

KS4 Performance Measures in Wales: Changes and comparability

Background:

This Statistical Article provides information on forthcoming changes to the way we measure Key Stage 4 (KS4) performance in Wales as a consequence of the 2011 Review of Qualifications¹. These changes will impact on comparability of performance measures over time in Wales, particularly as some of these changes will lead to behavioural changes in schools and pupils. The article will also examine comparisons with England and the rest of the UK, particularly in light of Wolf Review of Vocational Education in England².

The Welsh Government commissioned the Review of Qualifications in 2011, with the aim of identifying the qualifications that are most relevant, valued and understood and to ensure that these are available to learners. It also considered issues related to the measurement of performance.

In addition to the changes arising from the review, we intend to remove independent schools from the calculation of the Wales totals and to include pupils educated other than at school (EOTAS) who did not attend a PRU. The removal of independent schools is due to the fact that our performance measures are becoming less and less applicable, and can provide a misleading indication of performance at a National level. More information can be found on this in section 2.2.

Key Points:

- From summer 2016, KS4 performance measures in Wales are changing following the recommendations made by the Review of Qualifications in Wales.
- In the short term these changes will affect our ability to track performance over time. For example, this may lead to behavioural change in pupils and schools in terms of qualifications chosen, which cannot be modelled.
- There has been a similar review in England (called the Wolf Review). Between this and our own review there are now a number of key differences between KS4 performance measures in England and Wales. This means that performance cannot be compared in the traditional way using indicators such as the L2 inclusive. We recommend using international studies such as the OECD PISA survey for comparable outcome data across UK countries.
- For a more detailed comparison between UK countries at individual subject level, data from the Joint Council for Qualifications data may be used. They publish an annual data set on GCSE results day that gives GCSE results by subject and grade, for each country separately. This data set is not affected by many of the changes arising from the Review of Qualifications. However, there are a number of limitations to this data, particularly around different early entry patterns in England and Wales, which means that comparisons can be misleading. Users wishing to analyse this data set for comparison purposes should do so with extreme caution.

¹ Welsh Government, November 2014: Review of Qualifications 14- 19

<http://gov.wales/topics/educationandskills/qualificationsinwales/revofqualen/?lang=en>

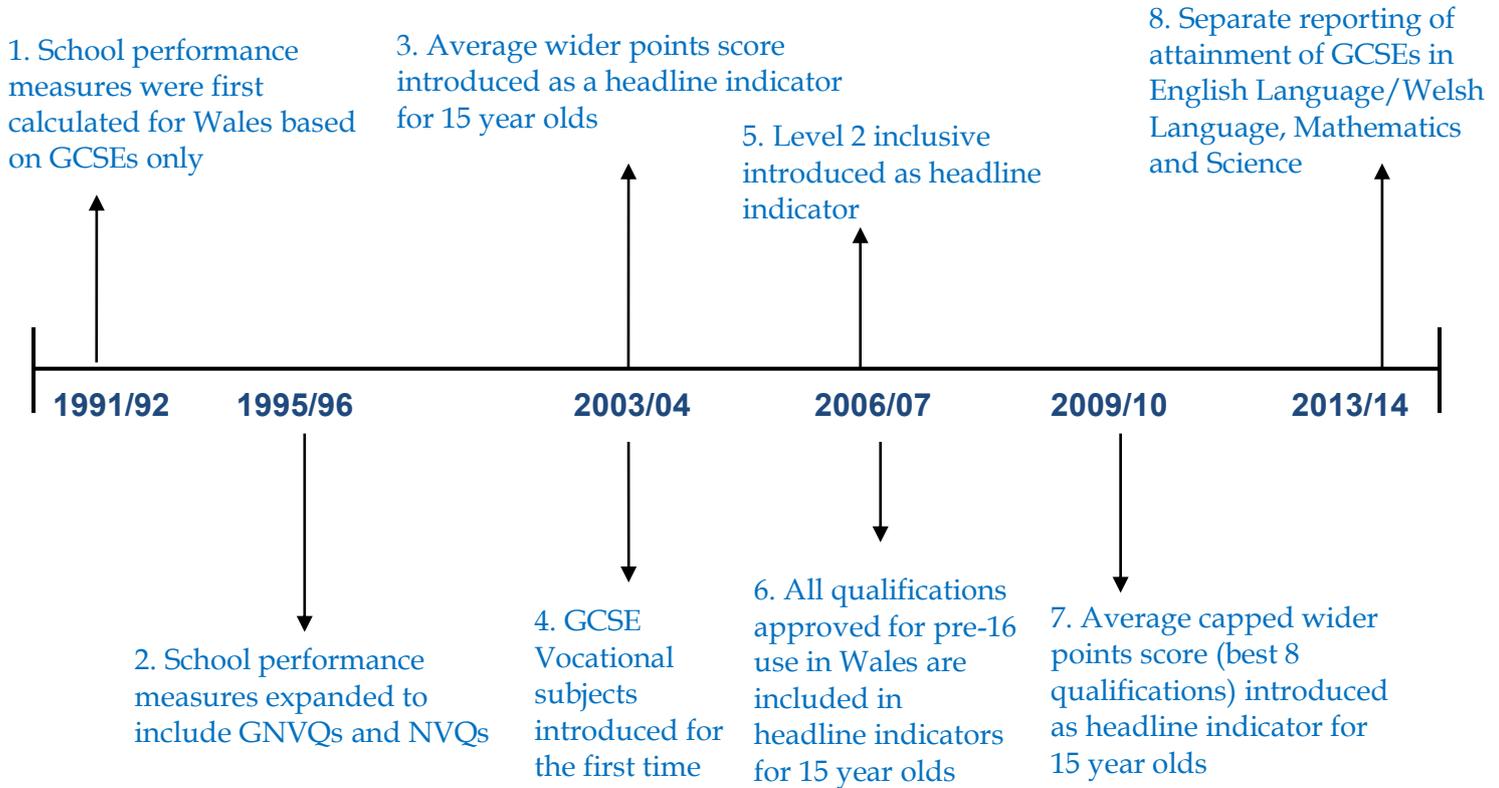
² A. Wolf, March 2011: Review of Vocational Education – The Wolf Report

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/180504/DFE-00031-2011.pdf

1. Historic changes to KS4 performance measures in Wales:

The following timeline presents the changes to KS4 performance measures in Wales from 1991/92-2013/14. More detail on each of the changes can be found below.

1.1. Timeline of historic changes to KS4 performance measures in Wales



1. School performance measures were first calculated for Wales in 1992, with the headline measures being the achievement of 5 GCSEs at grades A*-C or above and the Core Subject Indicator. This measure was based solely on GCSE results

2. In 1995/96 the definition of the school performance measures was expanded to include GNVQs and NVQs.

3. In 2003/04, the average wider points score was introduced as a headline indicator for 15 year olds, where it is still used as a performance measure for KS4.

4. GCSE Vocational Double awards were awarded for the first time in 2003/04. Each double award is counted as 2 entries as opposed to one.

5. In 2006/07, the Level 2 inclusive threshold was introduced as the headline indicator for pupils aged 15. This is defined as a volume of qualifications at Level 2 equivalent to the volume of 5 GCSE's at grade A*-C including English or Welsh First Language and Mathematics. This is still a current performance measure for KS4.

6. Up to 2005/06, the KS4 performance measure statistics included GCSEs, GCSE short course, GNVQs and NVQs only. From 2006/07, the statistics include all qualifications approved for pre-16 or 16-18 use

Current headline KS4 performance measures:

- **Level 2 inclusive** - a volume of qualifications at Level 2 equivalent to the volume of 5 GCSE's at grade A*-C including English or Welsh First Language and Mathematics
- **Average capped wider points score** - calculated using the best 8 results for each pupil
- **Core Subject Indicator** - achieved GCSE grade A*-C in each of English or Welsh first language, mathematics and science.

in Wales. The introduction of the wider definition meant the inclusion of a larger range of qualifications and thus an increase in the headline indicators of performance.

7. Due to the variety of different qualifications and the increasing number of qualifications that pupils take, a capped point score was introduced in 2009/10 for pupils aged 15 in order to best compare pupils' achievements. A capped point score is calculated as the 8 best GCSEs or equivalent. Further information on how the capped points score is produced can be found in the technical document [here](#). Note that the calculation of the capped points score is changing from 2016/17 - the score will be based on nine rather than eight qualifications.

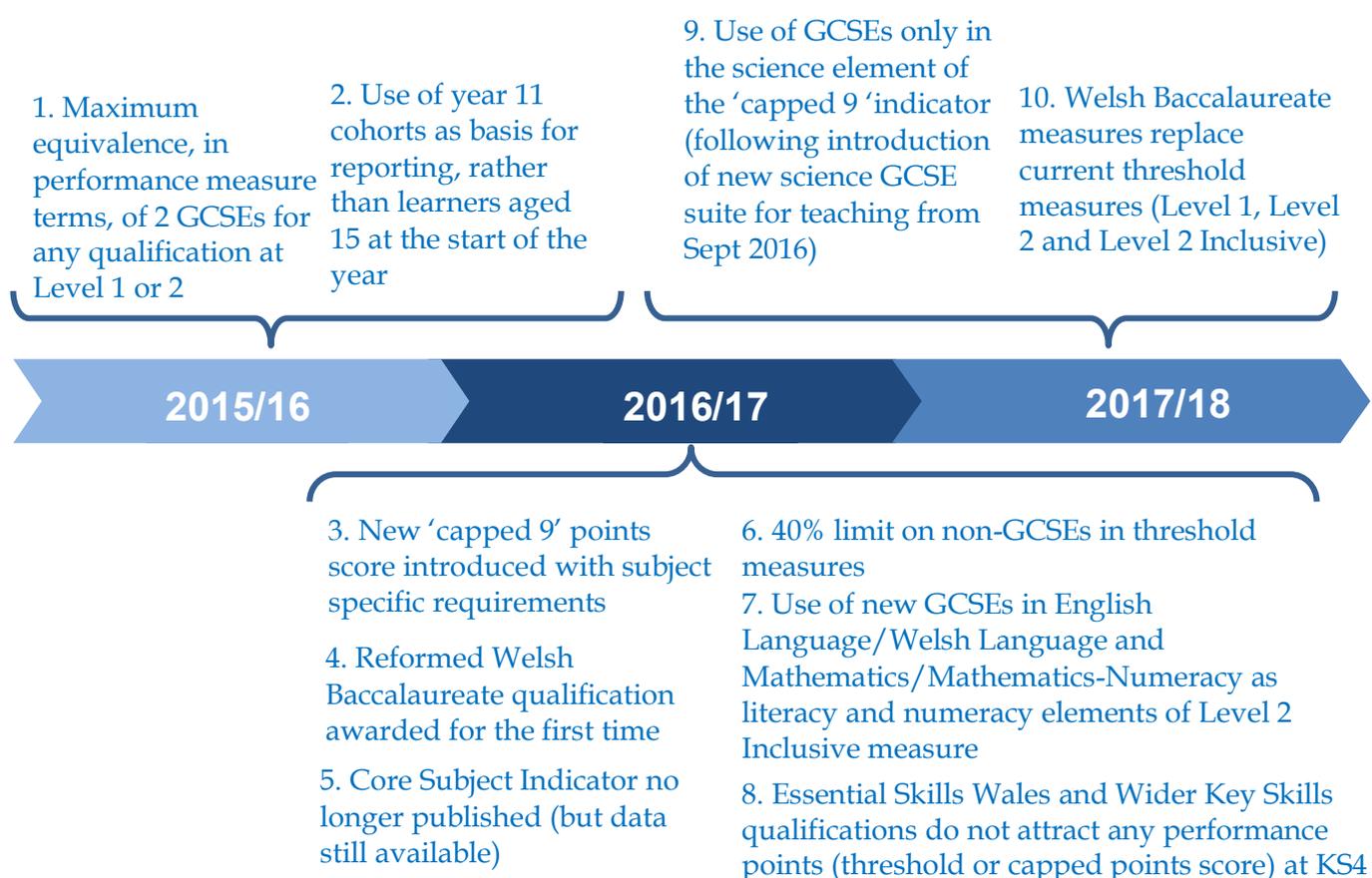
8. Following one of the recommendations in the Review of Qualifications, in 2013/14, the percentage of pupils achieving A*-C in Science, A*-C in Maths and A*-C in English/Welsh were introduced to the headline performance indicators to give separate reporting of attainment of the core subjects.

2. Review of Qualifications and future changes to KS4 performance measures in Wales

The [Review of Qualifications](#) for 14 to 19 year olds was launched in September 2011 by the Deputy Minister for Skills, Jeff Cuthbert AM, to evaluate how the Welsh Government could achieve the 'vision of qualifications that are understood and valued and meet the needs of our young people and the Welsh economy'.

The review ran up to November 2012, when the Project Board delivered its final report and recommendations to the Deputy Minister for Skills. On 29 January 2013, the Deputy Minister made a statement announcing that the Welsh Government broadly accepted all of the Review's recommendations. The main conclusion of the Review was that the time has come to develop a high-quality, robust and distinctive national qualifications system for 14 to 19-year-olds in Wales, and to support divergence between Wales and other parts of the UK where this is in the interests of learners in Wales. The KS4 performance measures have been reviewed in response to recommendations made by the Review of Qualifications in Wales and the following timeline presents these future changes.

2.1. Timeline of future changes to KS4 performance measures in Wales



1. The maximum equivalence rating for any non-GCSE qualification at 14-16 will be two GCSEs. Those Level 1 or 2 qualifications currently counting as equivalent to more than two GCSEs will have their performance points value capped at the equivalent of two GCSEs. This will impact on Level 1, Level 2 and Level 2 inclusive threshold measures, the capped points score and, from 2018, the Welsh Baccaulaureate measures. Note that in England, the equivalence value for any non-GCSE qualification is being limited to one GCSE. See Section 3.2. for more details.

2. From 2015/2016, we will measure pupils in Year 11 for reporting on KS4 school performance statistics, rather than learners who are 15 at the start of the year. The Year 11 cohort will be based on the number of pupils who were registered as being on roll in Year 11 in the school census each January. We are making this change to ensure that the cohort reported for KS4 performance includes all pupils who are at the end of their KS4 programme of study. Note that KS4 results for independent schools are still based on pupils aged 15, rather than Year 11 pupils, as 'Year Group' is not recorded for this sector.

In England, data was published for pupils aged 15 up to 2004/2005. From this point, England instead measured pupils at the end of KS4 for their school performance statistics. This change also occurred for independent schools. See Table 1a for more information in the document [here](#).

3. A new capped points score will be introduced in 2016/2017 as part of a suite of performance measures that also includes the new Welsh Baccaulaureate. This will use the existing scoring methodology, which attributes different scores for each grade and takes into account the size of the qualification. Further information on how the current capped points score is produced can be found in the [technical document here](#). The new score will have a number of significant differences from the current capped points score:

- The score will be based on nine rather than eight qualifications
- Five of the nine qualifications used to calculate the score will be:
 - GCSE English Language or GCSE Welsh Language (whichever is the learner's best, literature will not count)
 - GCSE Mathematics – Numeracy and GCSE Mathematics
 - The learner's best two science qualifications (from 2018, their best two science GCSEs)
- The other four qualifications will be the learner's best (highest grade) other qualifications. These could be GCSEs, vocational qualifications or the Skills Challenge Certificate (the core of the new Welsh Baccaulaureate).

4. The Welsh Baccaulaureate has been redesigned for first teaching from September 2015 and will be awarded for the first time in 2016/17 (but reported as a performance measure in 2017/18). This is a composite qualification that includes a Skills Challenge Certificate; assessing the skills that young people need for college, university, employment and life. Alongside the Skills Challenge Certificate, learners also take a selection of GCSE, AS, and A level and vocational qualifications appropriate to their needs in order to be awarded the Baccaulaureate.

The Baccaulaureate is awarded at three levels:

- Foundation Welsh Baccaulaureate (level 1) for use at Key Stage 4 or post-16
- National Welsh Baccaulaureate (level 2) for use at Key Stage 4 or post-16
- Advanced Welsh Baccaulaureate (level 3) for use at post-16 only

5. The Core Subject Indicator (A volume equivalent to GCSE grade A*-C in each of Maths, Science and English or Welsh 1st Language) will no longer be published as a performance measure from 2016/17.

6. There will be a limit of 40 per cent on the contribution of non-GCSEs to the Level 1, Level 2 and Level 2 inclusive threshold measures. There will be no limit on the contribution of non-GCSEs to the new capped points score (although, as set out above, some specific qualifications are required within the nine).

7. The new GCSEs in English Language/Welsh Language and Mathematics/Mathematics-Numeracy will be used as the literacy and numeracy elements of Level 2 Inclusive measure. Only these new qualifications will count towards the subject specific requirements of this measure (literature qualifications will no longer count).

8. Essential Skills Wales and Wider Key Skills no longer hold a contribution value in Key Stage 4 measures, and will be approved for Post-16 delivery only

9. For science from 2018, only GCSE qualifications will count towards subject specific requirements of the capped points score. Non-GCSE science qualifications no longer count towards science components but can still count towards a learner's 'other 4' best qualifications.

10. New measures will be introduced in 2018 relating to the attainment of the new Welsh Baccalaureate at Foundation and National levels (Levels 1 and 2). These new measures will replace the current Level 1, Level 2 and Level 2 Inclusive threshold measures.

2.3. Additional proposed changes to KS4 performance measures in Wales

In addition to the changes being implemented as a result of the Review of Qualifications, we are proposing to make the following two definitional changes in 2015/16. If you wish to comment on either of the proposals, or for further information and advice, please contact school.stats@wales.gsi.gov.uk by **August 15th 2016**.

Independent Schools

KS4 performance measures for Wales as a whole currently cover all maintained and independent schools in Wales. We propose that starting this year (2015/16) results for independent schools are not to be included in the Wales figures. Our main reason for wanting to make this change is to ensure that figures for Wales are based on robust information and is not misleading. Data only includes qualifications approved by the Welsh Government for use in schools. For example, independent schools can choose other qualifications which are not approved, such as iGCSEs, and these are not included in our figures. The data we hold for independent schools is not as comprehensive as it is for maintained schools and can be misleading to users when we are asked to provide the data in response to requests.

The performance measures are becoming increasingly prescriptive, and this divergence in qualifications will mean that it is more likely that independent schools will access non-approved qualifications in the future, exacerbating the issue.

The table below shows the effect of removing independent schools from the Level 2 inclusive threshold for pupils in aged 15 for the last 3 years.

Percentage of pupils aged 15 who achieved the Level 2 inclusive threshold, 2012/13 -2014/15

Year	Percentage of pupils who achieved the Level 2 inclusive threshold (including independent schools)	Percentage of pupils who achieved the Level 2 inclusive threshold (excluding independent schools)	Difference (percentage points)
2012/13	52.7	52.4	-0.4
2013/14	55.4	55.3	-0.1
2014/15	57.9	58.1	0.2

Pupils educated other than at school

In previous years, performance measures for Wales were based on all pupils in mainstream schools, special schools, independent schools and PRU’s (Pupil Referral Units). Due to a lack of robust data, we have not included those pupils who were educated other than at school (EOTAS) but who did not attend a PRU. We can now produce robust data to include the attainment of these pupils in the data for Wales and local authorities. We are not currently able to model the impact of this change but it is likely to lead to a very slight fall in the key performance measures for Wales.

3. Comparing KS4 Performance measures

3.1. KS4 Performance measures in Wales over time

There will be many changes to the way we measure KS4 performance in Wales arising from the Review of Qualifications. This in turn will affect the way that performance can be tracked over time in the short term. Some of the key barriers to measuring performance consistently over time are:

- Indicator changes.
 - The new capped points score cannot be calculated for previous years because there was no requirement for 2 Science qualifications or 2 Maths qualifications previous performance measures.
 - The Welsh Baccalaureate indicator cannot be calculated for previous years because it did not exist.
 - The limit on the size of non-GCSEs did not exist at the time pupils were making their curriculum choices.
- Qualification changes.
 - A new GCSE in Mathematics: Numeracy has been introduced, and the first students will complete this qualification in 2016/2017.
 - A new GCSE in Mathematics has also been introduced, and the first students will complete this qualification in 2016/2017
 - There are new Wales specific specifications for both Welsh and English language.
- Behavioural changes.
 - We cannot isolate the impact of changes in school and pupil behaviour due to policy changes such as the Review of Qualifications. For example, the limit on the size of each non-GCSE qualification may have led to schools changing the mix of qualifications offered to their pupils, more in favour of qualifications below the limit rather than above (qualifications above the limit can still be approved for use but will have their contribution to performance measures limited to the equivalent of 2 GCSEs). This response is likely to vary between schools.

3.2. Comparisons with England and the Wolf Review of Vocational Education

There has traditionally been more interest in Wales in comparisons with England than with the other countries of the UK. This may stem from our shared education system up until devolution and the creation of the National Assembly for Wales in 1999.

The [Wolf Review of Vocational Education in England](#), published in March 2011 by Professor Alison Wolf, considered how the Department for Education (DfE) could improve vocational education for 14 to 19 year olds in England. This review made detailed recommendations for how to promote successful progression into the labour market and into higher level education and training routes. It also presented practical recommendations to help inform future policy direction, taking into account current financial constraint. The government published its [formal response to the Wolf review](#) on 12 May 2011.

Following both the Wolf Review in England and our own Review of Qualifications, there are a number of key differences between KS4 performance measures in England and Wales. These are:

Area	Wales	England	Year of impact
Approved qualifications	All approved qualifications are included in performance information.	Not all approved qualifications are included in performance information. For a list of qualifications that count in the KS4 performance tables for each year, see here .	2013/14
Maximum size of qualifications for performance measures	2 GCSEs	1 GCSE	2013/14
Re-sits	A pupil's best grade in a subject is taken, regardless of the number of times that subject was attempted	Only the first entry is counted, including in cases where a better grade is achieved in a subsequent entry	2013/14
Discounting	Discounting is between families of qualifications. General and vocational qualifications do not discount against one another	Discounting is across all types of qualifications. Where a pupil has taken two or more qualifications with an overlap in curriculum, credit is only given once.	2013/14
Level 3 qualifications	Both A and AS levels can contribute to KS4 performance measures if achieved by pupils whilst in year 11	Only AS levels can count. A levels are not counted.	2013/14
Performance measures	New capped points score, Welsh Baccalaureate (very different from the English Baccalaureate)	Progress 8, Attainment 8, pupil destinations, a Basics in English and Mathematics, English Baccalaureate (which is very different from the Welsh Baccalaureate).	England: 2015/16 Wales: 2016/17

		See here for more details on the English Baccalaureate.	
Qualification specifications	Developed own specifications in Maths and English, and only these will be counted in school performance measures. Two separate GCSEs in Mathematics. Wales specific specifications for other core subjects to be available over the next few years.	One GCSE in mathematics. Further reformed GCSEs will be introduced in 2018 and 2019.	2016/17
GCSE grades	Retaining the A*-G (8 grade) structure	Moving to the 9-1 (9 grade) structure.	2016/17

The above table shows that performance measures began to significantly diverge in 2013/14, and that future changes as a result of both reviews will increase this divergence. **Performance information for Wales and England are thus not comparable from 2013/14 onwards.**

For further information on the changes to performance measures and qualifications in England, please visit :

<https://www.gov.uk/government/publications/school-and-college-performance-tables-documents-key-stage-4>

KS4 performance measures have not been comparable between England and Wales since 2013/14.



3.3. Other UK comparisons

Northern Ireland

Wales and Northern Ireland share similarities in terms of educational and curricular structure and terminology. Pupils generally take General Certificate of Secondary Education (GCSE) and A Level examinations at age 15-16 and 17-18 respectively. However, there are a number of key differences between KS4 performance measures in Northern Ireland and Wales. These are:

Area	Wales	Northern Ireland
Approved qualifications	All approved qualifications are included in performance information.	All approved qualifications are included in performance information
Maximum size of non-GCSE qualifications for performance measures	2 GCSEs	No cap
Re-sits	A pupil's best grade in a	A pupil's best grade in a subject

	subject is taken, regardless of the number of times that subject was attempted	is taken, regardless of the number of times that subject was attempted
Discounting	Discounting is between families of qualifications. General and vocational qualifications do not discount against one another	Discounting is between families of qualifications. General and vocational qualifications do not discount against one another
Level 3 qualifications	Both A and AS levels can contribute to KS4 performance measures if achieved by pupils whilst in year 11	Level 3 qualifications do not contribute to KS4 performance measures.
Performance measures	New capped points score, Welsh Baccalaureate (very different from the English Baccalaureate)	The 16-58 scale is currently in use. However, consideration is being given to a dashboard of measures which will consist of four domains: attainment, progress, context and quality. This work it is at an early stage and will be subject to Ministerial approval.
Qualification specifications	Developed own specifications in Maths and English, and only these will be counted in school performance measures. Two separate GCSEs in Mathematics. Wales specific specifications for other core subjects to be available over the next few years.	All GCSE specifications are counted with the exception of: (i) English Language specifications where the assessment of speaking and listening does not contribute to the overall grade; and (ii) GCSE Science specifications where the assessment of practical work does not contribute to the overall grade. Level 2 qualifications are accepted as GCSE equivalents (based on the Guided Learning Hours for the qualification) with the exception of GCSE English or GCSE Mathematics, where no equivalents are accepted.
GCSE grades	Retaining the A*-G (8 grade) structure	(i) Retaining the A*- G structure for CCEA GCSE specifications but introducing a C* grade and changing the methodology for awarding the A* grade. (ii) Allowing GCSEs using the 9-1 structure to be offered in schools.

Scotland

The education system in Scotland has marked differences to that in Wales. Scotland has a different set of qualifications to the rest of the UK and **comparisons cannot be made directly**. Pupils complete six years of secondary school from S1 to S6 (equivalent to Year 7 to Year 12 in England and Wales). Up until 2014, pupils sat Standard Grades instead of GCSEs and Highers instead of A levels. Standard Grades **are now no longer available** and have been replaced by the new National Qualifications.

Pupils typically sit National 4/5 examinations at the age of 15, usually taking subjects including compulsory exams in English and Mathematics. A Science subject (Physics, Biology or Chemistry) and a Social Subject (Geography, History or Modern Studies) were also compulsory, but this has changed in accordance with the new curriculum.

The table below shows how National Qualifications were implemented and what qualifications they replace. Note that there was no dual running of the National 4 and 5 qualifications with Standard Grades.

New Qualification	Previous Qualification(s)	Credit and Qualifications Framework for Wales level	Year of first examination in new qualifications (phased out qualifications & date ended)
National 4	Standard Grade (General) Intermediate 1	Level 1	2014 (Standard Grade,2013; Intermediate 1,2015)
National 5	Standard Grade (Credit) Intermediate 2	Level 1	2014 (Standard Grade,2013; Intermediate 2,2015)

For more information on school performance measurement in Scotland, please visit <http://www.gov.scot/Topics/Statistics/Browse/School-Education/Pub-SS-ALM>

Comparisons within the UK

The divergence in policy around performance measures has meant it is has become impossible to produce comparable measures from the examination systems in each country. Even if it were possible to practically produce indicators that were on a more or less similar technical footing, the entry patterns of schools and school pupils cannot be accounted for. We recommend that international studies such as the OECD PISA survey (see below) are the key approach in future for comparable outcome data across UK countries. Data from the PISA 2015 assessments will be published in December. (Overall qualification levels of the population can be compared across the UK using data from the Office for National Statistics Annual Population Survey).

3.4. Other sources of data on KS4 qualifications

The Joint Council for Qualifications is a membership organisation comprising the seven largest providers of qualifications in Wales, England and Northern Ireland. They publish an annual data set on GCSE results that gives GCSE results by subject and grade, for each country separately. This data set can in theory be used to compare attainment at subject level between the three countries because many of the issues relating to performance measures do not apply here. However, there are a number of limitations to this data set which means that comparisons can be misleading and that interpretation of the data needs to be done with caution:

- The data set is based solely on the results achieved in the summer examinations. It does not include data on examinations taken at an earlier age, or any new grades issued as a result of papers being re-marked.
- The data is at subject level and cannot be used to create the more traditional pupil level measures that are used more widely.
- Results are presented for students of any age, and cannot be disaggregated to specific groups of pupils e.g. pupils at the end of KS4.
- Results are included for all recognized examination centres, and cannot be disaggregated to focus only on schools.
- Entry patterns between summer and winter may be different .

For further information, please see last year's data release at:

<http://www.jcq.org.uk/examination-results/gcses/2015/gcse-and-entry-level-certificate-results-summer-2015>

3.4. International comparisons

The [Programme for International Student Assessment \(PISA\)](#) is a triennial international survey which aims to evaluate education systems worldwide by testing the skills and knowledge of about half a million 15-year-old students on maths, reading, science and problem-solving. The OECD, which runs PISA, publishes a report analysing the performance of the different countries that participated in the survey. Policy makers use PISA results to gauge the knowledge and skills of students in their own countries in comparison with those in other countries, set policy targets against measurable goals achieved by other education systems, and learn from policies and practices applied elsewhere.

We recommend using the results from this survey to make international comparisons of school performance.

4. Notes

Contact details

We actively encourage feedback from our users. If you have any comments or require further information please contact us on the details below:

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Notes on the use of statistical articles

Statistical articles generally relate to one-off analyses for which there are no updates planned, at least in the short-term, and serve to make such analyses available to a wider audience than might otherwise be the case. They are mainly used to publish analyses that are exploratory in some way, for example:

- Introducing a new experimental series of data;
- A partial analysis of an issue which provides a useful starting point for further research but that nevertheless is a useful analysis in its own right;
- Drawing attention to research undertaken by other organisations, either commissioned by the Welsh Government or otherwise, where it is useful to highlight the conclusions, or to build further upon the research;
- An analysis where the results may not be of as high quality as those in our routine statistical releases and bulletins, but where meaningful conclusions can still be drawn from the results.

Where quality is an issue, this may arise in one or more of the following ways:

- being unable to accurately specify the timeframe used (as can be the case when using an administrative source);
- the quality of the data source or data used; or
- other specified reasons.

However, the level of quality will be such that it does not significantly impact upon the conclusions. For example, the exact timeframe may not be central to the conclusions that can be drawn, or it is the order of magnitude of the results, rather than the exact results, that are of interest to the audience.

The analysis presented does not constitute a National Statistic, but may be based on National Statistics outputs and will nevertheless have been subject to careful consideration and detailed checking before publication. An assessment of the strengths and weaknesses in the analysis will be included in the article, for example comparisons with other sources, along with guidance on how the analysis might be used, and a description of the methodology applied.

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- .. The data item is not available
- . The data item is not applicable
- The data item is not exactly zero, but estimated as zero or less than half the final digit shown
- * The data item is disclosive or not sufficiently robust for publication

Produced by: Knowledge & Analytical Services, Welsh Government

Last reviewed: July 2016

National Statistics status

The United Kingdom Statistics Authority has designated these statistics as National Statistics, in accordance with the Statistics and Registration Service Act 2007 and signifying compliance with the Code of Practice for Official Statistics.

National Statistics status means that official statistics meet the highest standards of trustworthiness, quality and public value.

All official statistics should comply with all aspects of the Code of Practice for Official Statistics. They are awarded National Statistics status following an assessment by the UK Statistics Authority's regulatory arm. The Authority considers whether the statistics meet the highest standards of Code compliance, including the value they add to public decisions and debate.

It is Welsh Government's responsibility to maintain compliance with the standards expected of National Statistics. If we become concerned about whether these statistics are still meeting the appropriate standards, we will discuss any concerns with the Authority promptly. National Statistics status can be removed at any point when the highest standards are not maintained, and reinstated when standards are restored.



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