 August (only eight days after the results had been released), it concluded that the grades awarded in June were right, but those in January were generous. Since, however, those grades had already been given out following submission in January, Ofqual decided not to call them in to lower them. Exceptionally, a re-sit free of charge in November was offered to those disappointed by their grades. About 30 per cent of those receiving a D in August passed at grade C and above. These results have not been included in Chart 1.3 which shows only the results released in August.
- 1.7 Ofqual’s report did not satisfy the complainants, particularly those schools where results fell well below expectations, and there was some questioning of whether it was appropriate for Ofqual to investigate itself. Ofqual responded by undertaking a

more detailed review and in a second report published on 2 November developed a fuller picture of what had happened. It reports that only relatively few candidates submitted controlled assessment in January and the check against Key Stage 2 results proved to be inadequate to ensure that the grades were to standard. It reiterated that some over-grading had occurred.

Chart 1.4.: English and Maths Grades

Year	English			Maths		
	A*	A*/A	A*-C	A*	A*/A	A*-C
1992	-	9.6	55.3	-	9.0	45.4
1993	-	10.2	57.3	-	9.0	46.6
1994	1.8	10.5	58.2	1.9	8.9	46.2
1995	1.8	10.8	56.9	1.8	8.3	44.8
1996	2.0	11.0	56.8	2.0	9.0	46.5
1997	2.0	10.7	56.0	2.1	9.6	47.3
1998	2.4	11.5	56.5	2.1	9.9	46.9
1999	2.6	12.3	57.8	2.3	10.3	47.8
2000	2.9	13.2	58.6	2.8	10.7	49.2
2001	3.1	13.6	58.5	2.8	11.1	50.1
2002	2.8	13.5	59.5	3.6	11.9	51.3
2003	3.1	14.3	59.7	3.1	11.6	50.1
2004	3.6	14.7	59.9	4.2	11.8	51.7
2005	3.7	15.1	60.9	4.1	13.0	53.4
2006	3.9	15.2	61.6	4.2	13.2	54.3
2007	3.8	15.3	62.2	4.1	13.7	55.2
2008	4.0	15.5	62.9	4.6	14.5	56.3
2009	4.1	15.6	62.7	4.6	15.4	57.2
2010	4.3	16.0	64.7	5.0	16.2	58.4
2011	4.7	16.8	65.4	5.2	16.5	58.8
2012	3.4	15.0	63.9	5.5	15.4	58.4

- 1.8 January grade boundaries had become known and some teachers applied them to their marking of controlled assessments for June. Given the importance of at least a C to both schools and pupils this led to some pupils being awarded enough marks to achieve a C grade. When Ofqual's procedures found evidence of over-marking for the June submission it went to two of the exam boards (AQA and Edexcel) and required them to raise the bar for controlled assessment. It also required the boundaries for some written papers to be adjusted. The net effect was that some of the schools confidently expecting passes on the basis of information from January were sorely disappointed by the June results.
- 1.9 Ofqual's explanation revealed that the same mark was earning a different grade in June from that in January. This is intrinsically unfair. But it could only be resolved by taking back the January results or by raising those awarded in June. Ofqual pointed out that this would mean a lowering of standards and be unfair to candidates in previous years. It decided to let both results stand. The Welsh Government, also the regulator for GCSE in Wales, took a different view and ordered the Welsh Board

to increase the GCSE English grades for June in line with those of January. This has profound implications for the three-country agreement on GCSE standards, which we will take up in the final chapter.

- 1.10 There was outrage at Ofqual's decision and 167 pupils, supported by 150 schools, 42 councils and six organisations including teacher unions took Ofqual, AQA and Edexcel to a judicial review. Lord Justice Elias and Mrs Justice Sharp took a long time to reach a verdict but when they did it was wholly in favour of Ofqual and the exam boards. The judgement was that the structure of the qualification was at fault and that Ofqual and the boards had acted lawfully. It recognised that the January-June discrepancy meant there was going to be some unfairness whatever was done, and there was no obvious right answer.
- 1.11 For something that had been in the headlines since August the media coverage was strangely muted. The emphatic judgement had taken much of the steam out of the issue. But GCSEs, particularly GCSE English, will never be the same again.
- 1.12 This is true literally. In English a reformed GCSE is to be taught from 2015 with the first examinations in 2017. Until then the arrangements for the present GCSE are to be changed in important ways. The January units are to be graded at the same time as the June units, marking tolerances will be tightened and the future of the speaking and listening assessment is to be reconsidered. It currently comprises a fifth of the assessment, but it is difficult to moderate since, by definition, it does not produce written performance which can be checked. Ofqual is going to consult on certificating 'speaking and listening' separately, recorded on the examination certificate, but no longer contributing to the grade.

2. Entries

- 2.1. The Coalition Government has been exercised by the GCSE subjects that pupils have been choosing or have been steered into by their schools. Soon after coming to power, it announced in September 2010 that it would create a new certificate, the English Baccalaureate, which would bring “special recognition for those students who secure good passes in a balanced range of rigorous qualifications”⁴. The Schools White Paper 2010⁵ provided details of what was to be included: good GCSE or iGCSE passes in English, maths, the sciences, a modern or ancient foreign language, and a humanity such as history or geography.
- 2.2. The White Paper also explained that the EBac would be used as a performance indicator alongside the accountability measure⁶ of five good GCSEs including English and maths. While the award of an actual certificate has not been carried through, the performance indicator has been implemented. It was applied for the first time in the January 2011 publication of the 2010 league tables, amid complaints that this was retrospective and the schools had had no opportunity to adjust. The Government retorted that it would be a very useful baseline.
- 2.3. This year’s results represent the first real opportunity for the EBac to be having a noticeable impact on the subjects studied. It is true that the requirements were only confirmed in autumn 2010 when the pupils will have been starting their courses, but there was still the opportunity to make changes, unlike last year when pupils were already half way through.
- 2.4. Chart 2.1 shows the entries by subject in 2012 compared with those in 2011, and 2011 entries compared with those in 2010. It might have been expected that English and maths which are taken by nearly every pupil would remain steady and that the EBac would have promoted increases in the other subjects of which it consists. But, in fact, there are sharp falls from 2011 in both maths and additional maths. The reasons underline why these comparisons from results-day to results-day are fraught with difficulty and need not accurately reflect shifts in take-up.
- 2.5. In a press release accompanying the publication of results in August 2012, the Joint Council for Qualifications addresses the apparent decline in maths. It identifies the main factor as an additional chance to take the exam in March. When the entries for March are added to those in the summer, it reports that the number of entries has actually increased by 17.6 per cent. There will also be a March examination in 2013, but that will be the last, so a jump in the raw numbers of summer entrants can be expected in 2014. The huge drop in entries for additional maths (down by 74.4%) the JCQ attributes to the exam being only offered by one board, and schools switching to the iGCSE, AS and other qualifications.
- 2.6. Overall the number of entries increased in 2012 by 1.5 per cent in spite of a decrease of 0.5 per cent in the number of 16-year-olds. But another complication is that

⁴ Speech at Westminster Academy by Michael Gove, 6 September, 2010.

⁵ DfE (November 2010). *The Importance of Teaching*. The Schools White Paper 2010. Cm 7980. London: The Stationery Office.

⁶ The essential difference between a performance indicator and an accountability measure is that the former is intended to inform parents and others, while the latter has sanctions attached.

entries are not confined to an age cohort; some pupils enter early and people can take the exam latter in life, repeating or for the first time. There are also switches between full and short courses (not shown). The drop in entries overall of 4.2 per cent in 2011 compares with a reduction in the cohort size of 2.6 per cent.

Chart 2.1: Changes in Entries (thousands) 2011-12

Subject	2010	2011	2012	%Change 2010-2011	%Change 2011-2012
Science	449.7	406.0	552.5	-9.7	36.1
Other Mod Languages	32.7	26.3	29.8	-19.6	13.3
ICT	61.0	47.1	53.2	-22.8	13.0
Biology	129.5	147.9	166.2	14.2	12.4
Chemistry	122.0	141.7	159.1	16.1	12.3
Physics	120.5	140.2	157.4	16.3	12.3
Spanish	67.7	66.0	72.6	-2.5	10.0
Social Science Subjects	30.3	34.9	37.9	15.2	8.6
Religious Studies	188.7	222.0	239.1	17.6	7.7
Classical Subjects	15.8	14.3	15.3	-9.5	7.0
Economics	3.1	3.7	3.9	19.4	5.4
Geography	194.6	180.7	187.0	-7.1	3.5
English	705.2	649.6	669.5	-7.9	3.1
History	221.3	218.6	223.0	-1.2	2.0
Business Studies	77.4	69.6	70.5	-10.1	1.3
Other Sciences	9.7	9.3	9.4	-4.1	1.1
Other Technology	1.3	1.4	1.4	7.7	0.0
French	177.6	154.2	153.4	-13.2	-0.5
Welsh First Lang	5.4	5.3	5.2	-1.9	-1.9
Art & Design	188.2	183.2	178.9	-2.7	-2.3
Welsh Lit	4.2	4.1	4.0	-2.4	-2.4
Welsh Second Lang	10.3	10.0	9.7	-2.9	-3.0
Home Economics	39.0	38.0	36.7	-2.6	-3.4
Music	51.3	48.1	46.4	-6.2	-3.5
English Lit	513.5	490.1	468.2	-4.6	-4.5
Irish	2.2	2.0	1.9	-9.1	-5.0
Design and Technology	287.7	253.6	240.7	-11.9	-5.1
Statistics	69.5	53.4	50.6	-23.2	-5.2
Drama	87.3	80.9	76.6	-7.3	-5.3
Additional Science	352.5	306.3	290.0	-13.1	-5.3
German	70.2	60.9	57.5	-13.2	-5.6
Performing/Expressive Arts	24.1	22.2	20.8	-7.9	-6.3
PE	123.9	108.4	101.6	-12.5	-6.3
Media/Film/TV	67.8	67.4	61.7	-0.6	-8.5
Maths	762.8	772.9	675.8	1.3	-12.6
Business & Comm Systems	31.1	18.6	15.6	-40.2	-16.1
Humanities	15.5	17.3	13.8	11.6	-20.2
Maths (additional)	17.2	13.3	3.4	-22.7	-74.4
All Subjects¹	5,378.2	5,152.0	5,225.3	-4.2	1.4

1. Includes 'all other subjects' not show separately.

2.7. Some of the differences between 2011-12 and 2010-2011 in Chart 2.1 may be indications of the impact that the EBac is having. Entries in geography, which had

- been continually dropping, actually went up in 2012. It can also be argued that language requirement of the EBac is having an effect. ‘Other modern languages’ (where entries for Arabic, Chinese, Persian, Polish, Portuguese and Italian all rose), Spanish and classical subjects (which includes Latin and Greek) increased after falls in 2010-11, and the rate of decline in French and German was abated.
- 2.8. In contrast, falls greater than the reduction in cohort size occurred in both years in art & design, music, English literature, drama and performing/expressive arts indicating perhaps that the EBac is tending to draw pupils away from the creative arts. On the other hand, fears for religious studies, the social sciences and economics were not borne out. There were further increases in these subjects in 2012 after rises in 2011.
 - 2.9. Many of the ups and downs between 2011 and 2012 seem to have been part of established or emerging trends. The revival of the separate sciences (which were almost wiped out by the 1988 curriculum and its associated science GCSEs) continues apace, with substantial percentage increases between both 2010 and 2011 and 2011-12. Some of those increases have been at the expense of the second science qualification formed when the double award was divided.
 - 2.10. Other subjects are also in retreat. Design and technology (no longer bolstered by being compulsory to age 16), home economics, (which D&T absorbed), statistics (which unlike maths is not recognised for the EBac), PE, media/film/TV, business and communication systems all went down appreciably in both years.
 - 2.11. So far we have been looking at just two years. Chart 2.2 shows the changes in subject take-up over the past decade. It shows that most of the changes reported on so far are part of longer trends, not just random fluctuations. Over the past decade entry to the separate sciences has increased by more than threefold. This will have reflected a change in attitude in state schools in response to government encouragement. In 2002 entries to GCSEs in biology, chemistry and physics were barely above the total from independent schools, grammars and the leading comprehensive in which they had survived. All modern languages declined over the decade, even ‘other modern languages’ which can be a cheap pass in the mother tongue. German and French were down by more than half. ‘Classical subjects’ barely held its ground.
 - 2.12. Other than biology, chemistry and physics, the successes of the past decade have been religious studies and social sciences where the increases in the past two years build on those in previous years. The recent falls in art & design, English literature, drama appear to be part of long term trends. The same is true of design & technology, home economics, and PE.
 - 2.13. The one EBac subject where there is a clear difference in 2012 is geography. It rose in 2012 against a fall of more than a fifth over the decade as a whole. The apparent staunching of the loss from languages has to be seen in relation to the trends of at least the past decade. Spanish was already on an upward trend and ‘other modern languages’ recovered from a dip in 2011. French and German went down less in 2012, but whether it represents a change in direction awaits the evidence of future years.

Chart 2.2: Changes in Entries (thousands) over last Decade

Subject	2002	2012	%Change 2002-2012
Physics	46.5	157.4	238.5
Biology	49.2	166.2	237.8
Chemistry	47.1	159.1	237.8
Religious Studies	122.6	239.1	95.0
Social Science Subjects ¹	24.8	37.9	52.8
Other Technology	1.0	1.4	40.0
Spanish	58.0	72.6	25.2
Welsh First Lang	4.5	5.2	15.6
Welsh Lit	3.5	4.0	14.3
History	217.6	223.0	2.5
Classical Subjects ²	15.1	15.3	1.3
English	667.5	669.5	0.3
Other Mod Languages	30.9	29.8	-3.6
Music	48.2	46.4	-3.7
Maths	709.0	675.8	-4.7
Home Economics	40.7	36.7	-9.8
PE	116.1	101.6	-12.5
Art & Design	204.8	178.9	-12.6
English Lit	543.5	468.2	-13.9
Welsh Second Lang	11.7	9.7	-17.1
Other Sciences	11.9	9.4	-21.0
Economics	5.0	3.9	-22.0
Geography	240.3	187.0	-22.2
Drama	99.5	76.6	-23.0
Business Studies	101.6	70.5	-30.6
Humanities	20.9	13.8	-34.0
Design and Technology	433.6	240.7	-44.5
ICT	116.0	53.2	-54.1
German	126.2	57.5	-54.4
French	338.5	153.2	-54.7
All Other Subjects	114.5	29.1	-74.6
All Subjects³	5662.4	5225.2	-7.7
Bus & Com Systems	-	15.6	-
Irish	-	1.9	-
Maths (additional)	-	3.4	-
Media/Film/TV	-	61.7	-
Performing /Expressive Arts	-	20.8	-
Science Double Award	511.9	-	-
Science Single Award	68.4	-	-
Science	-	552.5	-
Additional Science	-	290.0	-
Statistics	-	50.6	-

1. Includes social science and social science subjects published separately in 2002.

2. Includes Latin and Greek.

3. Includes in 2002 double award science counting as two entries and in 2012 vocational GCSEs not listed separately.

Chart 2.3: A Longer View of Entries

Subject¹	1992²	2012	%Change 1992-2012
Other Mod Languages	1.6	29.8	1762.5
Social Science Subjects ³	5.4	37.9	601.9
Religious Studies	95.8	239.1	149.6
Spanish	29.2	72.6	148.6
Chemistry	72.2	159.1	120.4
Physics	78.3	157.4	101.0
Biology	103.2	166.2	61.0
Music	32.7	46.4	41.9
Maths	556.2	675.8	21.5
History	207.4	223.0	7.5
English	641.9	669.5	4.3
English Lit	450.3	468.2	4.0
Science	572.3	552.5	-3.5
Art & Design	214.4	178.9	-16.6
Classical Subjects ⁴	19.4	15.3	-21.1
Business Studies	97.3	70.5	-27.5
Geography	268.2	187.0	-30.3
German	98.9	57.5	-41.9
French	300.9	153.2	-49.1
Home Economics	108.0	36.7	-66.0
Economics	19.8	3.9	-80.3
All Subjects⁵	5180.8	5225.2	0.9
Bus & Com Systems	-	15.6	-
Computer Studies	45.1	-	-
CDT	149.4	-	-
Design and Technology	-	240.7	-
Drama	-	76.6	-
Humanities	-	13.8	-
ICT	-	53.2	-
Irish	-	1.9	-
Maths (additional)	-	3.4	-
Media/Film/TV	-	61.7	-
Performing /Expressive Arts	-	20.8	-
PE	-	101.6	-
Science Double Award ³	-	-	-
Science Single Award	-	-	-
Additional Science	-	290.0	-
Statistics	-	50.6	-
Welsh First Lang	-	5.2	-
Welsh Second Lang	-	9.7	-
Welsh Lit	-	4.0	-
Other Sciences	-	9.4	-
Other Technology	-	1.4	-

1. Other subjects included in the total but not shown separately.

2. Mode 1 Only.

3. Includes social science and social science subjects published separately in 2002.

4. Includes Latin and Greek published separately in 1992.

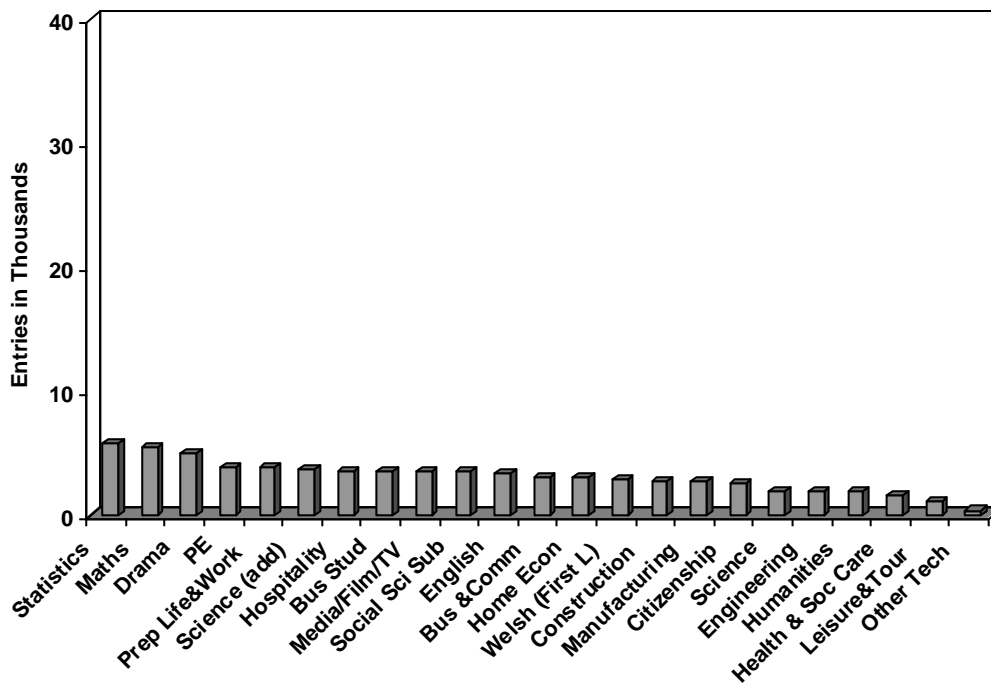
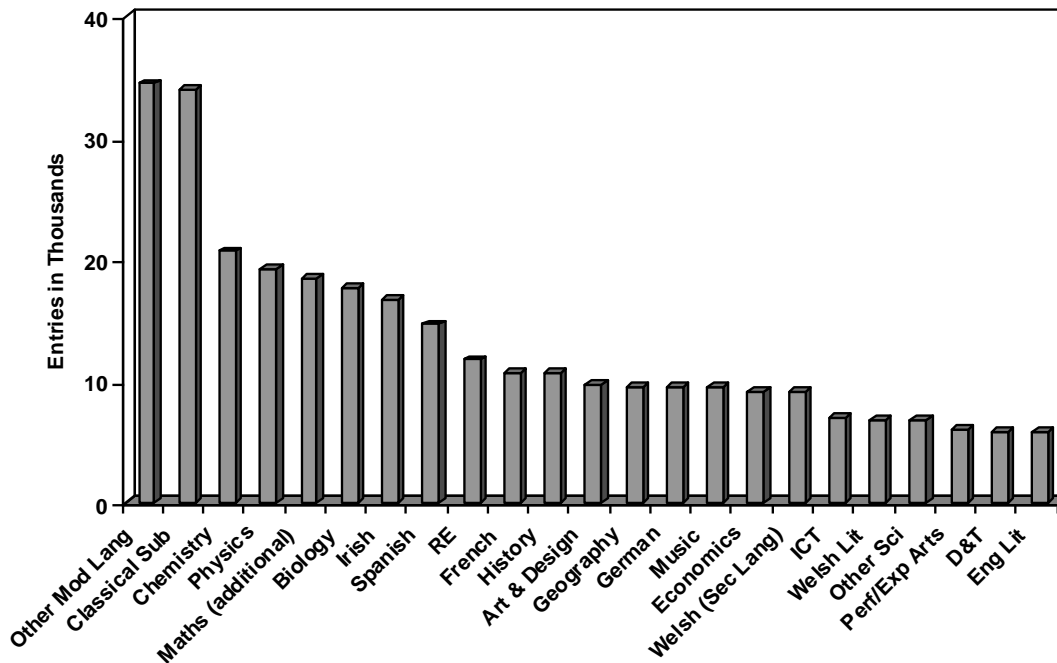
5. Includes in 2012 vocational GCSEs(previously GNVQs) which are not listed separately.

- 2.14. The trends are brought out more in Chart 2.3 which shows what happened over a space of two decades. There were major falls in economics, home economics, French, German and geography. The winners have been ‘other modern languages’ which barely existed as a category in 1992, social science subjects, religious studies, and Spanish. Biology, Chemistry and Physics increased overall, but notice they declined from 1992 to 2002. Music shows a substantial gain over the twenty years and there is an increase too in English literature, but as Chart 2.1 shows this growth has not continued in the past two years. Chart 2.1 also shows some small recovery in economics and ICT from massive falls evident from Chart 2.3.
- 2.15. Comparing entries in 1992, 2002 and 2012 is not always comparing like with like. But it is possible to see some swing back to geography and some slowing down in the leaching from languages, which may be associated with the EBac. It is possible to interpret some of the other changes as a response to other policies. The pattern for biology, chemistry and physics reflects their replacement by combined science, with its associated GCSEs, as the subject in the national curriculum. Subsequent promotion of separate sciences from 2004 onward, particularly by Gordon Brown when he was at the Treasury, has led to a strong revival. Design and technology was compulsory to age 16 and no longer is. Home economics was incorporated into D&T. Computer studies (the coding) was replaced by ICT (the use of computers) where alongside the GCSE there were vocational qualifications counting for more than one GCSE, in fact as many as four. The lists below total entries in Charts 2.2 and 2.3 show how other subjects have come into being or been discontinued. The successes over the past twenty years have been religious studies and social sciences, with no sign of them being threatened yet by the EBac.

3. Grades

3.1. The overall percentages of Chapter 1 are the aggregates of the awards in many different subjects. Chart 3.1 shows that the percentages of A* grades awarded differed widely in 2012 from 34.5 per cent in 'other modern languages' (often native speakers) to 0.4 per cent in 'other technology'.

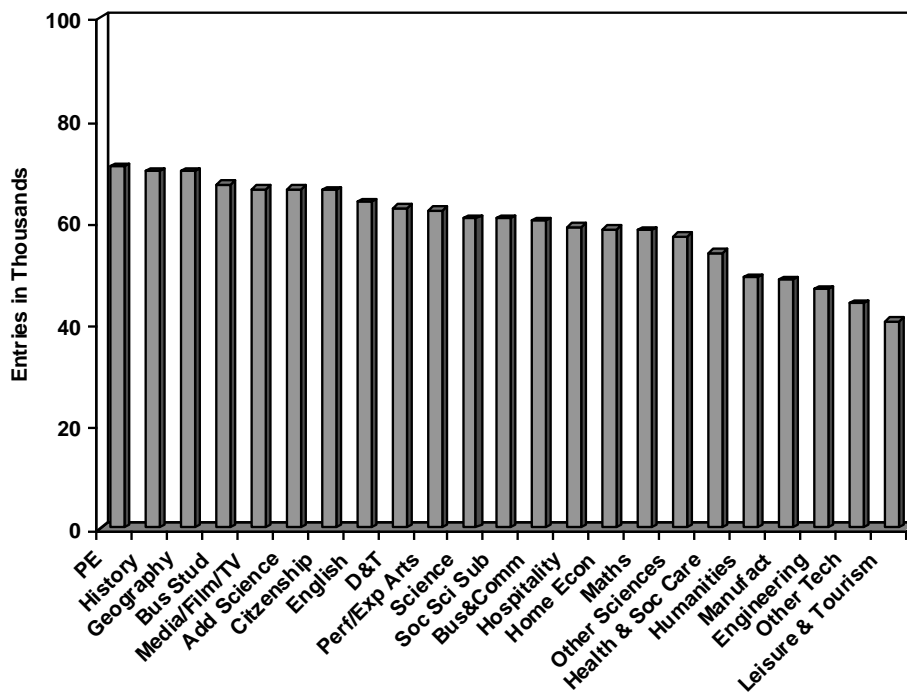
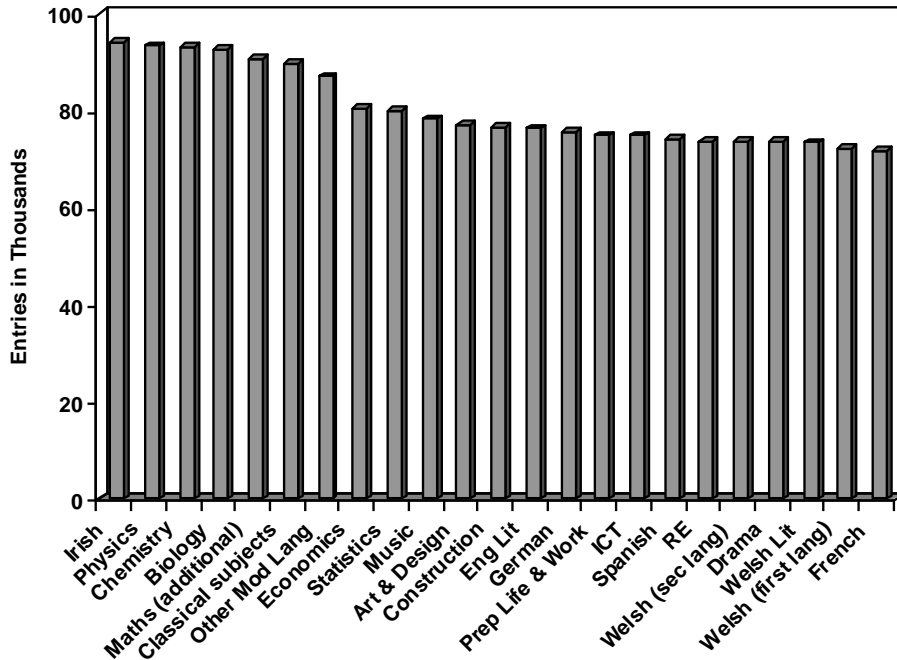
Chart 3.1: Percentage A* Grades in 2012



3.2. In term of a broad pattern, it is the traditional subjects which score highest (classical subjects 34.1%, chemistry 20.7%, physics 19.2%, additional maths 18.5%, biology

17.7%, and also Irish, 16.7%) and the practical subjects, formerly GNVQs, which score lowest (leisure and tourism 1.2%, health and social care 1.6%, engineering 1.9%, manufacturing 2.7% and construction 2.7%). Humanities (1.9%), science (2.0%) and citizenship (2.6%) are also down there.

Chart 3.2: Percentage A*-C Grades



3.3. If these wide differences have been accepted by Ofqual they must reflect how well the entrants for the various subjects did in the comparable outcomes check of Key Stage 2 tests. This implies that children of very different abilities are to be found in

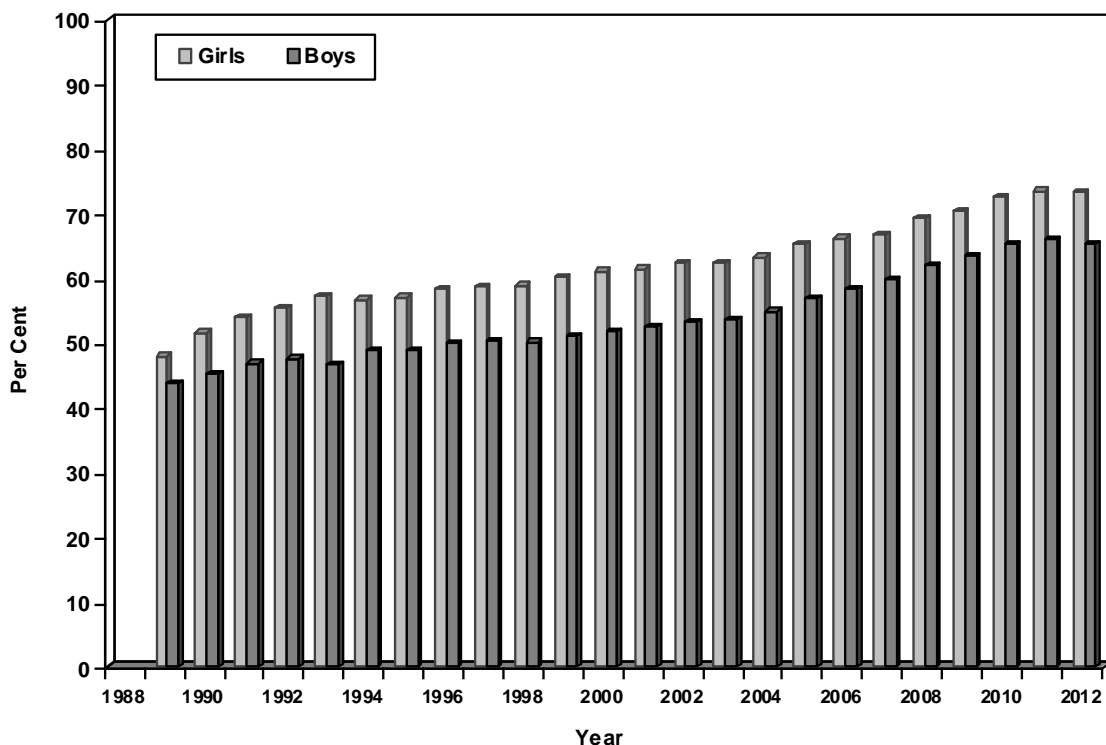
the different subjects. This can be understood in terms of how they get to be entered for the particular subjects. The high scoring subjects tend to be those for which the pupils are selected. This occurs at two levels. First selective schools tend to teach the traditional subjects. But also with additional maths and the separate sciences there is selection within subjects. To be entered for additional maths a pupil will have to have shown real promise at maths. The separate sciences are mainly taken by those with ability and interest in them; other pupils will have been steered into science and additional science, which Chart 3.1 shows have very low percentages of A* grades. The other route to a high percentage of A* is to be a native speaker of a language, as seems to be the case with 'other modern languages' and Irish.

- 3.4. While the distribution of ability across the subjects is understandable, it is seriously bad news for practical subjects, all of which are at the wrong end. In addition to factors like types of school and ability, there also has to be the question of how well it is possible to encapsulate practical subjects within the structure of a GCSE. There could be a tendency to academicize them, and so render them less useful to employers and leave able pupils disinclined to take them.
- 3.5. In Chart 3.2 we show the percentages of candidates achieving at least a C in the various subjects in 2012. This is, of course, crucial to schools since the percentage achieving five or more including English and maths is how the schools are held to account. The broad pattern of A*-C grades is similar to that for A*. Physics, chemistry, biology, additional maths, classical subjects and 'other modern languages' are at the top with the percentages reaching comfortably into the 90s. At the bottom are the practical subjects with leisure and tourism, engineering and manufacturing below 50 per cent. Construction is somewhat different. As we saw in Chart 3.1, a very low percentage got A*grades, but from Chart 3.2 we can see a creditable 76.6 per cent achieved at least a C.
- 3.6. Interestingly, in this mix English and maths, the backbone of the accountability measure, are down in the second half of the table. In English the percentage of A*-C grades is 63.9% and in maths 58.4%. A likely explanation is that, given how important they are, all pupils except those with severe cognitive disabilities will have been entered for them. In contrast, only high ability pupils will have been entered for subjects like physics and additional maths. All pupils are required to study science to the age of 16. Those not selected for biology, chemistry and physics will be put in for science and possibly also additional science. In both the percentages of A*-C grades are of the same order as for English and maths; 60.7 per cent in science and 66.4 per cent in additional science.
- 3.7. The percentages passing English and maths with at least a C grade show how difficult it will be for schools to meet accountability thresholds of 40 or 50 per cent. The practical subjects offer little help since the pass rates there are generally so low. Neither do sexy subjects like media/film/TV offer much comfort. The only cheap passes seem to be in entering pupils from abroad for the languages they grew up with.

4. Gender

- 4.1. One of the striking characteristics of the UK education systems is the big lead girls have over boys in the GCSE examinations. Chart 4.1 illustrates the gap in terms of A* -C grades from 1989 when separate results by gender were first published. Girls opened with a lead of 4.3 percentage points in C grades and above and that more than doubled to 9.2 percentage points in 2002 as the pass rates themselves increased. The gap has fallen back somewhat since then, but in 2012 it was still 7.9 percentage points.

Chart 4.1: Girls and Boys GCSE Grades A*-C



- 4.2. Girls were ahead in the predecessor examination for GCSE A*-C grades, the O-level, but by very much less. What seems to have made the difference is the reliance of GCSE assessment on substantial amounts of coursework. Girls, it is said, typically apply themselves more conscientiously and consistently to school work than do boys, and show themselves to advantage in course work. There are some indications that this is the case. As we shall be showing in Chart 4.3, boys overtook girls when coursework was dropped from the maths examination in 2009.
- 4.3. A related issue is the modularisation of GCSEs. In broad terms, courses can be assessed in two main ways: (i) at the end or (ii) at various stages. The former is called 'linear' and the latter 'modular' or 'unitised'. When the assessment is modular the course itself is split up into chunks, typically four in GCSEs. Modularisation is bound up with course work since subjects where the content was claimed not to be properly assessed in end-of-course examinations, like technology and English, were more likely to adopt modular assessment. For courses beginning in 2009 all GCSE course became modular, but that has now been reversed for courses beginning in September 2012.

4.4. Higher grades are generally obtained in modular assessment, partly through the opportunity to re-sit modules. When A-levels became fully modular in 2002 the pass rate leapt by 4.6 per cent, to the embarrassment of the Chief Executive of the Qualifications and Curriculum Authority and the Secretary of State (who both later resigned, partly in consequence). There was an echo of the pass rate boost in 2012 when the results of the fully modular GCSEs came through and some corrective re-setting of grade boundaries took place, particularly in English.

Chart 4.2: Boys and Girls Performance at GCSE

Year	A*		A*/A		A*-C		Diff
	Boys	Girls	Boys	Girls	Boys	Girls	
1989	-	-	9.1	10.6	43.7	48.0	4.3
1991	-	-	10.3	12.5	45.3	51.6	6.3
1992	-	-	10.8	13.8	46.9	53.9	7.0
1993	-	-	10.8	14.2	47.6	55.4	7.8
1994	2.5	3.2	11.2	14.8	48.8	56.7	7.9
1995	2.7	3.6	11.2	14.9	48.9	57.1	8.2
1996	2.9	3.9	11.7	15.8	49.9	58.3	8.4
1997	3.1	4.2	12.0	16.3	50.3	58.7	8.4
1998	3.4	4.9	12.3	16.9	50.2	58.9	8.7
1999	3.6	5.4	12.7	17.6	51.1	60.2	9.1
2000	3.7	5.6	13.1	18.4	51.9	61.1	9.2
2001	4.0	5.8	13.4	18.7	52.6	61.5	8.9
2002	4.1	5.9	13.7	19.0	53.4	62.4	9.0
2003	4.1	6.0	14.1	19.3	53.6	62.4	8.8
2004	4.6	6.5	14.7	20.0	54.9	63.3	8.4
2005	4.9	6.9	15.6	21.1	57.0	65.2	8.2
2006	5.3	7.3	16.4	21.8	58.5	66.2	7.7
2007	5.4	7.4	16.9	22.1	59.7	66.8	7.1
2008	5.7	7.5	17.9	23.5	62.1	69.3	7.2
2009	6.0	8.2	18.7	24.4	63.6	70.5	6.9
2010	6.3	8.6	19.6	25.5	65.4	72.6	7.2
2011	6.4	9.1	19.8	26.5	66.0	73.5	7.5
2012	6.0	8.7	18.9	25.6	65.4	73.3	7.9

4.5. Chart 4.2 give the data for A*-C grades illustrated in Chart 4.1. In addition, it compares boys' and girls' performance in terms of A* and A*/A. Across the years and across these levels, in aggregate, girls have been ahead throughout the life of GCSE.

4.6. That is not always true of the individual subjects. Chart 4.3 compares boys' and girls' A*-C grades in the two crucial subjects of English and maths. It shows that girls have always enjoyed an enormous lead in English. Having narrowed a little since 2000 it has widened again as English was one of the few subjects in 2009 to adopt 60 per cent controlled assessment (coursework under standard conditions). The huge gap seems to be due to the higher verbal abilities, on average, from an

early age and a preference for course work and modular exams. The regulated lowering of GCSE grades in English in 2012 impacted more on boys.

Chart 4.3: Boys and Girls A*-C in English and Maths

Year	English			Maths		
	Boys	Girls	Gap	Boys	Girls	Gap
2000	50.8	66.4	15.6	48.8	49.7	0.9
2001	50.8	66.2	15.4	49.7	50.6	0.9
2002	52.1	67.0	14.9	50.8	51.8	1.0
2003	52.2	67.4	15.2	49.4	51.1	1.7
2004	52.7	67.1	14.4	50.9	52.6	1.7
2005	53.9	67.9	14.0	52.5	54.4	1.9
2006	54.7	68.6	13.9	53.5	55.0	1.5
2007	55.3	69.2	13.9	54.6	55.8	1.2
2008	56.1	69.4	13.3	55.9	56.8	0.9
2009	56.2	69.3	13.1	57.6	56.8	-0.8
2010	57.9	71.8	13.9	58.6	58.3	-0.3
2011	58.7	72.5	13.8	58.9	58.6	-0.3
2012	56.7	71.3	14.6	58.8	57.9	-0.9

- 4.7. There is some support for suspecting that coursework plays a part in the gender gap in English from the results in maths shown in Chart 4.3. When coursework was dropped from the assessment of the maths GCSE in 2009 what had been a gap in favour of girls swung round with the boys going ahead. This is in line with research that indicates that there is a small advantage to boys, on average, in numerical and spatial skills from an early age.
- 4.8. In looking for sticks to beat the Secretary of State with, a teacher union, the ATL, even heard at their 2013 conference in Liverpool that that the switch from modular to end-of-course examinations due from 2014 “could discriminate against girls” because they are less confident when sitting exams. That is to say nothing about how the GCSE might have been discriminating against boys all these years.
- 4.9. It is obviously a nonsense to deliberately design an examination to favour one gender over another, or one social group over another. Exams should be designed to give an accurate, reliable and valid assessment embodying the intrinsic purposes of the course of study. Examining is not an exact form of measurement, but every precaution must be taken to ensure that it is fair, dispassionate and intrudes as little as possible. If the results are to be used to hold schools to account then it is clearly important to have the examinations set and marked independently of the school. If valid assessment leads to one gender or another, or one social group or another, emerging on top so be it. It does no one any good setting out to fix the results.

5. Countries of the UK

- 5.1. England has improved its pass rate in GCSE at grade C and above compared with both Wales and Northern Ireland. Chart 2.1 shows that Northern Ireland is still well ahead, but England has narrowed the gap from 11.0 percentage points in 2002 to 6.1 percentage points in 2012. Relative to Wales, England has improved by 6.4 percentage points since 2002. From being 2.3 points behind Wales in 2002, England was, in 2012, 4.1 points ahead.

Chart 5.1: Percentage GCSE A*-C by Country

Year	England	Wales	NI	Total
2002	57.4	59.7	68.4	57.9
2003	57.6	59.7	69.0	58.1
2004	58.7	60.7	69.4	59.2
2005	60.8	61.3	71.0	61.2
2006	62.1	62.3	71.7	62.4
2007	63.0	63.0	72.4	63.3
2008	65.5	65.0	74.5	65.7
2009	66.9	65.5	75.1	67.1
2010	69.0	66.4	76.3	69.1
2011	69.8	66.5	74.8	69.8
2012	69.5	65.4	75.6	69.4

- 5.2. England's relative improvement is dramatic, but the real GCSE story for the three countries of the UK in 2012 lies elsewhere. In all there are five GCSE examination boards. AQA, OCR and Edexcel which operate mainly in England, CCEA which operates in Northern Ireland, and the Welsh board, the WJEC, which spans Wales and England. There has been an understanding that they would work to common standards even though they are regulated differently.
- 5.3. Ofqual's remit extends to examinations taken in England including the Welsh board's. But the Welsh board's examinations taken in Wales are currently regulated by the Welsh Government (although an independent regulator, Qualification Wales, is to be set up). In English about 70 per cent of the Welsh board's candidates take the examination in England. It thus finds itself being regulated by both Ofqual and the Welsh Government. They took contrary positions on the 2012 débâcle.
- 5.4. In September 2012 the Welsh Government published a regulatory report on GCSE English which found a drop of 3.9 percentage points for candidates in Wales in passes at grade C and above compared with 2011. It recommended re-grading of the June results to bring them into line with those from January. The Welsh minister for education, Leighton Andrews, then immediately ordered the WJEC to do so within seven days. We have set out in Chapter 1 Ofqual's response which was essentially no raising of the summer grades. The outcome has been that the same mark could have received different grades according to whether the candidate took the examination in England or Wales. The re-grading in Wales led to 2,386 being increased, including about 1,200 crossing the C threshold. These re-gradings have not been taken into account in Chart 5.1.

5.5. The GCSE has hitherto been jointly owned by England, Wales and Northern Ireland working to a common standard. But that is on the verge of collapse. The Northern Ireland board, CCEA had already announced in May 2012 that it would no longer offer its examinations to candidates in England. But conditions imposed by the Welsh Government in the aftermath of GCSE English 2012 will mean that the Welsh board if it wishes to continue to serve candidates in England (and remember about 70 per cent of its 2012 candidates in English sat the examination in England) will have to run different examinations in the two countries. With separate examination boards and different regulators it appears that England, Wales and Northern Ireland will soon be going their separate ways in the examinations for 16-year-olds.