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We strongly encourage readers to use this booklet in conjunction with other resources (papers, Deep Dives etc.) available within Help & Support to develop their knowledge of Insight.



1 Insight User Access

The data that an Insight user can access on the national and local dashboards and in the course level measures is dependent on the status of their user access.

- A Regional Improvement Collaborative (RIC) user will see unsuppressed data for all the RIC's establishments and the RIC itself.
- A local authority user will see unsuppressed data for all that local authority's establishments and the local authority itself.
- A school user will see unsuppressed data for its own school and its learning partners only.

In looking at other establishments, basic disclosure controls are applied, so a user will see suppressed data where it relates to a cohort or part of a cohort of fewer than five. This helps to avoid individual pupils being identified from data that is available to all users since Insight is not intended to display the performance of individual pupils.

This means that in almost all instances, graded course data would be suppressed for at least one of the grade bands. That being the case, further suppression would be required to prevent calculation of the suppressed value. Because of this, the following course level measures are still not accessible to users when viewing other establishments.

- Local Course Measure: Attainment in Selected Graded Course
- Local Authority Summary: Graded Course
- Partnership Course Summary
- Selected Subject Summary
- Whole School Course Summary

We will continue to engage with users to realise the principle of open access as far as possible.

It is worth noting that where a learning partnership has been entered into between schools, a user will continue to see data for the partner establishment without any suppression or controls.



2 Insight's Underlying Concepts

2.1 Insight Data

- a) Insight processes data for academic years. The user interface by default displays outputs for the **three** most recent years. However, users can change their settings to allow **five** years' worth of data to be displayed.

User's name ► Settings ► User Preferences

- b) The data sources for Insight are data collected by [ScotXed](#) and data from suppliers such as SQA, Skills Development Scotland and wider awards providers.
- c) Where a qualification has been replaced with a new qualification, the tool makes use of reference data to ensure that any replaced qualifications are mapped to their replacements.
- d) Attainment data in Insight is based on the result date of learners' qualifications rather than the course entries expected to be completed within an academic year (as per SQA). This allows a wide range of awards to be included in Insight. Due to the difference in reporting the total number of 'resulted entries' described by Insight and the total number of 'entries' described in the SQA data may differ. However, figures on actual attainment (i.e. an award at A to D in National 5 or an award at National 4) should be similar in all sources.
- e) For the years Recognising Positive Achievement (RPA) process for National 4 qualifications was in place, those years will include awards awarded through RPA.
- f) Updates from the SQA's administrative review process will appear in the February release of Insight each year. It will update only the most recent year's information so, for example, in February 2023 the post-results review data has updated only the 2022 attainment information. It includes information following the conclusion of SQA's Results Services procedures and the receipt of any late results. This means that some results which were reported as being 'incomplete' in September will have an associated award in the following February. It also means that some awards which were reported in September will no longer be reported as a result of the course or unit having been withdrawn by the pupil or presenting centre. The post-administrative review data is in line with SQA's own statistical reporting from December.



2.2 *Insight Establishments*

- a) Insight computes measures for the following establishment levels:
- All mainstream local authority and grant-aided secondary schools
 - 32 local authorities and one 'grant-aided' authority
 - Six Regional Improvement Collaboratives (RICs) and one 'No regional Improvement Collaborative'
 - National
- b) The user interface only displays outputs for schools that are open in the most recent year calculated.
- c) When a centre closes and merges into one other new or existing centre, the tool assigns the pupils from the closed centre, together with any attainment they had, to the receiving centre.
- d) The tool also has a process in place to handle feeder centres (e.g. Junior High Schools) from which S4 pupils progress to S5 at a different, pre-defined (target) centre. To avoid the appearance of these pupils in S5 causing an apparent change in the performance of the target centre between S4 and S5/S6, when analysing S5 or S6 measures, the feeder pupils are treated as if they were in the target centre during S4.
- e) The same process applies to any pupil who changes schools after S4. The pupil is included in the S4 target centre roll for S5 or S6 measures.
- f) A Pupil's Base Centre, as defined by the Census, is the key establishment for all of the dashboard measures and the breadth and depth measures. For the 'curricular area' and 'course based' measures, the key establishment is the pupil's presenting centre for the attainment. There is currently no ability for Insight to take account of a pupil changing schools mid-year. This may account for some differences in statistics published elsewhere (e.g. the historic SDS leaver destinations publication).
- g) Where award providers present through a centre other than the pupil's base centre, the attainment will not be visible in the local course-based measures for the base centre but will be included in the national and local dashboard measures. It will also be visible in the Partnership Course Summary measure. *Course ► Partnership Course Summary*
- h) RIC data is currently calculated for only the national benchmarking and breadth and depth (leavers) measures. We will work with users to assess the use of this data, and consider the inclusion of RICs in further measures in future updates.



2.3 Candidate Classification

- a) Candidates are pupils in the above establishments with Pupil Census records and are identified by their Scottish Candidate Number (SCN). The data in the tool will only reflect pupils who are counted in the relevant Pupil Census.
- b) Measures are only calculated for candidates in the senior phase i.e. school stages S4, S5 and S6.
- c) Measures can be annual or cumulative. Annual measures are based on attainment within a year. Cumulative are based on attainment data up to and including a year. Cumulative attainment data for a candidate at an establishment in a year is attainment for that candidate up to and including the year in question at that establishment.
- d) Each candidate is assigned a base centre based on their Pupil Census record for the year. If the pupil has exactly one pupil Census record with status 01 (on the roll of this school), the centre associated with the record is the pupil's base centre. If the pupil has more than one pupil Census record with status 01, the centre associated with the 01 record where the pupil has the most attainment is the pupil's base centre. If the pupil has no status 01 Census record then we consider the following cases:
 - If they have *exactly one* pupil Census record with status 04 (on the roll of the school but attending full time Further Education) or 05 (on the roll of the school but attending full time course other than Further Education outside of school), the centre associated with that record is the pupil's base centre.
 - If the pupil has *more than one* Census record with status 04 or 05, then their base centre is the centre associated with the status 04 or 05 Census record that has the most attainment.
 - If the pupil has no 01, 04 or 05 Census record they are not included in Insight.
- e) Each candidate is assigned a Census Stage based on the Pupil Census record used to assign their Base Centre in a year. Candidates with a null Census Stage will not contribute to any of the stage-based measures in the tool.
- f) The postcode for a candidate is taken from the relevant Pupil Census. If a candidate does not have a postcode in the Census, Insight assigns the postcode for their Base Centre to them.



2.4 Cohort of school leavers

- a) A pupil is defined as a school leaver in Insight if they have *all* of the following:
- one or more record in Skills Development Scotland's Opportunities for All shared dataset (SDS Initial Destinations) for the year;
 - a Pupil Census record for the same academic year;
 - no Pupil Census record in the following academic year for a stage within the senior phase (S4-S6).

The centre associated with the leaver record in Insight is the pupil's base centre from the Pupil Census in September at the start of the academic year. If a school or local authority has not informed SDS about a leaver then information about that leaver will not appear in Insight.

- b) In addition:
- SDS records with no match to the Pupil Census are excluded.
 - Pupils with a destination of 'excluded' are not counted as leavers (in line with SDS' approach). Reasons why these pupils have 'excluded' destinations include moving out with Scotland or returning to school. These pupils may therefore not actually have reached the end point of their schooling
 - If we cannot find exactly one destination in the SDS Initial Destinations then we only look at the destination associated with the year in which they last appeared in the Census. If that fails, the pupils destination is classified as 'unknown'.
 - Pupils who appear in the Pupil Census (and Insight) in a year but then do not appear in the Census in the following year and have no SDS leaver record are identified as inactive candidates.



2.5 Partnership Attainment

- a) Where a school has a partnership arrangement for the teaching of a course or award with a college other school or other establishment, a summary of attainment from the partner centre(s) can be seen in the Partnership Course Summary. This provides the base centre with visibility of their learners' achievements at other establishments and allows the comparison of attainment in different centres. Where learners are presented for an award at a partner centre, attainment/tariff will be credited to the base centre in the National/Local dashboards and the Breadth and Depth measures. However, in the other local measures (graded and ungraded course measures and curricular area measures), attainment/tariff will be credited to the partner centre. This ensures that at a school level, the base centre gets credit for doing what is best for the learner but at a course level, the data reflects the performance of that course in the presenting centre. (see Deep Dive 2 : Recognising Achievement for an example).
- b) The process of linking candidates back to their base schools relies on using the correct SCN for the candidates in the presenting centre. Any discrepancy with SCNs makes it impossible to assign attainment to these candidates in the tool.
- c) Candidates involved in partnerships should also be recorded with the correct status in the school's MIS.
 - In the base school, candidates should be entered on the MIS with their SCN and status code 01 (for a pupil on their roll).
 - For learners on the roll of the school but studying full time in another setting, status 04 or 05 may be used (see the [Pupil Census](#) guidance for full details).
 - In the presenting school, candidates (a pupil from another school who attends for some courses but remains based at the other school) should be entered on the MIS with the correct SCN and a status code 02.
 - The partnership school (rather than the base school) should also register the pupil for the SQA presentation. If the partnership is with a college, the college should register the SQA presentation with the correct SCN.
- d) The inclusion of attainment in the tool for a given year also requires that the result date for the qualification falls in the period 1st August to 31st July. Schools and local authorities may wish to ensure that this timeframe is communicated to partner colleges as attainment submitted to SQA that is resulted and certificated after that period would not be counted until the following academic year (e.g. attainment with a resulted date in August 2021 would not be included in Insight in 2020-21 but would be eligible to contribute in 2021-22) and so on. Of course, it is also important that all the requirements for the course are resulted (i.e. the course itself and, if any, associated unit results).



3 National Dashboard (Leavers) Measures

All of the national dashboard measures consider pupils' achievements on leaving school. The school leavers' cohort will consist of a mixture of pupils from S4, S5 and S6, with the default display showing all pupils who left school that year. However, it is possible to filter for more information, (e.g. for achievement of only those pupils who left following S5). Note that these measures only include data for leavers and do not include information on those pupils who remain at the school. The local dashboard measures can be consulted for the corresponding stage-based information.

Where a school has a partnership arrangement in the teaching of a course or award, attainment will show in the national dashboard and breadth and depth measures for the base school. However, attainment in that course itself will be reflected in the presenting centre, for example in the graded and ungraded course measures. A summary of attainment in partner centres is shown in the Partnership Course Summary measure.

The national dashboard measures, local dashboard measure relating to destinations, and the breadth and depth (leavers) measure will always be updated in the spring following the pupils' exit from school, when the latest information on school leavers is available.

3.1 Improving Attainment in Literacy and Numeracy

Benchmarking ► National Benchmarking Measure: Literacy and Numeracy

What is being measured?	The percentage of school leavers attaining literacy and numeracy at different SCQF levels.
What is the source of the data?	<ul style="list-style-type: none"> • SDS - Initial Destinations triangulated with other data sources. • SQA attainment data. • Pupil Census. <p>Only attainment in SCQF credit-rated qualifications achieved in the senior phase is included in the measure.</p>
How is the measure defined?	<p>Further information on the definition of the literacy and numeracy measure can be found in the Literacy and Numeracy Paper at</p> <p>In summary, the measure is based upon the outcomes and assessment standards for SQA's literacy and numeracy units at National 4 and National 5 levels. A set of technical criteria has been developed, allowing a range of qualifications and learning programmes to be included in the measure. This uses a 'best fit' approach with the key criterion i.e. that the main purpose of the qualification or learning programme is to improve literacy and / or numeracy skills and the assessment standards are applied to a comparable standard to those for SQA's literacy and numeracy units at National 4 and National 5 level. For example, using the best fit approach, National 5 courses in English, Gàidhlig and Mathematics will serve as proxy measures for literacy and numeracy at that level.</p>



	<p>Similarly, Higher English, Gàidhlig and Mathematics will serve as proxy measures for literacy and numeracy at SCQF level 6.</p> <p>When a pupil reaches the required level for literacy and/or numeracy, they will be counted in this measure. Where a pupil has several results that count towards the measure, they are only included once. For example, a pupil gaining two literacy results at level 4 would be included once in the measure of literacy at level 4 and above.</p> <p>This measure counts unit attainment where a pupil has passed all the units but may not have sat or gained an award in the final examination, e.g. in National 5.</p>
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3.2 Increasing Post-School Participation

Benchmarking ► National Benchmarking Measure: Leaver Initial Destinations

What is being measured?	The percentage of school leavers in a positive destination approximately 3 months after leaving school.
What is the source of the data?	<ul style="list-style-type: none">• SDS - Initial Destinations triangulated with other data sources.• Pupil Census.
How is the measure defined?	If a candidate has at least one destination record for the year with a positive destination, then the candidate's leaver destination for the year is 'positive'. If the candidate does not have a record of a positive destination and has at least one destination record with a non-positive destination, then the candidate's leaver destination for the year is 'non-positive'. Otherwise, the candidate's leaver destination for the year is undefined. In the detailed destinations information, both positive and other destinations are separated by category.



3.3 Improving Attainment for All

Benchmarking ► National Benchmarking Measure: Improving Attainment for All

What is being measured?	The average tariff score of school leavers for the lowest 20%, middle 60% and highest 20% of attainers.
What is the source of the data?	<ul style="list-style-type: none"> • SDS - Initial Destinations triangulated with other data sources. • SQA attainment data. • Pupil Census. <p>Only attainment in SCQF credit-rated qualifications achieved in the senior phase is included in the measure.</p>
How are the lowest 20%, middle 60% and highest 20% defined?	<p>The selected cohort of school leavers is ordered according to their tariff score and allocated into three groups based on attainment (lowest 20%, middle 60% and highest 20%). The average tariff score of these candidates is displayed for each of the three groups.</p> <p>When the number of pupils in the cohort is not divisible by 5, there will be 1 fewer pupil in the lowest 20% than in the highest 20%.</p> <p>The virtual Comparator cohort is also ordered and split into the three attainment categories in the same way. Since the overall virtual cohort has been selected to match the characteristics of your pupils it is likely that the characteristics of the lowest attaining leavers in the Virtual Comparator will be similar to the lowest attaining leavers in your school cohort. However, since the Virtual Comparator cohort is sorted independently to the school cohort, in some cases the Virtual Comparators of a pupil in your lowest 20% may end up in the middle 60% or even highest 20% of the VC cohort.</p> <p>The calculation of cohorts and cohort averages is performed separately for total tariff, complementary tariff, grade neutral average total tariff and grade neutral average complementary tariff scores but follows the same principles.</p>



3.4 Tackling Disadvantage by Improving the Attainment of Lower Attainers in Relation to Higher Attainers

Benchmarking ► National Benchmarking Measure: Attainment versus Deprivation

What is being measured?	The average tariff score for school leavers by Scottish Index of Multiple Deprivation decile.
What is the source of the data?	<ul style="list-style-type: none"> • SDS - Initial Destinations triangulated with other data sources. • SQA attainment data. • School Pupil Census. <p>Only attainment in SCQF credit-rated qualifications achieved in the senior phase is included in the measure.</p>
What is meant by Scottish Index of Multiple Deprivation decile?	<p>The Scottish Index of Multiple Deprivation (SIMD) enables schools to map their performance taking into account the social context in which they operate.</p> <p>The SIMD shows where Scotland's most deprived areas are. It is a relative measures of deprivation across all small areas (data zones) in Scotland. It assesses multiple deprivation based on income, employment, education, health, access to services, crime and housing. SIMD ranks all of the data zones from the most to least deprived and splits them into one of ten deciles. Decile 1 contains the most deprived 10% data zones and decile 10 contains the least deprived 10% data zones.</p> <p>Based on the postcode of the school leaver from the Pupil Census, it is possible to identify which data zone the school leaver lives in and therefore which deprivation decile. This allows us to look at attainment across the school by level of deprivation.</p> <p>For further information on the SIMD, please see the link: http://www.scotland.gov.uk/Topics/Statistics/SIMD/ .</p> <p>Insight uses SIMD 2020 data for years 2020/21 onwards in all national and local measures. No historic SIMD data has been re-calculated so all years prior to 2021 continue to be based on SIMD 2016 (and years prior to 2017 continue to be based on SIMD 2012).</p>



4 Local Dashboard (Whole School) Measures

The local measures provide data on pupils' achievements during the senior phase, whether or not they are a leaver or they are still at school. The local dashboard measures are the stage-based versions of the national benchmarking measures as shown on the national dashboard, and use the data for the whole cohort in each stage (S4, S5 or S6).

Where a school has a partnership arrangement in the teaching of a course or award, attainment will show in the local dashboard and the breadth and depth measures for the base school. However, attainment in that course itself will be reflected in the presenting centre, for example in the graded and ungraded course measures. The Partnership Course Summary allows users to view a summary of attainment from the partner centre(s).

The local benchmarking dashboard measures will to some extent be influenced by a school's curricular model (e.g. if the policy is to have no (or few) presentations in S4 then this will need to be borne in mind when considering the data in comparison to the school's Virtual Comparator, local authority, RIC, or national result where pupils may be sitting different numbers of qualifications in S4). These local dashboard measures are provided to offer a sense of how specific year-group current cohorts are performing. However, it is the national dashboard leaver-based measures which offer a consistent and comparable measure of school performance.

The majority of the local dashboard measures are updated in the September update each year. The exception to this is the measure on candidate destinations, which uses data from Skills Development Scotland's Initial Destinations of school leavers, which cannot therefore be updated until February each year. It differs from the national dashboard measure in that it includes pupils who have stayed on at school (i.e. not just the leavers).

4.1 Calculation and basis stage

As a default, the local dashboard measures are shown for the S5 cohort based on the S5 roll (i.e. it considers the S5 cohort from the Census and then looks at the performance of that cohort later in the session). Users can select a 'calculation stage' and a 'basis stage'. So, for example, a calculation stage of 'S4' and a basis stage of 'S4' would allow you to look at that specific stage and see how that cohort got on in the given year. So, if you had 100 pupils in S4, selecting these stages would allow you to see how they all did in that stage according to deprivation or other factors. However, you could also look at cumulative attainment by selecting, for example, a calculation stage of 'S6' and a basis stage of 'S4' which would reflect how an S4 group of pupils attains across their full senior phase. In these cumulative measures, the tool takes account of pupils who change schools between years. This means that if a pupil arrives in a school in S6, they will be treated as though they had been there at the start of S4.



4.2 Improving Attainment in Literacy and Numeracy

Benchmarking ► Local Benchmarking Measure: Literacy and Numeracy

What is being measured?	The percentage of candidates attaining literacy and numeracy at different SCQF levels.
What is the source of the data?	<ul style="list-style-type: none">• SQA Attainment Data.• School Pupil Census.
What information is provided?	As per leavers measure.
How is the measure defined?	As per leavers measure.

4.3 Increasing Participation

Benchmarking ► Local Benchmarking Measure: Candidate Initial Destinations

What is being measured?	The percentage of candidates staying on in school, or in a positive destination approximately 3 months after leaving school.
What is the source of the data?	<ul style="list-style-type: none">• SDS - Initial Destinations triangulated with other data sources.• School Pupil Census.
How is the measure defined?	If a candidate is present in the following year's Pupil Census, then the candidate is recorded as 'staying on at school'. Otherwise, if the candidate has a record in Skills Development Scotland's Initial Destinations of School Leavers, then they are recorded with the identified destination. Pupils who appear in the Pupil Census (and Insight) in a year but then do not appear in the Census in the following year and have no SDS leaver record are identified as 'inactive candidates'.



4.4 Improving Attainment for All

Benchmarking ► Local Benchmarking Measure: Improving Attainment for All

What is being measured?	The average tariff score of candidates for the lowest 20%, middle 60% and highest 20% of attainers.
What is the source of the data?	<ul style="list-style-type: none"> SQA attainment data. <p>Only attainment in SCQE credit-rated qualifications achieved in the senior phase is included in the measure.</p>
What information is provided?	<p>As per leavers measure.</p> <p>Additionally you are able to filter information based on annual or cumulative calculation type, the stage cohort and stage roll that the calculation is based upon.</p> <p><i>Change Options ► Calculation Type</i></p> <p><i>Change Options ► Stage</i></p> <p><i>Change Options ► Based upon (stage roll)</i></p> <p>Please note that no data will be displayed if you select different stages for 'stage' and 'based upon (stage roll)' along with an 'annual' calculation type. For example, it is not possible to display annual data for S6 pupils based up on the S4 roll: it has to be set to 'cumulative'.</p>
How are the lowest 20%, middle 60% and highest 20% defined?	As per leavers measure.



4.5 Tackling Disadvantage by Improving the Attainment of Lower Attainers in Relation to Higher Attainers

Benchmarking ► Local Benchmarking Measure: Attainment versus Deprivation

What is being measured?	The average tariff score for candidates by Scottish Index of Multiple Deprivation decile.
What is the source of the data?	<ul style="list-style-type: none"> • SQA attainment data. • School Pupil Census. <p>Only attainment in SCQE credit-rated qualifications achieved in the senior phase is included in the measure.</p>
What information is provided?	<p>As per leavers measure.</p> <p>Additionally you are able to filter information based on annual or cumulative calculation type, the stage cohort and the stage roll that the calculation is based upon.</p> <p><i>Change Options ► Calculation Type</i></p> <p><i>Change Options ► Stage</i></p> <p><i>Change Options ► Based upon (stage roll)</i></p> <p>Please note that no data will be displayed if you select different stages for 'stage' and 'based upon (stage roll)' along with an 'annual' calculation type. For example, it is not possible to display annual data for S6 pupils based up on the S4 roll: it has to be set to 'cumulative'.</p>
What is meant by Scottish Index of Multiple Deprivation decile?	As per leavers measure.



5 Other Local (Course) Measures

These measures include summaries of attainment by establishment (School or Partner Centre), curricular areas, course type, SCQF level, and subject. The majority of these measures will be updated in September each year, following the pupil completing the relevant award in the August certification. In the following February, they will be updated with any new information following the SQA's post-administrative review. The leavers' versions of breadth and depth is updated each February when the latest information on school leavers is available.

Where a school has a partnership arrangement in the teaching of a course or award, attainment will show for the presenting school in the following local measures- attainment in graded courses, attainment in ungraded courses, course comparator and awards in curricular areas. For example, if a pupil is presented for a course by a partner centre, the attainment will data will appear for the partner centre rather than the base centre for these measures. However, partnership attainment does count towards both the 'Breadth and depth: leavers' measure and the 'Breadth and depth: all candidates' measures for the base school rather than the partner centre.

To see a summary of the information for graded and ungraded courses undertaken only at your school see the Whole School Course Summary or the Selected Subject Summary. To see a summary of Partnership Attainment (graded and ungraded courses undertaken at your school's partner centres) see the Partnership Course Summary.

September 2018 was the first time that full (non-pathfinder) Foundation Apprenticeships (FAs) have been certificated. If these awards have been certificated at local colleges or other establishments, they will appear in the Course Partnership Summary output in the system, although they will also contribute to attainment measures for the base centre schools.



5.1 Attainment in Selected Graded Course - Percentage of Resulted Entries

Course ► Local Course Measure: Attainment in Selected Graded Course- Percentage of Resulted Entries

What is being measured?	The resulted attainment in the selected course broken down by grade.
What is the source of the data?	<ul style="list-style-type: none"> • SQA Attainment Data • Open University (OU) graded YASS awards. • Training Qualifications UK (TQUK) graded Design, Engineer, Construct awards. • IFS Certificate in Personal Finance. • School Pupil Census. <p>Only attainment in SCQE credit-rated qualifications achieved in the senior phase is included in the measure. Please note that at present, the only data providers with graded course data are SQA, OU, TQUK and IFS and therefore selecting any other providers will not display any data.</p>
What is meant by a graded course?	A graded course is defined as a qualification which has grades assigned on a scale for an award. Awards are mapped on scales such as A to D, 1 to 7 or Pass to Distinction. Awards are aggregated depending on the scale used. For example, with SQA National qualifications the individual grades (A, B, C, D, no award) and the aggregations ('A', 'A-B', 'A-C', 'A-D', and 'no award') can be displayed. With Open University courses the grade aggregations 'Distinction' and 'Distinction to pass' can be displayed.
How are old and new Highers presented?	<p>Following consultation with users and SQA old and new Highers were mapped together as appropriate and a similar process has now been carried out for Old and New Advanced Highers. This allows a 5 year trend to be seen.</p> <p>Information for the old qualifications which have been mapped can be found by selecting "Higher" or "Advanced Higher" (rather than "Higher [old]" or "Advanced Higher [old]") from the Qualification Level dropdown menu. Old qualifications which have not been replaced are available by selecting "Higher [old]" or "Advanced Higher [old]".</p> <p><i>Change Options ► Course</i></p>



5.2 Attainment in Selected Ungraded Course

Course ► Local Course Measure: Attainment in Selected Ungraded Course

What is being measured?	The number of resulted passes in the selected course.
What is the source of the data?	<ul style="list-style-type: none">• SQA Attainment Data• School Pupil Census.• Wider awards provider attainment data (years of data availability varies by provider). <p>Only attainment in SCQF credit-rated qualifications achieved in the senior phase is included in the measure.</p>
What is meant by an ungraded course?	An ungraded course is defined as a qualification which is not a unit and which is ungraded i.e. the course is awarded on a pass / fail basis without results mapped to individual grades.



5.3 Course Comparator

Course ► Local Course Measure: Course Comparator- Selected Graded Course

Course ► Local Course Measure: Course Comparator- All Graded Courses

What is being measured?	How a cohort taking a selected graded course has performed relative to other similar students nationally.
What is the source of the data?	<ul style="list-style-type: none"> • SQA Attainment Data • School Pupil Census. <p>Currently only graded SQA qualifications are included in the measure (although all SCQF qualifications attempted will be included within the calculation). Attainment is only eligible for inclusion in the course comparator regression if it has been undertaken in one of the centres eligible for inclusion in Insight. This means that attainment from colleges, independent and special schools will not contribute to the regression.</p>
What is meant by Course Comparator?	<p>The measure allows you to compare graded courses. The Course Comparator provides information about how well pupils performed in a particular course compared to the national performance in that course, by pupils who are similar in terms of the following independent variables:</p> <ul style="list-style-type: none"> • Stage • Attainment in SCQF courses within the same curricular area • Attainment in SCQF courses in other curricular areas • Volume of attainment in other courses <p>The course comparator fits a multiple linear regression for each eligible course to predict grade band depending on these four independent variables. The model takes the form:</p> $Y = \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \alpha$ <p>Y = The grade band achieved in the course</p> <p>X₁ = Stage, defined as the learner's stage in the academic year the qualification was taken</p> <p>X₂ = Attainment in the same curricular area, defined as the total annual tariff points obtained in courses within that curricular area exclusive of points obtained from the course itself. For example, the course comparator calculation for Biology Higher would take into account any attainment in Chemistry, Physics or other Science subjects within the same academic year.</p>



	<p>X_3 = Attainment in other curricular areas, defined as the annual total tariff points obtained from courses in any other curricular area. For example, the course comparator calculation for Biology Higher would take into account tariff points from all curricular areas except science within the same academic year.</p> <p>X_4 = Volume of attainment in other courses, defined as the total SCQF credit points from all the qualifications achieved by the learner in that academic year exclusive of the course itself.</p> <p>The national model is fitted using the least squares method to the data for all of the students nationally who took the particular course and had attainment from any other courses within the same year and stage.</p> <p>This allows a predicted grade band to be determined for each learner depending on the four independent variables and the confidence intervals around this prediction to be calculated (95% confidence intervals are used as default).</p> <p>For each learner the residual is calculated as their predicted grade band minus their actual grade band. The mean is then taken for the learner residuals within the cohort to give the course comparator value presented within the tool.</p> <p>If the course comparator value is negative and marked as significant then this means that, on average, learners within the cohort achieved a lower grade band than predicted and that this was outside of the 95% confidence intervals for the prediction.</p> <p>A significant course comparator value of -1 would mean that on average learners achieved one grade band (or half a grade) worse than predicted.</p> <p>If the course comparator value is positive and marked as significant then this means that, on average, learners within the cohort achieved a higher grade band than predicted and that this was outside of the 95% confidence intervals for the prediction. A significant course comparator value of +1 would mean that on average learners achieved one grade band (or half a grade) better than predicted.</p> <p>If the course comparator value is not marked as significant this means that, on average, learners within the cohort achieved a grade</p>
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	<p>band within the 95% confidence intervals for the grade band they were predicted.</p> <p>A separate regression is undertaken for each course as a whole and for each stage and sex combination (see next section on model variations).</p> <p>The course comparator value for a given course will only be displayed if all of the following conditions are met:</p> <ol style="list-style-type: none">1. At the National level, there are more than 60 learners in the cohort selected with attainment in the course who also have any other course attainment within that academic year.2. The National regression model provides an acceptable fit to the data as measured by the number of entries in the regression being greater than $400 \cdot (1 - R^2)$. <p>Confidence limits are calculated based on the t-distribution where the number of entries in the regression is less than 120 and based on the normal distribution for all other cohorts.</p>
Model Variations	<p>In cases where all learners within the national regression have the same value for one of the four independent variables that variable is dropped from the model. For example, where the regression is being applied only to learners within S5 then stage will be dropped from the model.</p> <p>Please note that, at National level, the course comparator value is zero for all years and courses. This is because course comparator is a measure which compares school / LA performance in a course to the national picture.</p>



5.4 Curricular Areas

Course ► *Curricular Areas: All Curricular Areas*

Course ► *Curricular Areas: Single Curricular Areas*

What is being measured?	The percentage of awards or average tariff score in each Curricular Area.
What is the source of the data?	<ul style="list-style-type: none">• SQA Attainment Data• School Pupil Census.• Wider award provider attainment data (years of data availability varies by provider) <p>Only attainment in SCQF credit-rated qualifications achieved in the senior phase is included in the measure.</p>
What is meant by curricular area?	<p>The measure provides information on attainment across the eight curricular areas of Curriculum for Excellence and breaks down languages into 'English and Gàidhlig' and 'Other Languages'. In addition, the tool includes a tenth curricular area of 'Wider Achievement', aiming to reflect the ethos of Curriculum for Excellence that achievement should also capture other areas within the life of the school and outside the school.</p> <p>Further information on Curriculum for Excellence can be found at: http://www.gov.scot/Topics/Education/Schools/curriculum</p> <p>Further information on Curriculum Areas can be found at: https://education.gov.scot/parentzone/learning-in-scotland/curriculum-areas</p>



5.5 Breadth and Depth: (Leavers)

Course ► Breadth and Depth: Leavers

What is being measured?	The number of leavers achieving awards at each SCQF level.
What is the source of the data?	<ul style="list-style-type: none"> • SDS Initial Destinations triangulated with other data sources. • SQA Attainment Data • School Pupil Census. • Wider award provider attainment data (years of data availability varies by provider). <p>Only attainment in SCQE credit-rated awards achieved in the senior phase are included in the measure i.e. only full courses.</p> <p>As the default all SCQF awards (all the awards in Insight) are included in the measure. However, when the Breadth and Depth area SQA National is selected, only attainment in SQA National awards are included in the measure, these may be graded or ungraded courses and include National 1 to National 5, Higher, Advanced Higher, and Skills for Work Courses.</p>
How is the measure defined?	<p>When a pupil has reached an SCQF level, they will be counted in the corresponding cell. Where a pupil has several results that count towards a cell, they are only included once in that cell. For example, a pupil gaining three awards at SCQF level 4 would be included once in the cell for "1 or more" awards at "level 4". They would also be counted once in the cells "2 or more" at "level 4" and "3 or more" at "level 4". When the Breadth and Depth area SQA National is selected, an additional breakdown of grades (A to D) are displayed for SCQF levels 5 to 7.</p> <p>As per tariff measures, it is the best awards in each subject that are counted. Thus if someone has a National 5 and a Higher in Mathematics, it is the Higher that will contribute to this measure.</p>



5.6 Breadth and Depth: (All Candidates)

Course ► Breadth and Depth: All Candidates

What is being measured?	The number of candidates achieving awards at each SCQF level.
What is the source of the data?	<ul style="list-style-type: none">• SQA Attainment Data• School Pupil Census.• Wider award provider attainment data (years of data availability varies by provider). <p>Only attainment in SCQF credit-rated awards achieved in the senior phase are included in the measure i.e. only full courses.</p> <p>As the default all SCQF awards (all the awards in Insight) are included in the measure. However, when the Breadth and Depth area SQA National is selected, only attainment in SQA National awards are included in the measure, these may be graded or ungraded courses and include National 1 to National 5, Higher, Advanced Higher, and Skills for Work Courses.</p>
How is the measure defined?	As per leavers measure



6 Learning Partners

Course ► View Partnership

What does this feature do?	It allows schools to choose other schools as learning partners in order to share data without suppression.
What is the source of the data?	<ul style="list-style-type: none"> • SDS Initial Destinations triangulated with other data sources. • SQA Attainment Data Data • School Pupil Census. • Wider award provider attainment data (years of data availability varies by provider). <p>Only attainment in SCQE credit-rated qualifications achieved in the senior phase is included in the measure.</p>
Find Learning Partners	<p>For each school, a ranking of secondary schools in Scotland is provided via the 'Find Partners' option (note that 'Find Partners' is only available to the Learning Partner Administrator within a school). This ranking is based on differences between each school and its Virtual Comparator on the Attainment for All National Dashboard measure (based on average total tariff) using the most up-to-date leavers data within Insight. For example, the September 2021 release used 2020 leavers data and the Spring Update in February 2022 will use 2021 leavers data.</p> <p>The data used to rank schools is displayed in the 'Insight Closeness' tab (i.e. here you can see the weighted lowest 20% normalised score, weighted middle 60% normalised score, weighted highest 20% normalised score, and the distance). You can also see data about the other schools in terms of their 'National Benchmarking Performance' (positive destinations, literacy and numeracy and lowest 20% average total tariff). A positive weighted normalised score shows a school that is performing above its Virtual Comparator and a negative weighted normalised score shows a school that is performing below its Virtual Comparator. The distance column tells you about how similarly each school is performing to your school relative to the Virtual Comparators across the lowest 20%, middle 60% and highest 20%. Schools ranked most closely to your school (with the smallest 'distance' at the top of the list) will be performing similarly to your school relative to their Virtual Comparator. Those ranked least closely will be performing very differently relative to their Virtual Comparator.</p> <p>A positive weighted normalised score shows a school that is performing above its Virtual Comparator, and a negative weighted normalised score shows a school that is performing below its Virtual Comparator. Using this information, you could find a school which is performing much better than its Virtual Comparator compared to</p>



	<p>you for a particular group of attainers. For example, if a school has a negative weighted lowest 20% normalised score then they are performing below their Virtual Comparator for this group. Another school with a more positive score for the lowest 20% of attainers will be performing better than its Virtual Comparator for this group.</p> <p>The distance column tells you about how similarly each school is performing to your school relative to the Virtual Comparators across the lowest 20%, middle 60% and highest 20%. Schools ranked most closely to your school (with the smallest "distance" at the top of the list) will be performing similarly to your school relative to their Virtual Comparator. Those ranked least closely will be performing very differently relative to their Virtual Comparator.</p> <p>For your school, you can then choose other schools with whom you might like to form a partnership. You can propose a partnership via the tool. Once the school has accepted the partnership, you will see this via the 'View Partnerships' option. You will then be able to view their local dashboard measures and other local measures such as graded course and relative value data.</p> <p>Please note that only one individual per school will be assigned 'Learning Partner Administrator' rights to enable them to create and dissolve partnerships using the 'Find Partners' option. Schools need to email the Insight mailbox with the name and school email address of the individual who will act as their Insight administrator. Once a partnership has been established with another school, all users at that school and at the school's LA will see this within the 'View Partnerships' option.</p>
How are the rankings calculated?	<p>The ranking methodology used in the Learning Partner feature uses data calculated for the National Benchmarking Measure: Average Total Tariff Score. The Euclidian distance is calculated between each school and each other school by creating a score representing the difference between the school and its Virtual Comparator on the National Benchmarking Average Total Tariff Score as follows:</p> <ol style="list-style-type: none">1. For each of the Average Total Tariff cohort parts within the base school cohort, the difference is calculated between the cohort part average total tariff score and the average total tariff score for the corresponding Virtual Comparator cohort part. For example, the difference in tariff scores is calculated between the pupils with the lowest 20% Average Total Tariff Score in the school and the corresponding Virtual Comparator.2. These Average Total Tariff score differences are then normalised, by subtracting the mean and dividing by the standard deviation.



	<p>3. The cohort parts are then weighted to compensate for relative population size.</p> <p>4. For each school, the distance to each other school is calculated as the Euclidean distance between the schools using these three dimensions (weighted lowest 20% normalised score, weighted middle 60% normalised score and weighted highest 20% normalised score).</p> <p>5. The ranks are calculated using the Euclidean distance. The school with the smallest distance is ranked in first place.</p> <p>6. If the Euclidean distance cannot be calculated for a school, its distance would be listed as 'undefined' and a ranking would not be produced. Any such school would appear at the bottom of the learning partner list.</p>
Can the rankings of potential learning partners change?	Yes, the rankings can change when there is an update in the National Benchmarking Improving Attainment for All measure for your school, other schools and the corresponding Virtual Comparators. In particular, you should expect to see a change in the rankings following the annual February update with the new leavers data.
What is meant by a learning partner?	A Learning Partner within Insight is another school in Scotland with whom a school has agreed to share <i>Local Measure</i> data to aid partnership working. Insight does not seek to define such partnerships but suggests that these partnerships would foster discussion and mutual learning about pedagogy, performance and structures with the aim of seeking improvement to the benefit of both partners.



7 Filters

For each of the measures presented in the tool, it is possible to apply filters to explore the data based on underlying pupil characteristics. These filters are based on data from the Pupil Census, matched to the school leavers collection, leaver destinations and attainment data.

When using filters, the filter selected applies to all of the cohorts except the Virtual Comparator considered by the measure. For example, by selecting those pupils with English as an additional language (EAL) as a filter, the selection will display the result for:

- those pupils in the target school with EAL;
- the pupils from the Virtual Comparator who are matched to the pupils in the target school with EAL. So when the EAL filter is applied, the pupils in the Virtual Comparator may or may not have EAL themselves but will match their target pupils on other factors;
- those pupils in the LA with EAL;
- those pupils nationally with EAL.

Remember, if you select English as an Additional Language (EAL) as a filter this will display information for the young people in your school who have EAL and for the virtual comparator pupils to which they are matched. However, since EAL is not a matching variable, this does not necessarily mean that the virtual comparator pupils themselves have EAL.

It is possible to apply filters individually or in combination, for example, restricting the results to 17 year olds with additional support needs and a minority ethnic background. However, the tool will suppress results for cohorts smaller than 5 pupils and the more filters that are applied, the greater the likelihood that results will be suppressed.

Core cohorts are those based on the sex and stage filters. If any other filter is applied then this is a non-core cohort and the measures are produced on demand rather than being pre-calculated.

The following table provides more detail on each individual filter:

Filter	Options	Description
Age	<ul style="list-style-type: none">• All• Under 16• 16• 17• 18• Over 18	This filter is based on the pupil's age as at the end of February in the given academic year, as calculated from information in the Pupil Census (conducted annually in September).
ASN (Additional Support Needs)	<ul style="list-style-type: none">• All• ASN• Other	This filter is based on the Pupil Census records for the year being considered. If a pupil has one or more student need records in the year then the candidate is recorded as having additional support needs. Selecting 'ASN' as your filter will restrict the results to



		only those pupils who have been recorded as having additional support needs. Selecting 'Other' will restrict the results to those pupils who are not recorded as having additional support needs.
EAL (English as an Additional Language)	<ul style="list-style-type: none"> • All • EAL • Other 	This filter is based on the Pupil Census records for the year being considered. Selecting 'EAL' as your filter will restrict the results to only those pupils who have been recorded as having English as an additional language. Selecting 'Other' will restrict the results to only those pupils who are not recorded as having English as an additional language.
Ethnicity	<ul style="list-style-type: none"> • All • White • Minority Ethnic • Not Known 	This filter is based on the latest Pupil Census for the year being considered. The filter can be used to restrict the results to only those pupils whose ethnicity is white, minority ethnic or not known.
FSM (Free School Meals)	<ul style="list-style-type: none"> • All • FSM • Other 	This filter is based on the Pupil Census records for the year being considered. Selecting 'FSM' as your filter will restrict the results to only those pupils who have been recorded as being eligible for Free School Meals. Selecting 'Other' will restrict the results to only those pupils who are not recorded as being eligible for Free School Meals.
Sex	<ul style="list-style-type: none"> • All • Male • Female 	This filter is based on the pupil's sex as at the latest Pupil Census (conducted annually in September).
Highest SCQF Attained	<ul style="list-style-type: none"> • Any • 1 • 2 • 3 • 4 • 5 • 6 • 7 	This filter is based on SQA and wider achievement provider attainment data which makes it possible to identify the highest SCQF Levels attained by each pupil.
LAC (Looked After Status)	<ul style="list-style-type: none"> • Any • Looked after at home • Looked after away from home • All looked after 	This filter is based on the Pupil Census records for the year being considered. Selecting 'Looked after at home' as your filter will restrict the results to only those pupils who have been recorded as having a looked after status, who are looked after at home. Selecting 'Looked after away from home' as your filter will restrict the results to only those pupils who have been recorded as having a looked after status, who are looked after away from home. Selecting 'All looked after' as your filter will restrict your results to all pupils who have a looked after status.



Leaver Destination	<ul style="list-style-type: none"> Any Positive 	<p>This filter is based on Skills Development Scotland's School Leaver Destination Report. Selecting 'Positive' as your filter, restricts the results to only those school leavers who have been recorded as having a positive destination. A positive destination includes Higher Education, Further Education, Training, Voluntary Work, Employment and Activity Agreements. Further information on these categories can be found in the background notes to Initial Destinations of Senior Phase School Leavers National Statistics Publication.</p> <p>The filter is available for all measures except the national dashboard measure on school leaver destinations.</p>
Pupil Points	<ul style="list-style-type: none"> Any National Lowest 20% National Highest 20% 	<p>This filter is based on SQA and wider achievement provider attainment data. For each pupil it is possible to calculate their total tariff points, based on the range of qualifications they have achieved. Pupils are assigned nationally into groups based on their total tariff points. This filter allows you to look in more detail at the result for the lowest 20% and highest 20% of attaining pupils.</p> <p>Since the pupil points groups are assigned nationally, it is important to note that an S4 pupil is more likely to be in the lowest 20% than the highest 20% and, similarly, an S6 pupil is more likely to be in the highest 20% than in the lowest 20%.</p> <p>The filter is available for all measures except the national dashboard measure on improving the attainment of all learners.</p>
SIMD	<ul style="list-style-type: none"> Any Most deprived Quintile 1 Quintile 2 Quintile 3 Quintile 4 Least deprived Quintile 5 	<p>This filter is based on the Pupil Census for the year being considered and the Scottish Index of Multiple Deprivation (SIMD) rank of the pupil's home area.</p> <p>The SIMD identifies small area concentrations of multiple deprivation across Scotland. It is based on data zones (a small area geography) and provides an assessment of multiple deprivation based on income, employment, health, education, housing, access to services and levels of crime in the area. It provides a relative measure of deprivation which means that the data zones can be ranked from most to least deprived and cut offs can be applied to identify different levels of deprivation.</p>



		<p>These filter choices allow you to restrict your results to the most deprived 20% of data zones (Quintile 1), the least deprived 20% of data zones (Quintile 5) and datazones in between (Quintiles 2,3 and 4) .</p> <p>The filter is available for all measures except the national dashboard measure on improving attainment versus deprivation.</p> <p>Insight uses SIMD 2020 data for years 2020/21 onwards in all national and local measures. No historic SIMD data has been re-calculated so all years prior to 2021 continue to be based on SIMD 2016 (and years prior to 2017 continue to be based on SIMD 2012).</p>
Stage	<ul style="list-style-type: none">• S4• S5• S6• S4/S5• S5/S6• S4/S5/S6	<p>This filter is calculated using a stage estimation algorithm based on Pupil Census data.</p>



8 Virtual Comparators

Insight allows schools to compare their performance to the performance of a Virtual Comparator. The Virtual Comparator is made up of pupils from schools in other local authorities who have similar characteristics to the pupils in your school. It allows you to see how the performance of your pupils compares to a similar group of pupils from across Scotland to help you undertake self-evaluation and improvement activities.

a) Methodology for leavers-based Virtual Comparators

For each pupil in the cohort of interest (e.g. S4 pupils in School A), 10 matching pupils are randomly selected without replacement from other local authorities based on the following characteristics:

- Sex
- Additional support needs:
 - No additional support needs
 - Additional support needs but spend 80% or more of their time in mainstream education
 - Additional support needs and spend less than 80% of their time in mainstream education
- Latest stage is defined as 'stage of leaving' for leavers and 'latest stage attained in current year' for the September Update.
- Scottish Index of Multiple Deprivation vigintile.

This allows Virtual Comparators to be produced for the target cohort of interest. So, if school B has 20 school leavers all of whom have the same characteristics, 200 different pupils with these same characteristics from schools in the other 31 local authorities will be selected to compare them to. The maximum cohort in a school for which a Virtual Comparator is produced is the senior phase (S4 to S6).

The leavers-based Virtual Comparator is created from all of the matched pupils meaning that it will have ten times as many pupils and that the characteristics of the Virtual Comparator will match its target group. Analysis revealed that four matches per target pupil would have been perfectly adequate but we have chosen to select ten matches for even greater precision.

The characteristics were selected due to their significance in explaining variation in the attainment and destinations of leavers. Independent advice concluded that these variables were highly statistically significant and that they seem to strike a reasonable balance between matching a pupil appropriately and not having so many variables that matching some individuals is hard to achieve. There are few instances of pupils having missing data for these characteristics. The most common characteristic to be missing is SIMD data zone (affecting less than 0.5% of records). Missing data zones are due to missing or invalid postcodes and in these cases, the data zone for the pupil's base centre is used as a proxy.



The latest stage is included even though it is a combination of an input and an output measure. For example, if a pupil does not stay on to S5 then they do not have the option of taking Higher or Advanced Higher qualifications, so will have lower attainment. However by having lower attainment the pupil would be less likely to stay on. In addition, in some local authorities, college provision is widely available and preferred so many pupils leave at the end of S4 and continue their education at college instead of staying on to S5 and S6.

Note that filtering for characteristics which are not used for Virtual Comparator matching (e.g. LAC) will still display the school filtered for that characteristic and the Virtual Comparator pupils which match those school pupils. However the Virtual Comparator pupils may not have the same LAC category.

Insight uses SIMD 2020 data for years 2020/21 onwards in all national and local measures. No historic SIMD data has been re-calculated so all years prior to 2021 continue to be based on SIMD 2016, (and years prior to 2017 continue to be based on SIMD 2012).

b) Methodology for stage-based Virtual Comparators

The Virtual Comparator for stage based measures is more complicated. When considering attainment within one stage (e.g. calculation stage = S5 and basis stage = S5), the VC will be based on 10 matches to each pupil in S5. For measures where the calculation stage and basis stage are different (e.g. S6 based on S4) this is less straightforward. In defining the Virtual Comparator for these measures, consideration was given to whether the VC should be built from the matches for the pupils when they were in S4 or at their point of exit from school. Following consultation through the Statistics Working Group, it was felt that the leaver based measures already adequately capture a comparison at the point of exit. It was therefore agreed that these types of measure should be compared with the S4 Virtual Comparators to consider how both sets of pupils progress by the time of reaching S5 or S6. This means that the matched pupils could have left at different points in the senior phase when compared to your own pupils, offering a richer understanding of the situation in the school. However this also results in the situation where sometimes, within an SIMD decile, the number of candidates is not 10 times the number in the school. This happens because some pupils move between S4 and S6 and therefore change decile. As a result, whilst these pupils would have been matched to the same decile in S4, by the time they reach S6 some of their datazones and therefore deciles have changed. You will still find that the total number of VCs for the school is always 10 times the number of pupils.

c) Methodology where insufficient pupils match characteristics

For a very small number of pupils (most likely those with additional support needs that spend less than 80% of their time in mainstream education), we may run out of pupils to match to. Where this happens, we:

- collapse by sex in the first instance (so that we are picking from both male and female pupils that match the other characteristics)
- move into the neighbouring SIMD vigintiles



- for pupils with ASN who are less than 80% mainstream it may also be necessary to collapse by stage

Learning from the preview editions of the tool, we have strengthened the implementation of the selection methodology to reduce the number of instances in which the characteristics for matching need to be widened in this way resulting in many fewer inexact matches.

d) Difference between leavers and August attainment (as used in the September Update) methods

It is not possible to carry forward August attainment virtual pupils picked on the latest stage in current year into the leavers' matches. This is because some of the Virtual Comparators will not have left school and so will have no destination (there will also be issues of bias as the comparators could have stayed on, so may have had better attainment to start with). It is also not possible to use stage of leaving when picking Virtual Comparators for August attainment as we do not have leaver information at that time. Virtual Comparators for these two groups are therefore picked separately.

This means that stage of leaving is not controlled for in the stage-cohort analysis and therefore, in certain cases, a school could perform consistently above its VC on the leavers analysis and consistently below it on the cohort analysis. In the stage based measures when you are considering, for example, S6 of S4, the matched pupils in your Virtual Comparator may have left at different points in the senior phase when compared to your own pupils. The difference between the two offers a richer understanding of the situation in the school.

Development of the Methodology

The methodology implemented in the tool was developed by the Scottish Government in consultation with stakeholders, which includes independent advice from Professor John McColl at the University of Glasgow. Other options were considered and we have taken forward a methodology which was found to be both appropriate and easily accessible for end users.

Regular health checks on the Virtual Comparator methodology have been performed and have provided reassurance that it is performing as expected.



9 Tariff scale

One of the features in Insight is the tariff scale. The purpose of this is to aid the analyses of attainment data for benchmarking purposes. Tariff scores provide a means of capturing and displaying attainment data thereby allowing schools and local authorities to compare attainment in a number of ways including between schools, local authorities, the Virtual Comparator or other breakdowns of cohorts in the senior phase. They provide a summary view of a wide range of achievement and different awards from a range of providers. This feature is useful for benchmarking purposes because it can help prompt questions about particular aspects of performance. These questions can then be investigated further using the rich and rounded information available within the tool. This rich view of attainment will continue to develop as Curriculum for Excellence embeds in the senior phase.

The Insight tariff scale and the tariff points accrued by particular schools, local authorities and cohorts should not be viewed as the only way of measuring performance. They should be considered in the context of the other outcome measures included in the tool, for example, improving post-school participation and raising attainment in literacy and numeracy. In addition, the tariff scale should not be viewed as a reflection of the value of the qualifications achieved to the individual learner.

The Insight tariff scale has been developed to take account of the new qualifications available through Curriculum for Excellence and previous or pre-existing qualifications (such as Highers and Standard Grades) are mapped to the new tariff points in a way which allows historical comparison. The Insight Tariff Review, which ran between 2016 and 2017, conducted a full review of the tariff scale to ensure that it continues to provide a fair measure of attainment with the full implementation of Curriculum for Excellence. An agreed outcome of the review was the introduction of the grade neutral tariff in September 2018.

For more detailed information about the tariff scale please use the [Insight Tariff Ready Reckoner](#) and the simple [tariff calculator](#). For information about interpreting the different tariff methodologies see the [Deep Dive: Guide to Insight Tariff](#).

The technical principles that underpin the Insight tariff are:

- Calculation - Tariff points are calculated on the basis of SCQF credit points and a multiplier based on the SCQF level plus a weight for attaining the full course (0 if the award is a single unit or combination of units making up an ungraded course, or a variable weight if a course assessment element is involved i.e. added value unit at National 4 or course assessment at National 5 and above) and a weight differentiating between the grade achieved (A, B, C, D). Bands within grades are not differentiated in the tariff scale. A grade D achieves more points than units alone, recognising that a learner has achieved the course.
- No gap - the total of the units at a given SCQF level should be worth the same as an A at the level below. This recognises the high value of the overall course assessment - integration, challenge and application of learning - compared to achieving units alone.



- Tariff points for Units and Courses - Units attract tariff points as well as full courses. The achievement of a course (with a course assessment / added value unit) will get more credit than the achievement of the same number of standalone units at the same level. This reflects the additional application of learning that occurs across the course as a whole. Tariff points for a course award at the level below with units at the level above, attract fewer points than any grade at the level above.
- Ungraded courses - A pass (in a pass / fail course with its own course assessment / added value unit) is equivalent to a Grade C in a graded course at the same level. Ungraded courses without a course assessment / added value element will receive tariff points for the units alone with no additional weighting. A small number of courses which do not have an assessment or added value unit, such as Skills for Work, have been determined to contain an added value element delivered through the accumulation of units and are treated for tariff as having equivalence to a Grade C.
- Existing qualifications - Existing qualifications are mapped to the tariff points based on their SCQF level and credit points. To avoid advantaging or disadvantaging any sector, as National courses at SCQF level 4 and below are ungraded, any courses at or below SCQF level 4 receive tariff points set at the pass level regardless of grade e.g. Intermediate 1 at A-D and Standard Grades 3 and 4 receive points equivalent to a National 4 pass.

Calculation of Points for each qualification

The tariff points for a unit or course are currently calculated using the following equation:

$$\text{Tariff points} = (\text{CP} * \text{multiplier}) + ((\text{course wt} + \text{result wt}) * \text{CP} / \text{NCC})$$

Where:

CP = SCQF credit points

Multiplier = the multiplier for the SCQF level

Course wt = Course weight. The weight for attaining the full course at that SCQF level (0 for a single unit or combination of units making up an ungraded course, or a variable weight if a course assessment element is involved i.e. added value unit at National 4 or course assessment at National 5 and above)

Result wt = Result weight. This is the weight which differentiates between the grade achieved (A, B, C, D) for the course at the SCQF level. The weight is such that a grade D receives more points than units alone, recognising that a learner has achieved the course. Result weight is not included in the grade neutral tariff calculations

NCC = National course correction. This is the SCQF credit points for the SQA National Course at the same level (with the exception of the Baccalaureate Interdisciplinary Project)



10 Commentaries

The Tool currently includes commentaries for the national dashboard measures and the local dashboard measures.

The principles underpinning the use of commentaries in the tool are as follows:

- Comments should be used to highlight information that is of particular educational significance.
- Commentaries are driven by the data in the tool.
- Commentaries are only produced for comparisons between schools or LAs and their Virtual Comparators (with the exception of the national and local dashboard measures relating to deprivation where commentaries for comparison with the national result are also provided). This reflects the importance of the Virtual Comparator as a key benchmark.
- Commentaries are only provided for core cohorts (i.e. those based on the sex and stage filters). If any other filters (non-core cohorts) are applied, then no commentary is produced.
- Comparisons are only produced if there are a minimum number of candidates in the cohorts being compared.
- A maximum of 6 comments are displayed per chart. These are displayed in order of priority, as follows: differences where the school or LA's performance is 'much greater than' the VC are displayed first where performance is 'much lower than', then 'higher than' and 'lower than'.

The methodology implemented is as follows:

1. A commentary is only generated if the cohort or cohort part (e.g. SIMD decile 5) meets the criteria for the minimum number of candidates (5 for the national dashboard measures, 0 otherwise).
2. For a comparison between a cohort and its Virtual Comparator, the difference between the two is tested for statistical significance (at the 95% level) and only statistically significant comparisons are eligible for display.
3. The difference between the given cohort and its comparator is calculated. For differences below 0 (including 0), this is divided by the standard deviation of all such cohort and comparator differences which are below 0 (including 0). For differences above 0, this is divided by the standard deviation of all such cohort and comparator differences which are above 0. So, if the comparison of interest is between girls in school A and girls in its Virtual Comparator and girls in school A perform above their Virtual Comparator, the standard deviation is calculated based on all of the possible school-Virtual Comparator girls comparison differences where the school performs above the VC.
4. Based on an understanding of the available educational literature, if the resulting value is greater than 1.6 the cohort is 'much greater than' its comparator. A value greater than 0.8 would be 'greater than', whilst a value of less than -1.6 would be 'much lower than' and of less than -0.8 would be 'lower than'.



Whilst there may be a difference in value between a school and its Virtual Comparator, these are only highlighted in commentaries if the difference is both statistically significant and large enough to be considered of important educational value.

Please note that some schools may not have commentaries for a particular measure. If none of the differences to the Virtual Comparator are significant the following message will be displayed 'Testing found that there were no significant comparisons for this measure'.

Commentaries are not currently displayed for the grade neutral tariff in the 'Attainment for All' and 'Attainment versus Deprivation' measures.