Item 2

20th April 2023

Glasgow City Council

Education, Skills and Early Years City Policy Committee

Report by Executive Director of Education Services

Contact: Jean Miller Ext: 74214

SCHOOL LEAVERS' ATTAINMENT 2022

Purpose of Report:

To update the Committee on the attainment of school leavers following the publication of the Insight data in February 2023.

Recommendations:

The Committee is asked to consider the report noting the positive trends in school leavers' attainment.

Ward No(s):	Citywide: ✓
Local member(s) advised: Yes ☐ No ☐	consulted: Yes ☐ No ☐

***PLEASE NOTE THE FOLLOWING**:*

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1 Leavers' attainment

1.1 In February each year, the Scottish Government publishes data through Insight on leavers' destinations and on leavers' attainment. Insight is the analytical tool available for all schools across Scotland. A number of new indicators have been included which allows attainment data at school level and at city level to be viewed in different ways.

1.2 Most of the data presented on Insight is single year data. Further work on the presentation of the data is needed to be able to show year-on-year progression which is critical for performance analysis.

1.3 This report has used data taken from Insight, but presented in ways which show year-on-year progression.

1.4 Insight allows the comparison of the performance of the authority or individual schools with their virtual comparator. Virtual comparators are created using data from pupils with similar characteristics such as SIMD[1] postcodes, additional support needs and gender.

1.5 The analysis offered in the paper has been based on cumulative data by the end of S5, and by the end of S6, over the last three years. Data on S4 has not been included at city level because some schools have chosen not to present groups of young people for national qualifications in S4 and instead focus on qualifications by the end of S5. One school does not present the entire year group for national qualifications in S4. This impacts on the meaningful relevance of the data as the percentages are based on the total number of pupils in the year group.

1.6 The awards are gathered in terms of SCQF[2] levels, Appendix 1 shows the full SCQF framework.

2 SQA 2020-2022

2.1 The Covid 19 pandemic significantly impacted on the examination diet and process. The examination diet for 2020 was cancelled and SQA immediately engaged with stakeholders to develop a contingency plan to enable young people to gain accreditation for their achievements. Following publication of the results on 4th August 2020 by SQA, a decision was taken that pupil grades would revert to teacher estimates becoming the final award. New certificates were issued to pupils in early September 2020.

[1] Scottish Index of Multiple Deprivation
[2] Scottish Credit and Qualifications Framework, further information available on http://scqf.org.uk/

2.2 The examination diet in 2021 was also impacted due to the pandemic, including a second lockdown period from January to March 2021, and grades were determined by a range of in school assessment processes. SQA worked with stakeholders and put in place an Alternative Certification Model (ACM). ACM relied on teachers' professional judgements about each young person based on evidence to be gathered across the academic session. Teachers in Glasgow worked exceptionally hard during this period gathering evidence for their estimates. They drew on a range of information – assessments, classwork and their professional judgement. Teachers worked in their subject departments to ensure that grades were based on robust evidence. Senior staff were also involved looking across pupil performance as part of their monitoring and tracking arrangements. There were a number of moderation activities across Glasgow schools to ensure that standards were being applied consistently.

2.3 The examination diet of 2022 returned to the pre-pandemic model of a traditional exam diet with SQA preparing all examination papers. However, some of the course descriptors were amended to take account of the impact of the pandemic and the continuing disruption to young people preparing for the exams.

2.4 This paper contains an analysis of performance across the last five years. Given the different approaches to certification which have taken place it would be inappropriate to draw significant conclusions from the data. However, in order to continue to improve it is critical that we consistently analyse performance data to consider areas for further improvement.

Insight: Breadth and Depth Indicator

3 By the end of S5

3.1 This indicator looks at the number of awards that young people have achieved by the end of a year. Insight allows you to compare performance with the local authority's virtual comparator authority as well as against national figures. It also allows the user to apply a range of filters such as gender, EAL, additional support needs or ethnicity.

3.2 The data in Insight includes all awards, including those achieved in other schools, colleges and the Advanced Higher hub. Schools are increasingly using a range of awards, including National Qualifications, National Progression Awards and vocational qualifications.

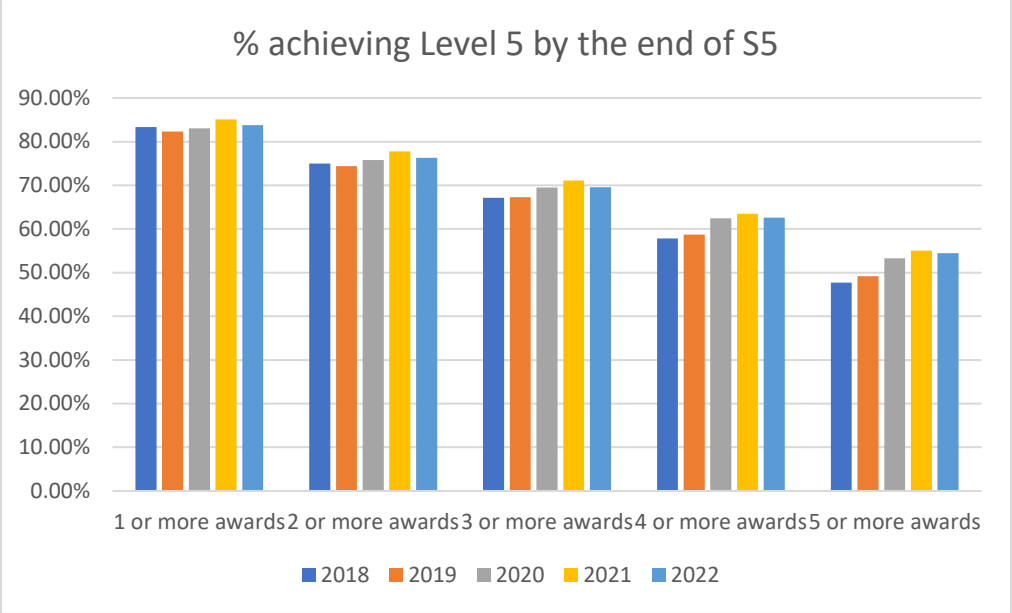


Table: SCQF level 5 by the end of S5 Glasgow and Virtual Comparator

	2018	2019	2020	2021	2022	2018 VC	2019 VC	2020 VC	2021 VC	2022 VC
1 or more awards	83.3%	82.3%	83.0%	85.1%	83.9%	78.3%	78.6%	79.9%	82.6%	81.7%
2 or more awards	75.0%	74.4%	75.8%	77.8%	76.5%	69.6%	69.6%	71.8%	75.8%	73.8%
3 or more awards	67.1%	67.3%	69.5%	71.1%	69.7%	62.0%	62.0%	65.1%	69.6%	67.3%
4 or more awards	57.8%	58.7%	62.5%	63.5%	62.8%	54.3%	54.8%	57.8%	62.8%	60.2%
5 or more awards	47.7%	49.2%	53.3%	55.1%	54.8%	45.3%	46.2%	50.0%	55.6%	52.4%

SCQF level 5 by the end of S5 National	2018	2019	2020	2021	2022
1 or more awards	86.5%	86.2%	86.8%	88.2%	87.9%
2 or more awards	80.0%	79.8%	81.2%	83.1%	82.4%
3 or more awards	73.8%	73.6%	76.1%	78.6%	77.4%
4 or more awards	66.95%	67.4%	70.4%	72.8%	71.7%
5 or more awards	58.6%	59.6%	63.5%	66.4%	64.9%

3.3 As can be seen from the tables above, Glasgow performs consistently better than its virtual comparator but remains below the national figures. Similar to the national position, there was a slight decline in 2022 from 2021 figures. However, as noted in section 2 of the report, the different approaches to assessment make comparison inappropriate. Positively, attainment has increased when comparing 2022 to 2019 which was the last year that young people sat a full external examination diet.

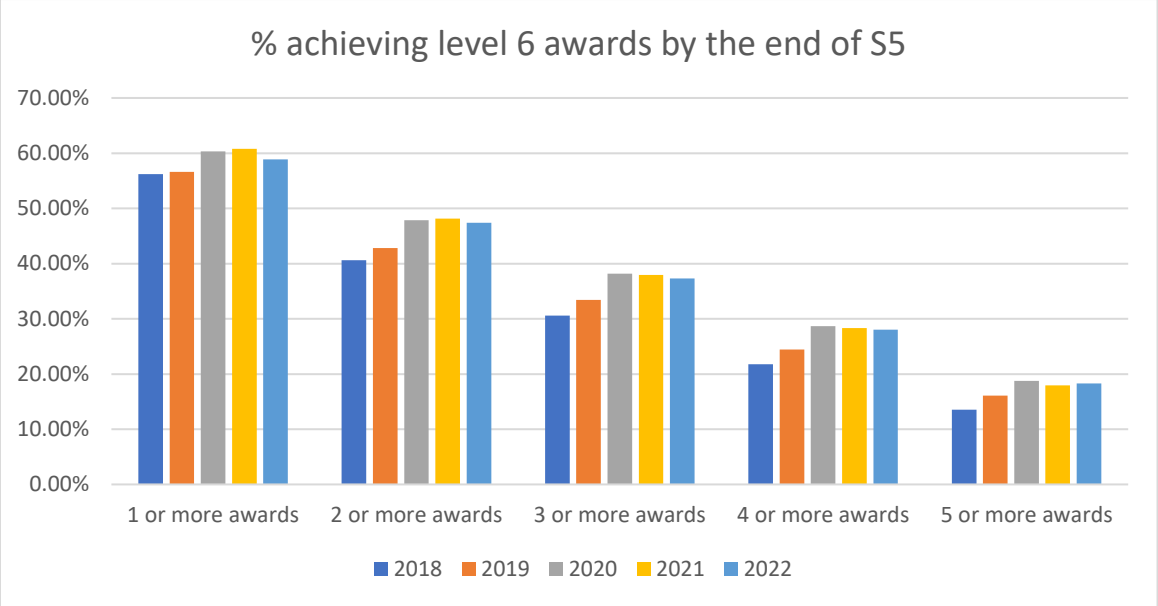


Table: SCQF level 6 by the end of S5 Glasgow and Virtual Comparator

	2018	2019	2020	2021	2022	2018 VC	2019 VC	2020 VC	2021 VC	2022 VC
1 or more awards	55.9%	56.6%	60.3%	60.8%	58.9%	47.3%	49.1%	51.5%	55.3%	52.0%
2 or more awards	40.5%	42.8%	47.9%	48.1%	47.8%	36.3%	38.1%	41.1%	44.3%	41.3%
3 or more awards	30.5%	33.4%	38.2%	37.9%	37.6%	27.9%	29.5%	32.2%	35.2%	33.0%
4 or more awards	21.8%	24.4%	28.7%	28.33%	28.2%	19.6%	21.7%	23.5%	25.4%	24.4%
5 or more awards	13.4%	16.1%	18.8%	17.93%	18.4%	12.0%	13.3%	14.2%	15.5%	15.5%

SCQF level 6 by the end of S5 National	2018	2019	2020	2021	2022
1 or more awards	60.4%	61.6%	64.3%	66.0%	64.0%
2 or more awards	49.5%	51.2%	55.0%	56.6%	54.6%
3 or more awards	40.4%	42.5%	46.3%	47.8%	46.0%
4 or more awards	30.7%	33.2%	36.2%	37.1%	36.1%
5 or more awards	20.1%	22.1%	24.1%	24.7%	24.4%

3.4 Similar to the level 5 figures, the performance by the end of S5 at level 6 shows that Glasgow continues to perform better than its virtual comparator and below the national figure. Again, there is a slight decline in 2022 from 2021 figures but positively, when 2022 is compared to 2019 attainment has increased.

4 By the end of S6

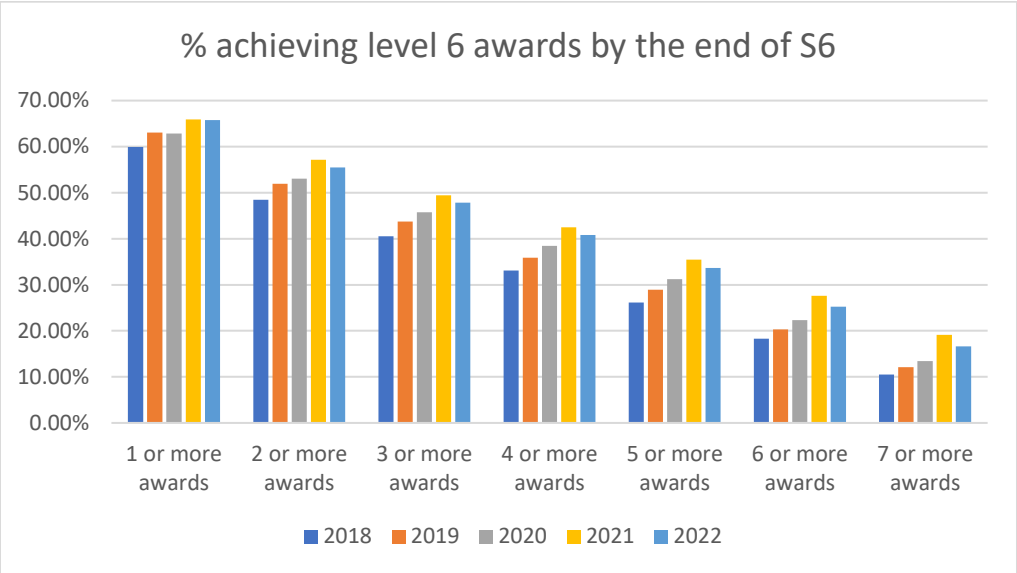


Table: SCQF level 6 by the end of S6 Glasgow and Virtual Comparator

	2018	2019	2020	2021	2022	2018 VC	2019 VC	2020 VC	2021 VC	2022 VC
1 or more awards	59.8%	62.9%	62.8%	65.9%	65.7%	51.4%	52.2%	54.0%	56.1%	58.7%
2 or more awards	48.4%	51.6%	53.0%	57.2%	55.6%	42.2%	43.1%	46.0%	48.2%	50.2%
3 or more awards	40.3%	43.5%	45.7%	49.4%	48.0%	35.0%	36.4%	39.3%	41.5%	43.0%
4 or more awards	32.9%	35.5%	38.4%	42.5%	41.0%	28.8%	30.0%	32.9%	35.0%	36.0%
5 or more awards	26.1%	28.5%	31.2%	35.5%	33.9%	22.7%	23.5%	26.6%	28.2%	29.0%
6 or more awards	18.3%	20.3%	22.3%	27.6%	25.6%	*	16.1%	18.5%	20.1%	20.7%
7 or more awards	10.5%	12.1%	13.5%	19.1%	17.0%	*	9.1%	10.7%	12.6%	12.3%

* Not available

SCQF level 6 by the end of S6 National	2018	2019	2020	2021	2022
1 or more awards	63.9%	64.7%	65.7%	67.7%	68.7%
2 or more awards	55.3%	56.4%	58.4%	61.0%	61.2%
3 or more awards	48.3%	49.5%	52.0%	54.9%	55.0%
4 or more awards	41.4%	42.5%	45.5%	48.4%	48.0%
5 or more awards	34.1%	35.0%	38.0%	41.0%	40.3%
6 or more awards	23.6%	24.4%	27.5%	30.3%	29.4%
7 or more awards	13.1%	13.9%	16.4%	19.1%	18.1%

4.1 Note that by the end of S6, performance up to 7 or more awards has been included. This is to stress the importance of young people continuing to achieve qualifications and shows that schools are continuing to have high expectations for all their young people.

4.2 By the end of S6, the pattern of performance is the same as by the end of S5 with Glasgow performing better than its virtual comparator and below the national figure. Again, whilst performance in 2022 compared to 2021 shows a slight decline, positively, when compared to 2019 attainment has increased.

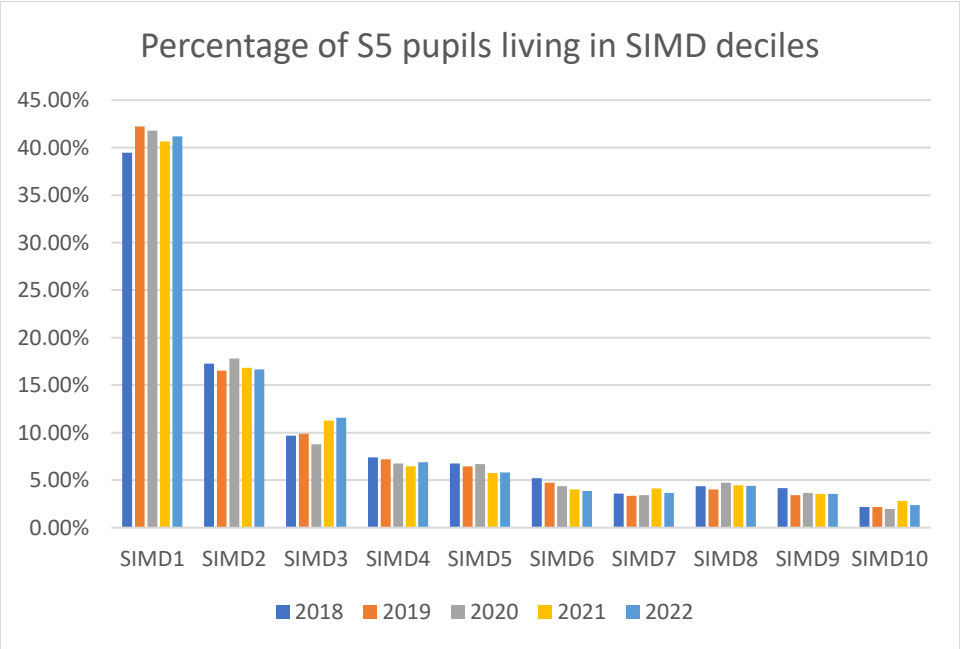
Insight: Attainment versus deprivation

5 By the end of S5

5.1 This statistic allows us to take into account pupils' postcodes and allows us to consider the impact of deprivation on attainment. The Scottish Index of Multiple Deprivation (SIMD) is used. The attainment measure being used is 'average tariff score'.

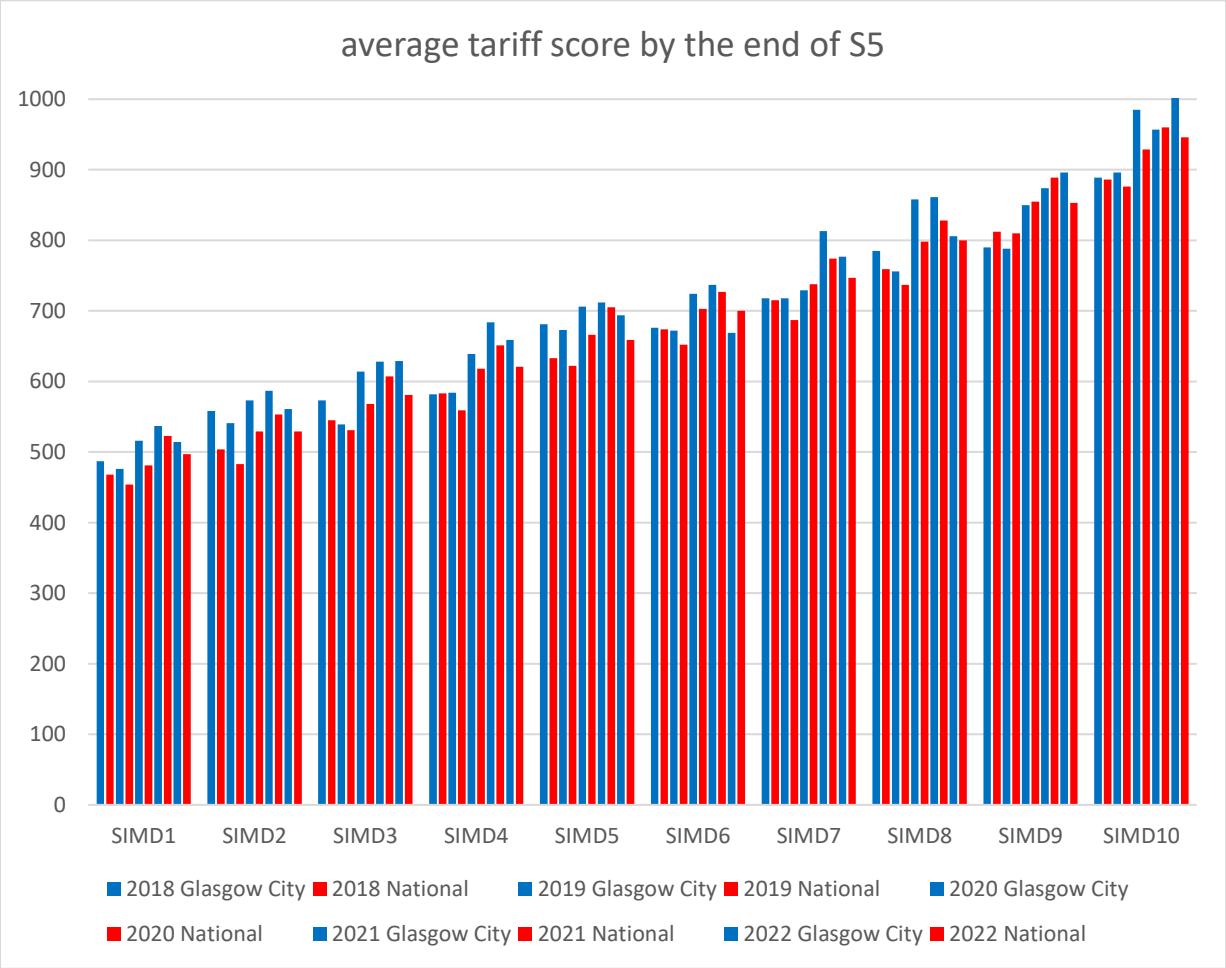
5.2 Glasgow has the highest percentage of children living in poverty in Scotland and the SIMD profile of the city is quite different from other local authorities, with notably high percentages living in SIMD1 (10% most deprived postcodes) compared to SIMD10 (10% least deprived postcodes).

5.3 The graph below shows that over 41% of S5 pupils in Glasgow live in the 10% most deprived postcodes with only 2% living in the 10% least deprived postcodes.



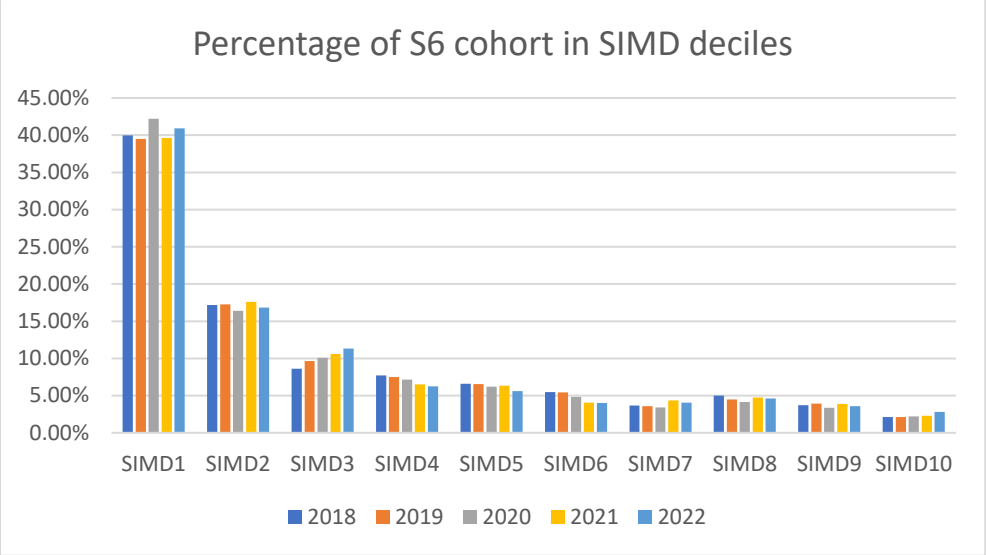
5.4 The graph below shows that attainment continues to be linked to deprivation with pupils in SIMD10 having a higher average tariff score than those in SIMD1.

5.5 Similar to the breadth and depth figures, the average tariff score shows a decline in 2022 for both Glasgow and the national figures. Positively, Glasgow's figures remain above the national figure for almost all the SIMD deciles showing that when deprivation is taken into account, Glasgow performs better than the national average.

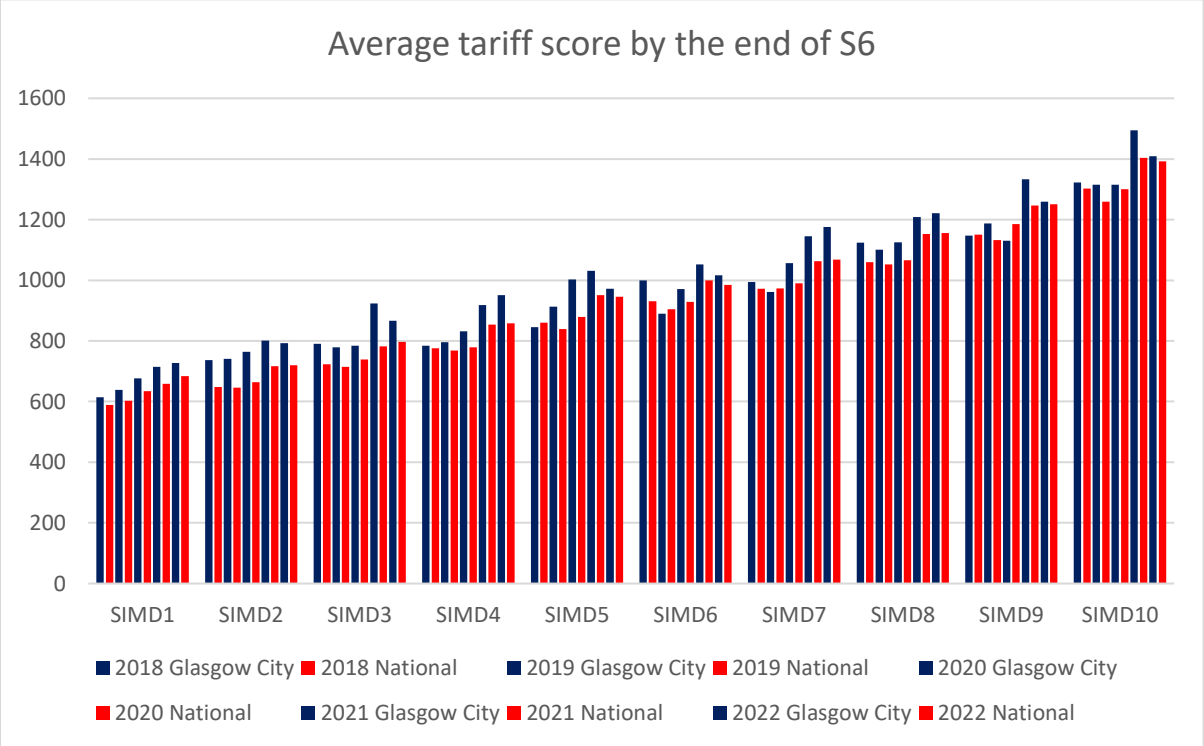


6 By the end of S6

6.1 The graph below shows that similar to S5, more than 40% of S6 pupils live in the 10% most deprived postcodes with only 3% in the 10% least deprived.



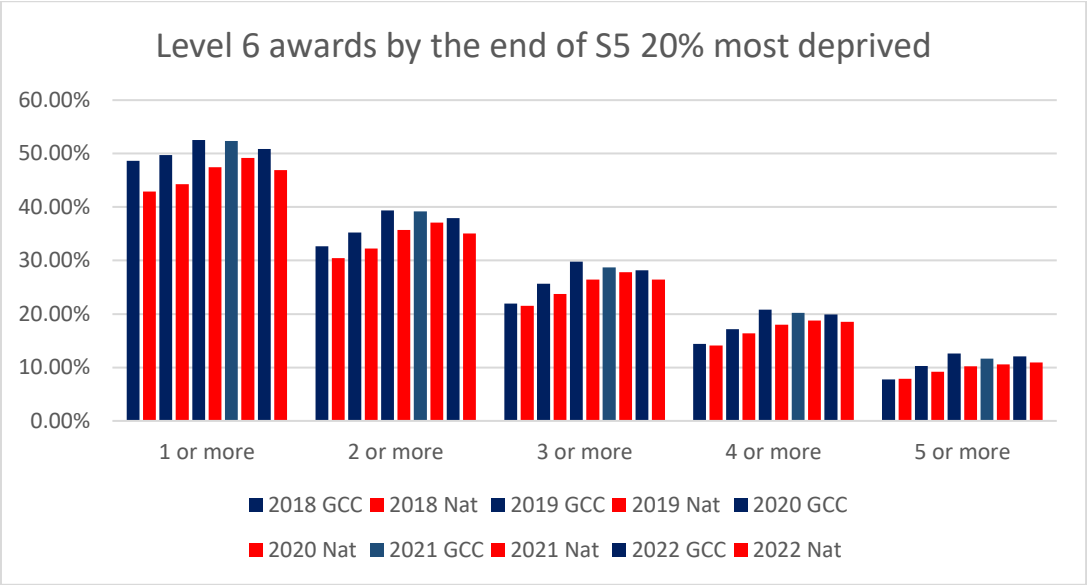
6.2 It can be seen that for all deciles Glasgow consistently performs better than the national average tariff score by the end of S6.



7 Breadth and depth attainment versus deprivation

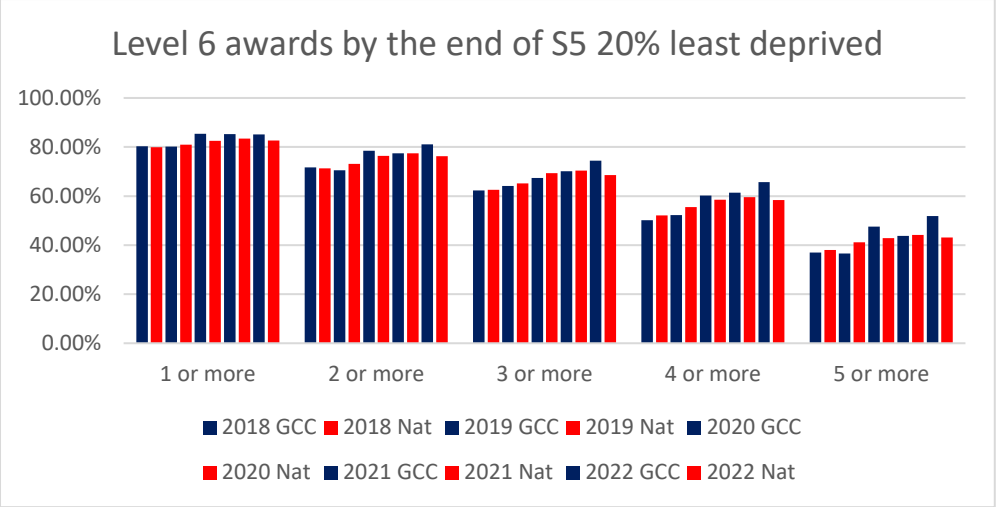
7.1 The Insight tool allows comparisons to be made by using a filter on Quintiles – where Quintile 1 is the 20% most deprived postcodes and Quintile 5 is the 20% least deprived postcodes. As the focus nationally and locally is on closing the poverty-related attainment gap, the tables and graphs in this section consider Level 6 attainment by the end of S5 for both Quintile 1 and Quintile 5.

Level 6	Quintile 1									
	2018		2019		2020		2021		2022	
	GCC	Nat	GCC	Nat	GCC	Nat	GCC	Nat	GCC	Nat
1 or more	48.7%	42.9%	49.7%	44.3%	52.6%	47.5%	52.4%	49.2%	50.9%	47.0%
2 or more	32.6%	30.5%	35.2%	32.2%	39.4%	35.7%	39.2%	37.1%	38.3%	35.4%
3 or more	22.0%	21.6%	25.7%	23.8%	29.8%	26.4%	28.7%	27.8%	28.4%	26.7%
4 or more	14.4%	14.1%	17.2%	16.4%	20.8%	18.0%	20.2%	18.8%	20.1%	18.8%
5 or more	7.8%	7.9%	10.3%	9.2%	12.6%	10.2%	11.6%	10.6%	12.1%	11.0%



7.2 The table and graph above show that Glasgow performs better than the national figure for all measures in 2022 for those young people living in the 20% most deprived postcodes.

Level 6	Quintile 5									
	2018		2019		2020		2021		2022	
	GCC	Nat	GCC	Nat	GCC	Nat	GCC	Nat	GCC	Nat
1 or more	80.3%	79.9%	80.2%	80.9%	85.4%	82.5%	85.2%	83.5%	85.7%	82.8%
2 or more	71.6%	71.4%	70.5%	73.2%	78.5%	76.4%	77.5%	77.5%	81.3%	76.4%
3 or more	62.3%	62.6%	64.9%	65.2%	67.4%	69.4%	70.1%	70.4%	75.0%	68.8%
4 or more	50.2%	52.2%	52.2%	55.5%	60.2%	58.5%	61.4%	59.6%	66.0%	58.7%
5 or more	37.0%	38.0%	36.6%	41.1%	47.5%	42.9%	43.7%	44.2%	52.0%	43.5%



7.3 The table and graph above show that Glasgow performs broadly in line with the national figure with 2022 showing a stronger performance than the national figures.

7.4 It is worth noting the numbers in each category for Glasgow.

	2018	2019	2020	2021	2022
No. in 20% most deprived	2591	2623	2768	2802	2883
No. in 20% least deprived	289	250	261	311	300

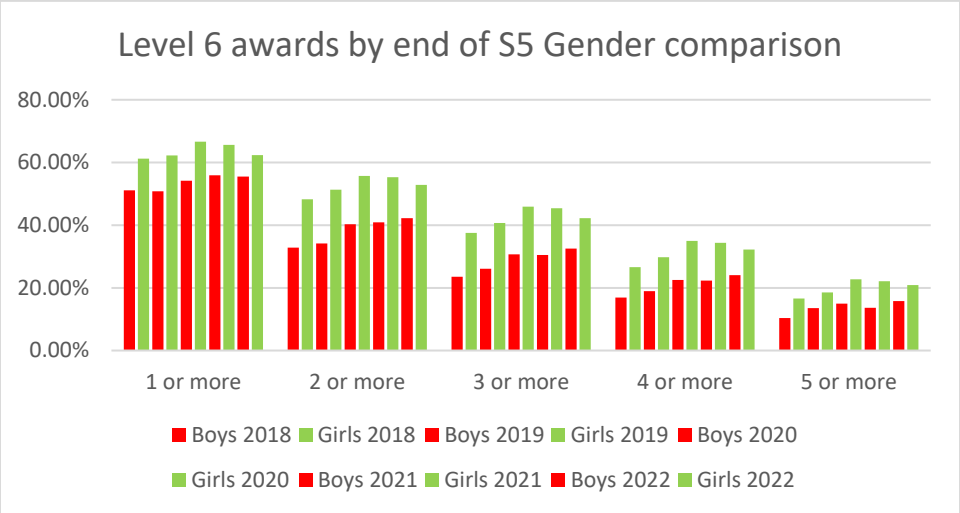
8 Gender comparison

8.1 The table and graph below show that girls consistently perform better than boys. The numbers of boys and girls in each year is broadly equivalent.

8.2 It can be seen from the table and the graph that the gap between boys' and girls' performance widened in 2020 and 2021. In 2022, girls' performance declined more than boys with the gap narrowing.

Awards at SCQF level 6 by the end of S5

	Boys 2018	Girls 2018	Boys 2019	Girls 2019	Boys 2020	Girls 2020	Boys 2021	Girls 2021	Boys 2022	Girls 2022
1 or more	51.1%	61.2%	50.9%	62.2%	54.2%	66.7%	56.0%	65.6%	55.6%	62.5%
2 or more	32.9%	48.2%	34.1%	51.4%	40.3%	55.7%	40.9%	55.3%	42.6%	53.2%
3 or more	23.6%	37.5%	26.1%	40.7%	30.7%	45.9%	30.5%	45.4%	32.7%	42.7%
4 or more	16.9%	26.6%	19.0%	29.7%	22.5%	35.0%	22.3%	34.3%	24.1%	32.5%
5 or more	10.3%	16.6%	13.6%	18.5%	15.0%	22.7%	13.7%	22.2%	15.9%	21.0%



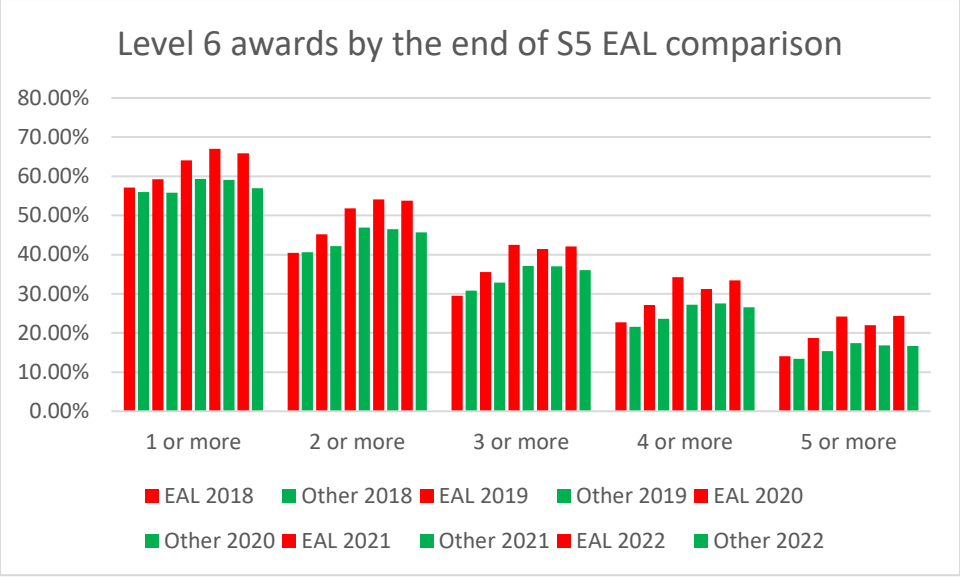
	2018	2019	2020	2021	2022
No. of boys	2267	2224	2366	2427	2539
No. of girls	2301	2241	2277	2447	2446

9 English as an additional language comparison

9.1 The table and graph below show that young people with English as an Additional Language perform consistently better than those young people who do not have English as an Additional Language (EAL).

Awards at SCQF level 6 by the end of S5

	EAL	Other	EAL	Other	EAL	Other	EAL	Other	EAL	Other
	2018	2018	2019	2019	2020	2020	2021	2021	2022	2022
1 or more	57.1%	56.0%	59.3%	55.9%	64.1%	59.4%	67.0%	59.1%	66.0%	57.0%
2 or more	40.5%	40.6%	45.2%	42.2%	51.8%	46.9%	54.1%	46.5%	54.1%	46.1%
3 or more	29.5%	30.8%	35.5%	32.8%	42.5%	37.1%	41.4%	37.0%	42.3%	36.4%
4 or more	22.7%	21.6%	27.1%	23.7%	34.3%	27.3%	31.3%	27.5%	33.6%	26.7%
5 or more	14.1%	13.4%	18.7%	15.4%	24.2%	17.4%	22.0%	16.8%	24.5%	16.7%



9.2 It is worth noting that Glasgow is significantly above the Virtual Comparator in all of these measures, for example 5 or more awards Glasgow is 24.5% whilst the VC is 12.4%.

9.3 The table shows the numbers of pupils in each category.

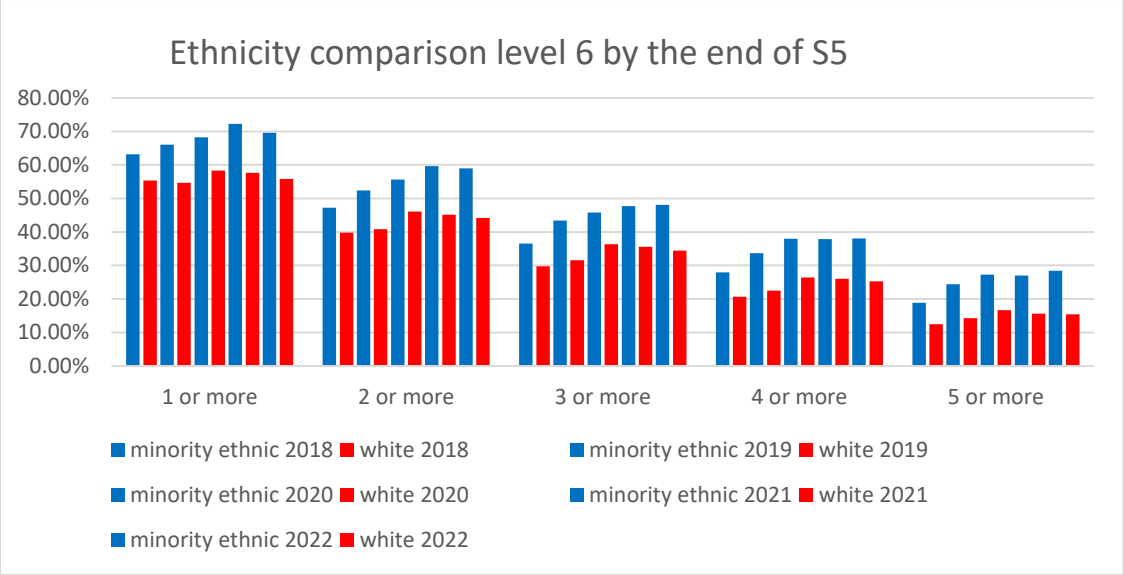
	2018	2019	2020	2021	2022
No. of EAL	867	918	922	1040	1070
No. of Other	3701	3547	3721	3834	3915

10 Ethnicity comparison

10.1 The table and graph below show that young people who have identified as 'minority ethnic' perform much better than those who have identified as 'white'.

Awards at SCQF level 6 by the end of S5

	Minority ethnic	White	Minority ethnic	White	Minority ethnic	White	Minority ethnic	White	Minority ethnic	White
	2018	2018	2019	2019	2020	2020	2021	2021	2022	2022
1 or more	63.2%	55.4%	66.1%	54.7%	68.2%	58.4%	72.3%	57.7%	69.7%	55.9%
2 or more	47.2%	39.8%	52.4%	40.9%	55.7%	46.1%	59.7%	45.1%	59.3%	44.7%
3 or more	36.6%	29.8%	43.4%	31.6%	45.8%	36.4%	47.7%	35.5%	48.4%	34.8%
4 or more	28.0%	20.7%	33.7%	22.5%	37.9%	26.5%	37.9%	26.0%	38.3%	25.5%
5 or more	18.9%	12.4%	24.4%	14.3%	27.3%	16.7%	26.9%	15.6%	28.6%	15.5%



10.2 Again, it is worth noting that Glasgow is significantly above the Virtual Comparator in all of these measures, for example for 5 or more Glasgow is 28.6% whilst the VC is 14.82%.

10.3 The table shows the numbers of pupils who have identified as White and Minority Ethnic. Note that there is a small number (less than 100 each year) who are categorised as 'not known'.

	2018	2019	2020	2021	2022
No. of White	3581	3377	3575	3624	3678
No. of Minority Ethnic	826	884	885	1054	1100

11 ASN Comparison

11.1 The next table shows that young people who have an additional support need do not perform as well as those who are not identified as having an additional support need.

Awards at SCQF level 6 by the end of S5

	ASN 2018	Other 2018	ASN 2019	Other 2019	ASN 2020	Other 2020	ASN 2021	Other 2021	ASN 2022	Other 2022
1 or more	44.2%	63.6%	43.6%	66.5%	47.2%	70.6%	49.7%	71.0%	47.2%	70.4%
2 or more	28.6%	48.0%	29.8%	52.6%	34.6%	59.1%	36.4%	58.8%	35.1%	60.1%
3 or more	20.47%	36.8%	22.5%	41.6%	26.4%	47.5%	26.9%	48.0%	25.9%	48.9%
4 or more	14.0%	26.6%	16.1%	30.7%	19.5%	36.0%	19.6%	36.2%	18.6%	37.5%
5 or more	8.2%	16.8%	9.9%	20.7%	13.4%	23.1%	12.48%	22.9%	12.4%	24.24%

11.2 Again, it is worth noting that Glasgow is significantly above the Virtual Comparator in all of these measures, for example for 5 or more Glasgow is 25.6% whilst the VC is 9.6%.

11.3 The table shows the numbers of pupils who are identified as having additional support needs and Other.

	2018	**2019**	**2020**	**2021**	**2222**
No. of Other	2824	2546	2598	2566	2533
No. of ASN	1744	1919	2045	2308	2485

12 Policy and Resource Implications

Resource Implications:

Financial: Education Services budget and a range of other sources of funding such as the Pupil Equity Fund and the Strategic Equity Fund.

Legal: N/A

Personnel: N/A

Procurement:

Council Strategic Plan: Grand Challenge 1 – Reduce poverty and inequality in our communities.
Mission 2: Meet the learning and care needs of children and their families before and through school.

Grand Challenge 2 – Increase opportunity and prosperity for all our citizens.
Mission 3: Raise attainment amongst Glasgow's children and young people.

Equality and Socio-Economic Impacts:

Does the proposal support the Council's Equality Outcomes 2021-25? Please specify. Outcome 14: Glasgow City Council (Education Services) has continued to improve outcomes in relation to attainment and achievement for children and young people including those experiencing socio-economic disadvantage, those for whom English is not their first language, those who identify as black and minority ethnic, and disabled children and young people.

What are the potential equality impacts as a result of this report?	Positive impact in that we continue to track performance across different groups of young people and use this data to support interventions.
Please highlight if the policy/proposal will help address socio-economic disadvantage.	Continuing to analyse data relating to attainment supports improvement in performance and, ultimately, better outcomes for young people.

Climate Impacts:

Does the proposal support any Climate Plan actions? Please specify:	No
What are the potential climate impacts as a result of this proposal?	N/A
Will the proposal contribute to Glasgow's net zero carbon target?	N/A

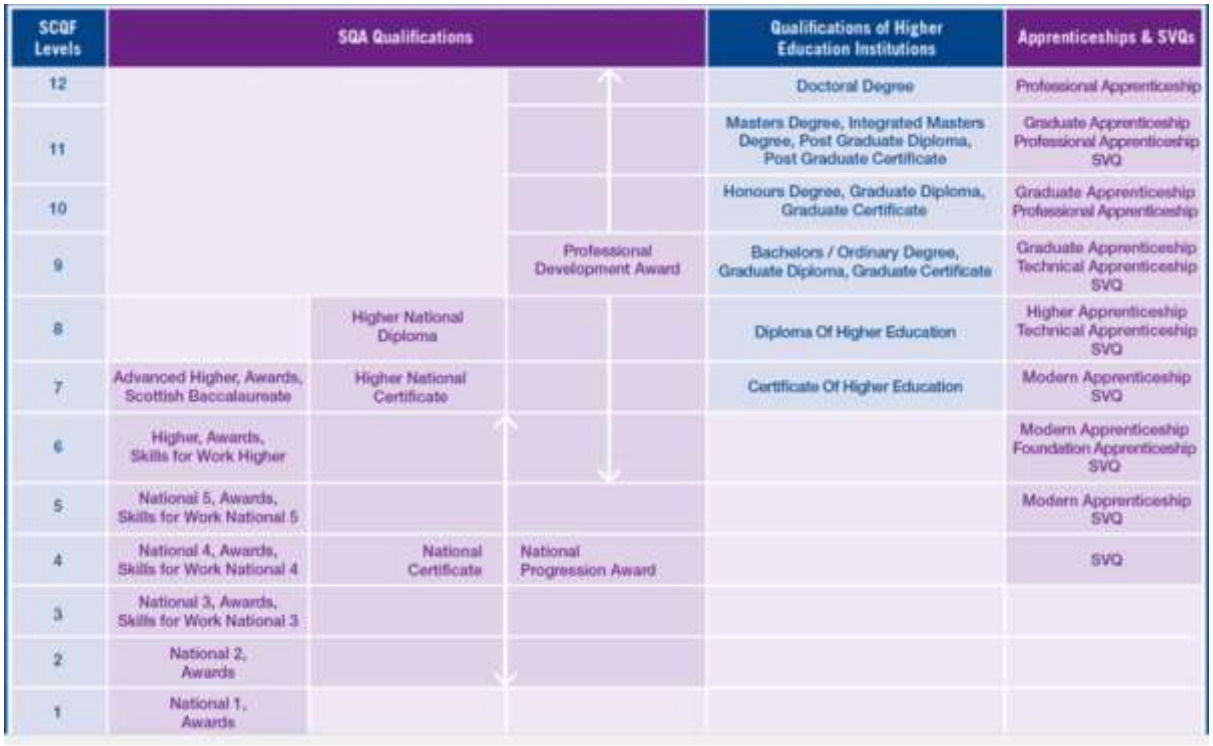
Privacy and Data Protection Impacts:

Are there any potential data protection impacts as a result of this report Y/N	No
If Yes, please confirm that a Data Protection Impact Assessment (DPIA) has been carried out	

13 Recommendations

13.1 The Committee is asked to consider the content of the report, note the positive outcomes for young people across the city and the focus on improving further.

Appendix 1



SCQF Levels	SQA Qualifications			Qualifications of Higher Education Institutions	Apprenticeships & SVQs
12				Doctoral Degree	Professional Apprenticeship
11				Masters Degree, Integrated Masters Degree, Post Graduate Diploma, Post Graduate Certificate	Graduate Apprenticeship Professional Apprenticeship SVQ
10				Honours Degree, Graduate Diploma, Graduate Certificate	Graduate Apprenticeship Professional Apprenticeship
9			Professional Development Award	Bachelors / Ordinary Degree, Graduate Diploma, Graduate Certificate	Graduate Apprenticeship Technical Apprenticeship SVQ
8		Higher National Diploma		Diploma Of Higher Education	Higher Apprenticeship Technical Apprenticeship SVQ
7	Advanced Higher, Awards, Scottish Baccalaureate	Higher National Certificate		Certificate Of Higher Education	Modern Apprenticeship SVQ
6	Higher, Awards, Skills for Work Higher				Modern Apprenticeship Foundation Apprenticeship SVQ
5	National 5, Awards, Skills for Work National 5				Modern Apprenticeship SVQ
4	National 4, Awards, Skills for Work National 4	National Certificate	National Progression Award		SVQ
3	National 3, Awards, Skills for Work National 3				
2	National 2, Awards				
1	National 1, Awards				

Appendix 2 From *Insight technical information*

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:

- Gender
- 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 August attainment. For leavers before 1st May in S5 (includes S4 leavers). After 1st May in S5, S6.

- 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 which 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 aren't 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.

Starting in the September 2017 update, Insight will use SIMD 2016 data as part of Virtual Comparator for the latest year of data (2017). Therefore this will start to be reflected as the measures in Insight are updated with the latest data. This means that for 2017 data included in the September update, the Virtual Comparator will be using SIMD 2016 as part of the matching process. No historic data will be re-calculated so all years prior to 2017 will 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 can 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 we 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 gender 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 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.

e) 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.