

Summer 2022 Equalities Impact Analysis: GCSE, AS, and A level

Statistician: John Fuery
Debbie Roberts
Hannah Williams
01633 373 292
statistics@qualificationswales.org

Media enquiries: 01633 373 222
media@qualificationswales.org

Key Points

- This release presents statistics on differences in qualification results by learner characteristics. These differences may have been influenced by other confounding factors, such as subject selection and prior attainment, which it was not possible to take account of with the available data. It is also important to place attainment gaps in the context of changes in overall results. Different awarding arrangements were in place in 2020 and 2021 due to the cancellation of exams, and results in 2022 were awarded broadly midway between 2019 and 2021. At a subject level, variation in attainment gaps can be quite substantial because of changes in the ability of learners choosing to study a subject, small entry sizes and other factors.
- In most subjects, gender attainment gaps have been in favour of girls in recent years. Compared to 2021, the gender attainment gaps in 2022 tended to be narrower. Compared to 2019, the gender attainment gaps in 2022 tended to be wider at grade A/7 and above but narrower at grade C/4 and above. However, these patterns were not consistent across all subjects.
- In most subjects, the GCSE attainment gap by free school meal eligibility at grade A/7 and above is narrower in 2022 compared to 2021, but larger than in 2019. At grade C/4 and above, there is more variation in how the gap has changed over time, and the pattern is not consistent across all subjects.
- In most subjects, the GCSE attainment gap by special educational needs provision in 2022 at grade A/7 and above is narrower in 2022 compared to 2021, but larger than in 2019. At grade C/4 and above it is generally narrower than both 2021 and 2019, but this pattern is not consistent across all subjects.
- Analysis of AS and A level results by Welsh Index of Multiple Deprivation shows that, generally, a greater proportion of top grades are awarded in the least deprived areas, and fewer in the most deprived areas. The difference between the most and least deprived areas reflects the overall trend in A level results for the year, so in years where results are higher overall, the gap between the most and least deprived areas is greater. At AS, the gap at grade A widened in 2022 compared to previous years.
- More information about results by pupil characteristics can be found in the [Examination Results](#) release published by the Welsh Government.

GCSE

The following analysis uses the data provided by awarding bodies and Welsh Government for GCSE results in the summer series. The data includes all single award GCSEs and double award science and is for 16-year-olds in Wales only. Data relating to gender is for all 16-year-olds and is based on data published by JCQ. Data relating to free school meals and special educational needs provision is only available for learners in maintained centres.

The proportion of learners who are eligible for free school meals and/or have a special educational needs provision in place has changed over time. The total number of entries for each group can be found in the data tables published alongside this release. These changes in population sizes are likely to have had an effect on attainment gaps. The [Welsh Government's Schools' census results](#) provides more information about the changes in these populations.

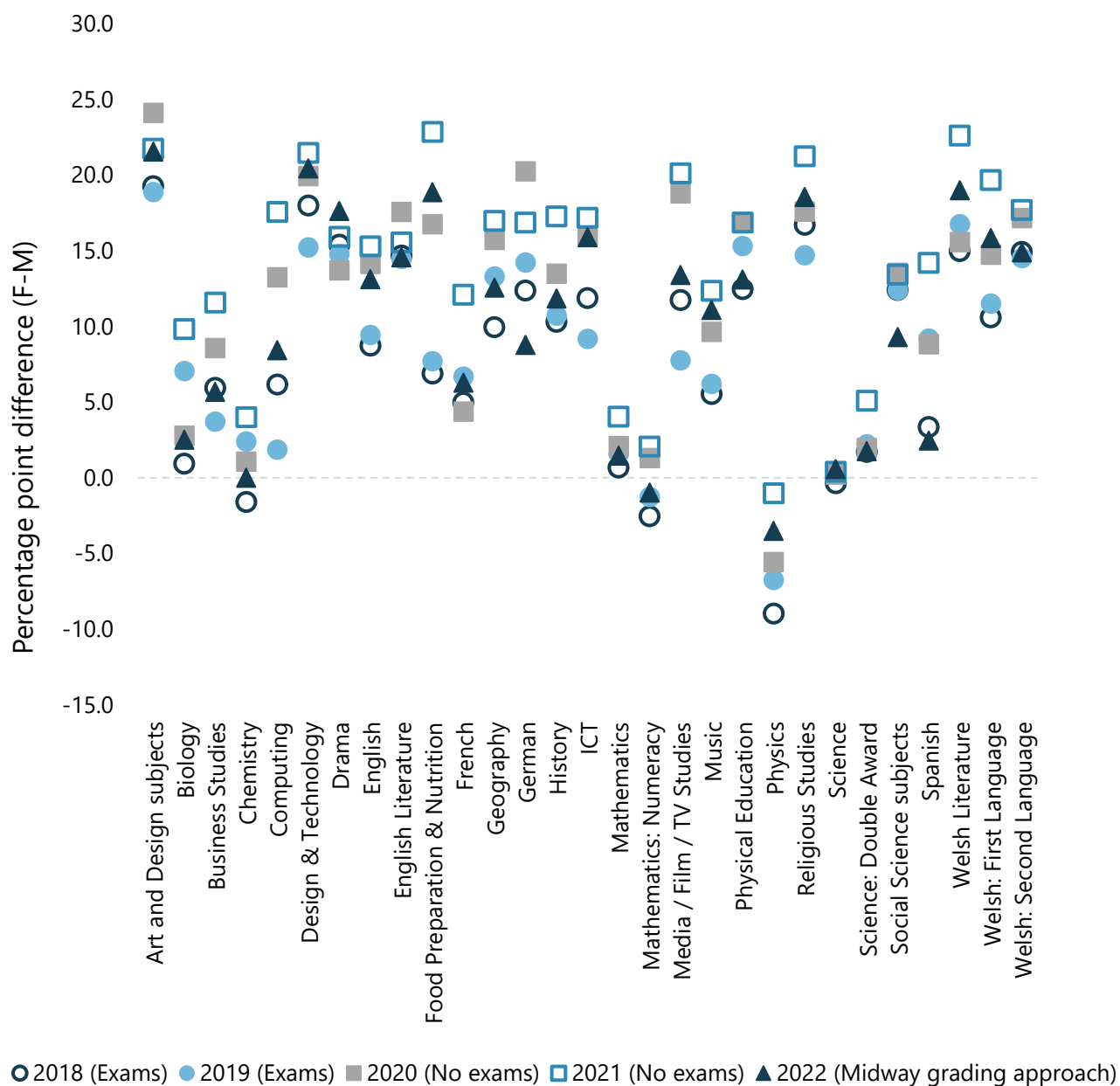
Gender

A gender attainment gap exists in all subjects, but the size of the gap varies across subjects. Female learners get higher results than male learners in most subjects, but not all. At grade A/7 and above, the 2022 results show a larger attainment gap in most subjects than in 2019, when exams were last sat. Compared with 2021 results at grade A/7, the 2022 results show a narrower attainment gap in almost all subjects. At grade C/4 and above there was a smaller attainment gap in most subjects in 2022 compared to 2021 and 2019.

The largest attainment gap in favour of female learners in the 2022 results was in Art and Design subjects (21.5pp). This is consistent with previous years, but the gap is larger than in 2019 and smaller than in 2020 and 2021. Design and Technology also had a large attainment gap at grade A/7 (20.4 pp). Physics and Mathematics: Numeracy are the only subjects in which male learners achieved higher results at A/7 and above than female learners in 2022. In Physics, this was consistent with the results for the past five years.

Figure 1: GCSE gender attainment gap (females – males, percentage point) at grade A/7 and above by JCQ subject grouping

16-year-olds, summer series, subjects with at least 100 entries in each group in each year, full course GCSEs and double award science only

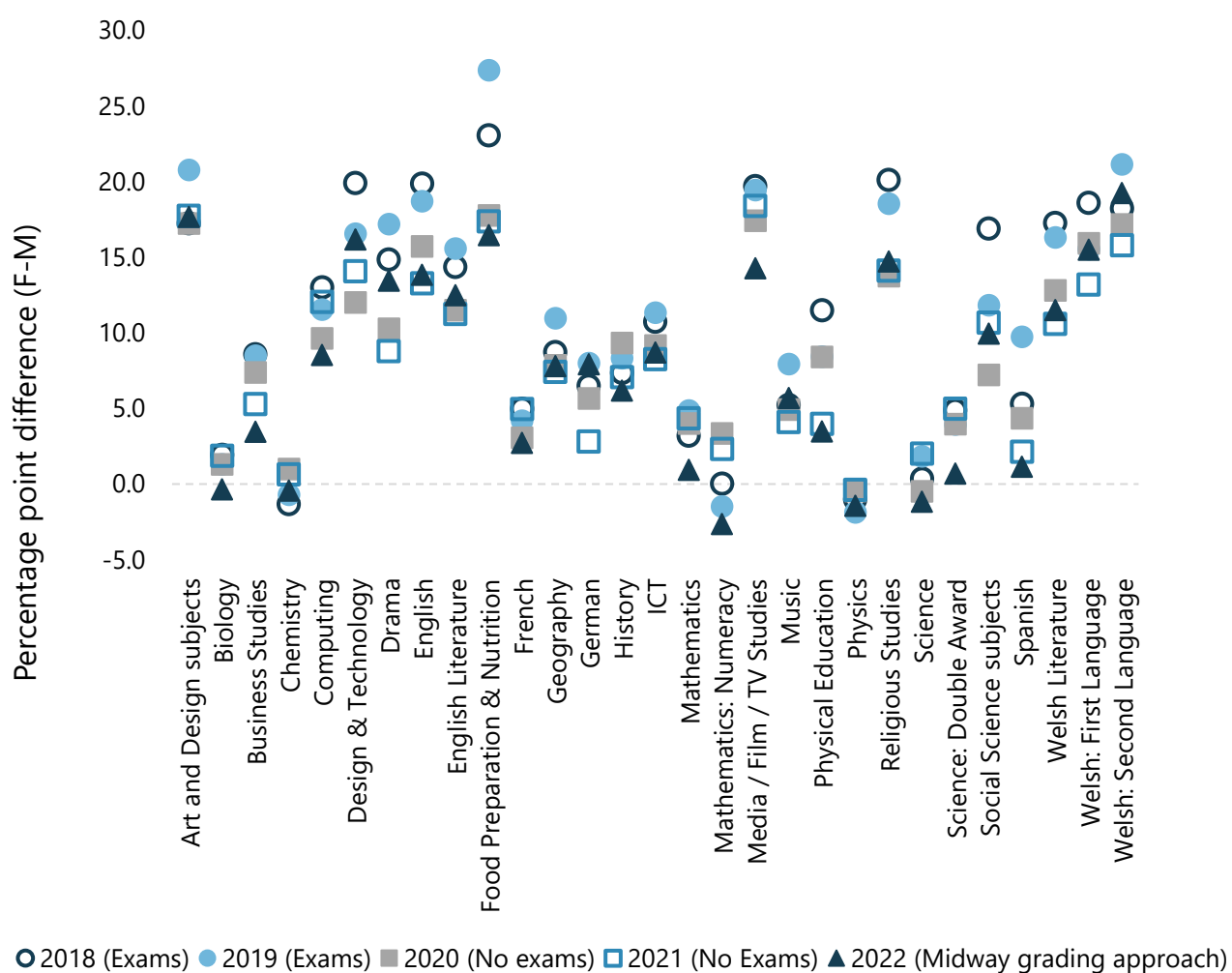


Source: JCQ

At grade C/4 and above, the highest attainment gaps in favour of female learners in 2022 were in Welsh: Second Language (19.3pp) and Art and Design subjects (17.7pp). Some science subjects (Biology, Chemistry, Physics and Science) and Mathematics: Numeracy were the only subjects where the results for male learners were higher, with attainment gaps ranging from 0.3pp to 2.6pp. In Biology, Chemistry and Mathematics: Numeracy, this is a change compared to 2020 and 2021, when more female learners achieved grade C/4 and above than male learners.

Figure 2: GCSE gender attainment gap (females – males, percentage point) at grade C/4 and above by JCQ subject grouping

16-year-olds, summer series, subjects with at least 100 entries in each group in each year, full course GCSEs and double award science only



Source: JCQ

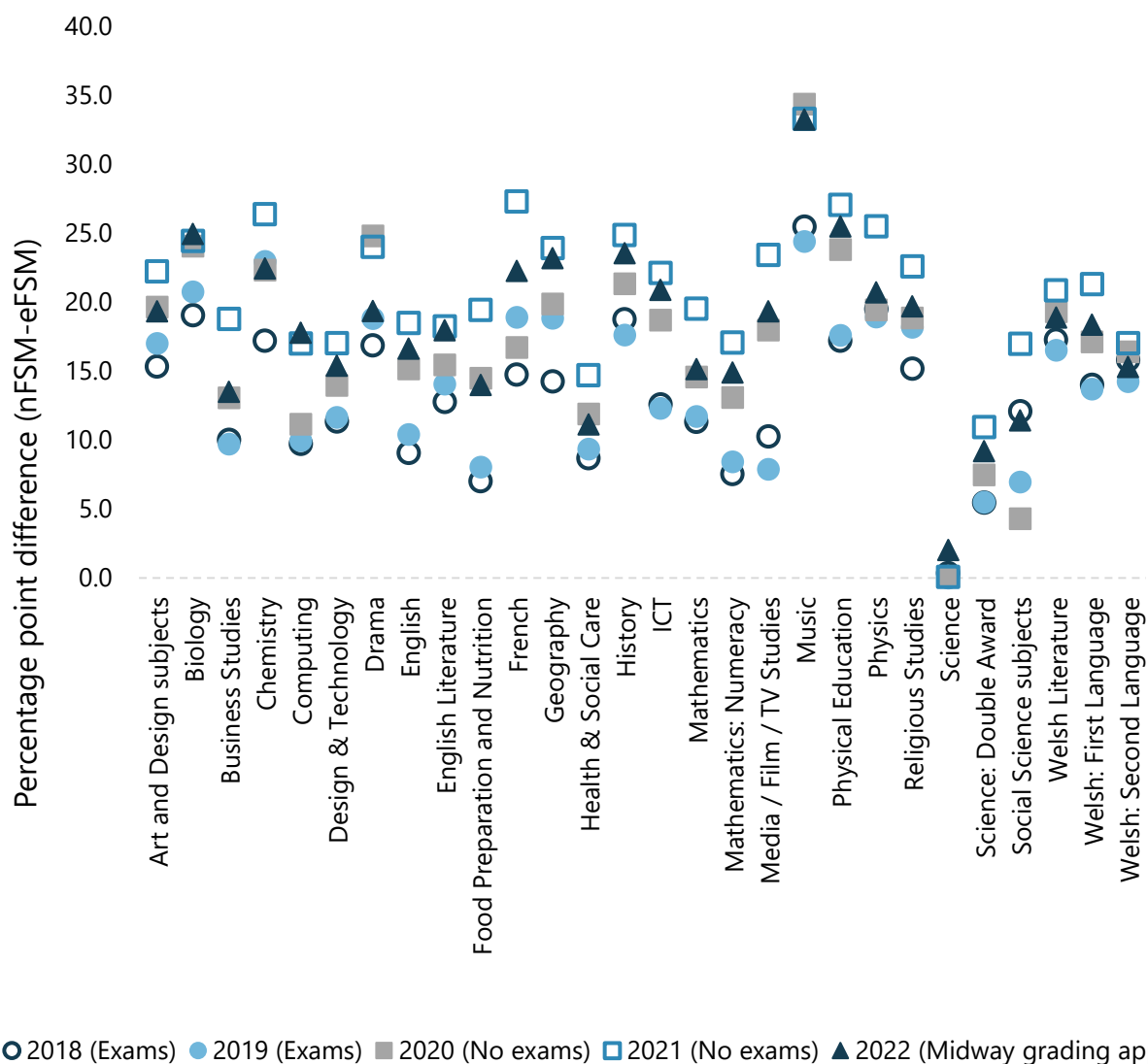
Free school meal (FSM) eligibility

In all subjects included in the analysis, learners who are not eligible for free school meals (nFSM) achieve higher results than those who are eligible (eFSM). The changes in the attainment gap over time vary by subject.

In most subjects, the FSM attainment gap at grade A/7 and above is narrower in 2022 compared to 2021, but larger than in 2019, the last summer when exams took place. In each year, the largest gap is seen in Music. The attainment gap in Music increased by 10 percentage points (pp) in 2020 to 34.4pp, and has been broadly stable since (33.3pp in 2021 and 2022). The second and third largest gaps in 2022 were in Physical Education and Biology, respectively. The smallest attainment gap in all years is in Science, with a gap of 2.0 pp in favour of nFSM learners in 2022. This is higher than in 2021, when the gap was 0.1pp. There was no gap in 2019 as no learners achieved grade A/7 and above. Since 2019, the "Science" category only includes the single award applied science GCSE which is taken by a small number of learners. The second smallest attainment gap of in 2022 was in Science: Double Award, with a gap of 9.2 pp in favour of nFSM learners.

Figure 3: GCSE attainment gap (nFSM – eFSM, percentage point) at grade A/7 and above by JCQ subject grouping

16-year-olds, summer series, learners for whom characteristic data was available, subjects with at least 100 entries in each group in each year, full course GCSEs and double award science only

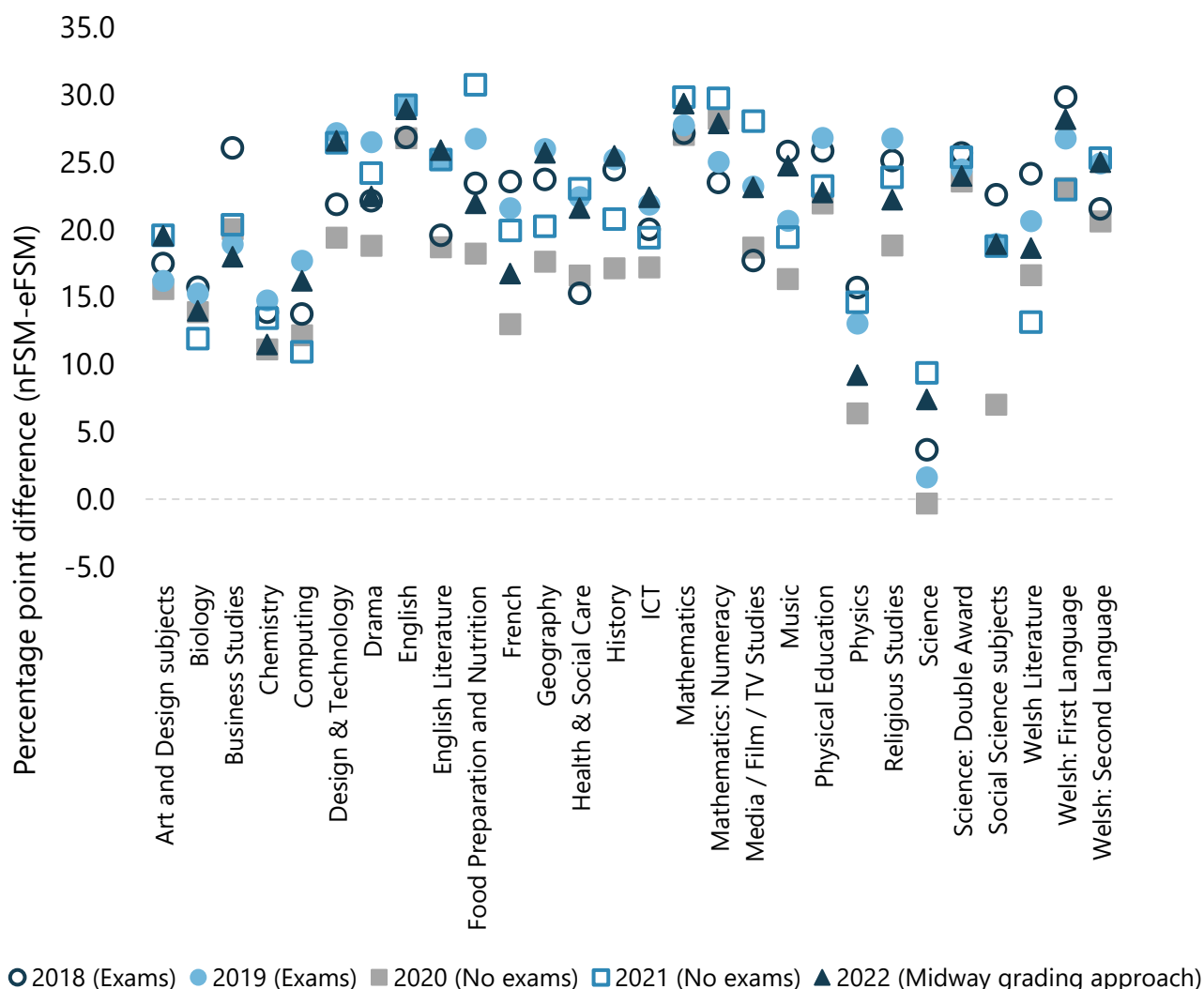


Source: WEDPLASC, QW Awarding Body data collection

At grade C/4 and above, there is more variation in how the gap has changed over time. Of the 28 subjects included, the gap in 2022 is narrower in 17 subjects compared to 2021 and in 18 subjects compared to 2019. The largest attainment gaps in 2022 were in Mathematics (29.4pp), English (29.0pp) and Welsh: First Language (28.2pp). In all years, the narrowest FSM attainment gap is in Science, with a gap of 7.4 pp in 2022. The separate sciences – Physics, Chemistry and Biology – saw the second, third and fourth narrowest FSM attainment gaps in 2022. Subjects with larger entry sizes, such as English, Mathematics and Science: Double Award, have generally seen a more stable attainment gap over time than other subjects.

Figure 4: GCSE attainment gap (nFSM – eFSM, percentage point) at grade C/4 and above by JCQ subject grouping

16-year-olds, summer series, learners for whom characteristic data was available, subjects with at least 100 entries in each group in each year, full course GCSEs and double award science only



Source: WEDPLASC, QW Awarding Body data collection

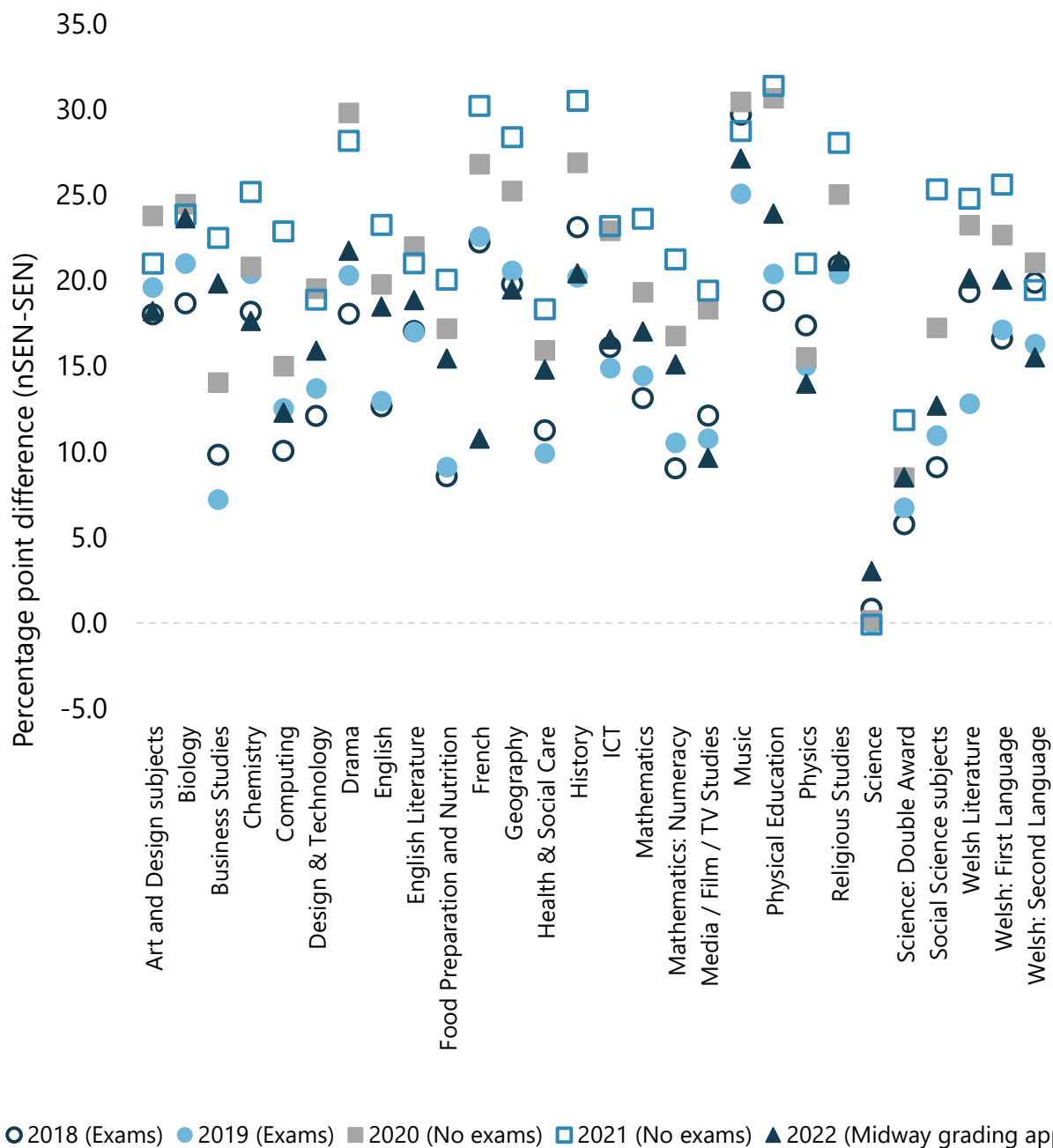
Special educational needs (SEN) provision

In almost all subjects and years, learners with no SEN provision (nSEN learners) achieve higher results than learners with an SEN provision (SEN learners). The annual changes in the attainment gap by SEN provision vary for different subjects. Some subjects have a fairly stable gap, while the gap in other subjects has changed notably each year.

In most subjects, the attainment gap at grade A/7 and above in 2022 is smaller than in 2020 and 2021, but larger than in 2018 and 2019. The largest attainment gaps in the 2022 results are seen in Music (27.1pp), Physical Education (23.9pp) and Biology (23.6pp). The smallest attainment gap in 2022 was in Science, with a gap of 3.0pp in favour of nSEN learners. Since 2019, the "Science" category only includes the single award applied science GCSE which is taken by a small number of learners, and very few grades are awarded at A/7 and above. The second smallest gap in 2022 was in Science: Double Award (8.5pp).

Figure 5: GCSE attainment gap (nSEN – SEN, percentage point) at grade A/7 and above by JCQ subject grouping

16-year-olds, summer series, learners for whom characteristic data was available, subjects with at least 100 entries in each group in each year, full course GCSEs and double award science only

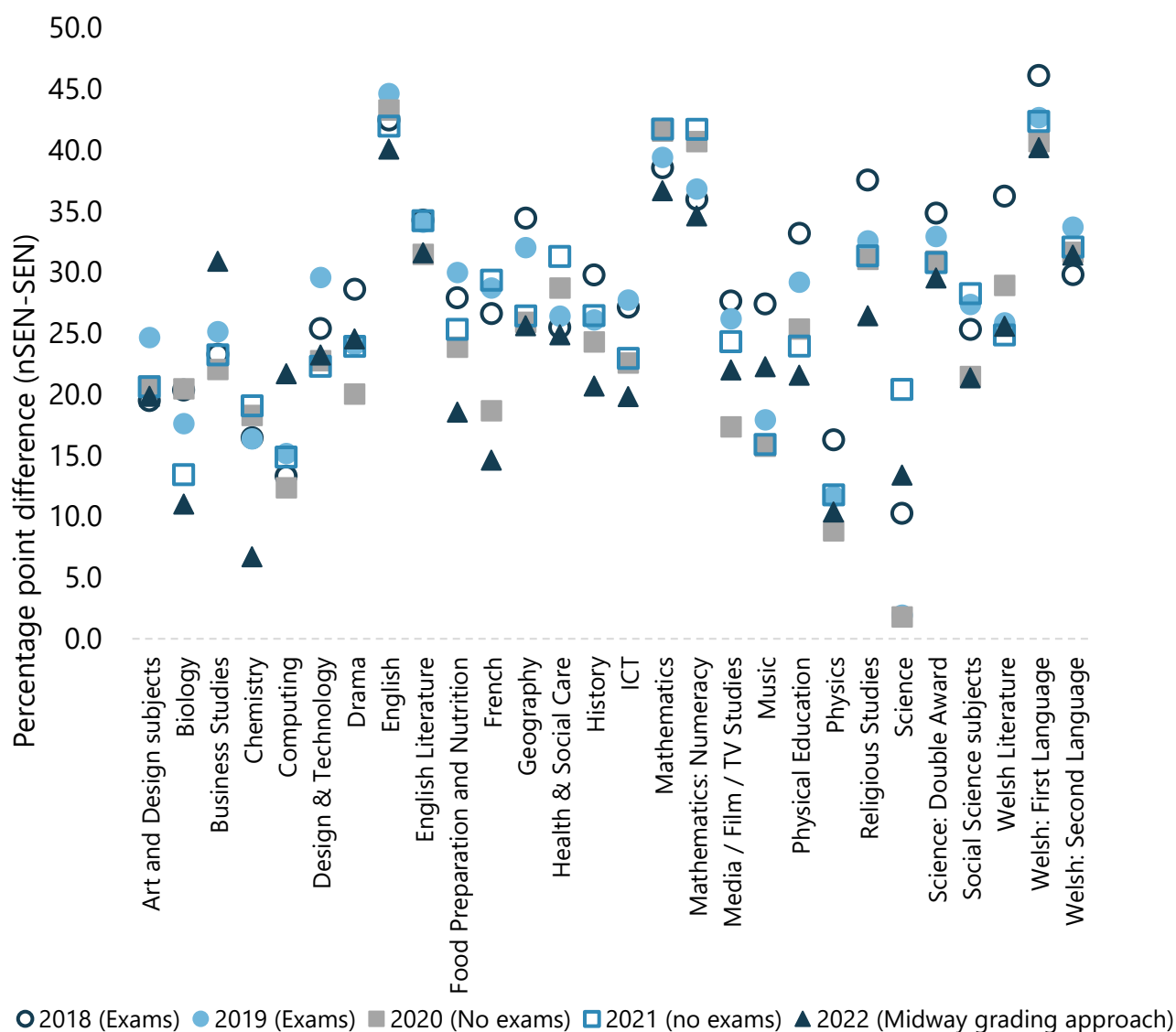


Source: WEDPLASC, QW Awarding Body data collection

At grade C/4 and above, there is more variation across subjects. In some subjects, the attainment gap by SEN provision has gone up, while in others it has gone down. In more than half of the subjects included, the gap in 2022 is the lowest it has been in the last five years. The largest attainment gaps in 2022 are seen in Welsh: First Language (40.2pp), English (40.1pp) and Mathematics (36.7pp). The smallest attainment gaps in 2022 were in Chemistry (6.7pp) and Physics (10.4pp)

Figure 6: GCSE attainment gap (nSEN – SEN, percentage point) at grade C/4 and above by JCQ subject grouping

16-year-olds, summer series, learners for whom characteristic data was available, subjects with at least 100 entries in each group in each year, full course GCSEs and double award science only



Source: WEDPLASC, QW Awarding Body data collection

AS

The following analysis uses the data provided by awarding bodies and Welsh Government for AS results in the summer series. Data relating to gender is for all 17-year-olds in Wales and is based on data published by JCQ. Analysis of results by Welsh Index of Multiple Deprivation is for learners of all ages in maintained schools and further education providers for whom a valid Welsh postcode/LSOA was available.

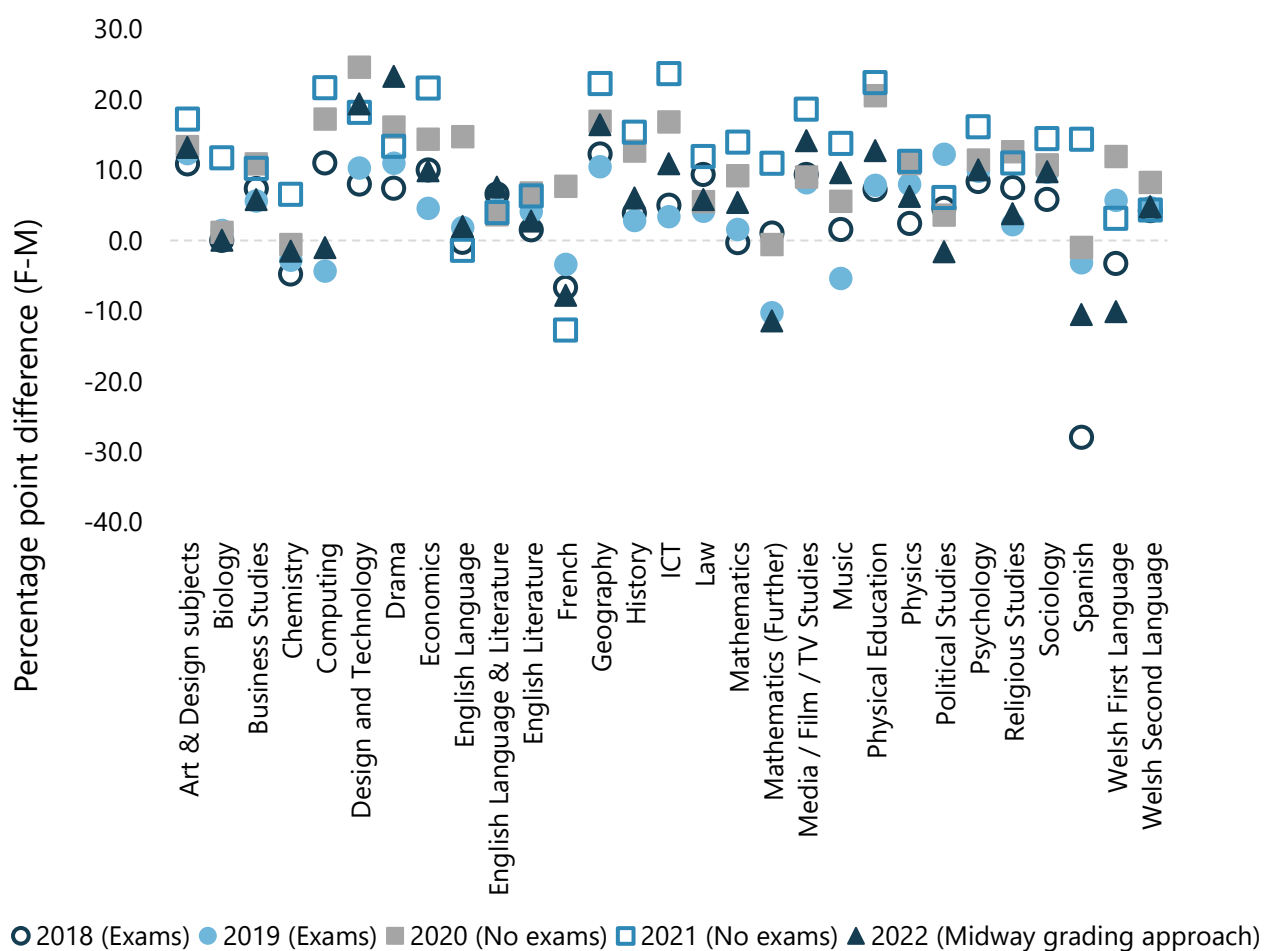
Gender

Gender attainment gaps exist in all AS subjects, mostly favouring female learners, but with some exceptions.

The largest attainment gaps at grade A in favour of female learners in 2022 were in Drama (23.3pp) and Design and Technology (19.4pp). Subjects where the attainment gap favoured male learners in 2022 include Mathematics (Further), Spanish and Welsh First Language (11.4pp, 10.5pp and 10.1pp respectively).

Figure 7: AS gender attainment gap (females – males, percentage point) at grade A by JCQ subject grouping

17-year-olds, summer series, subjects with at least 30 entries in each group in each year

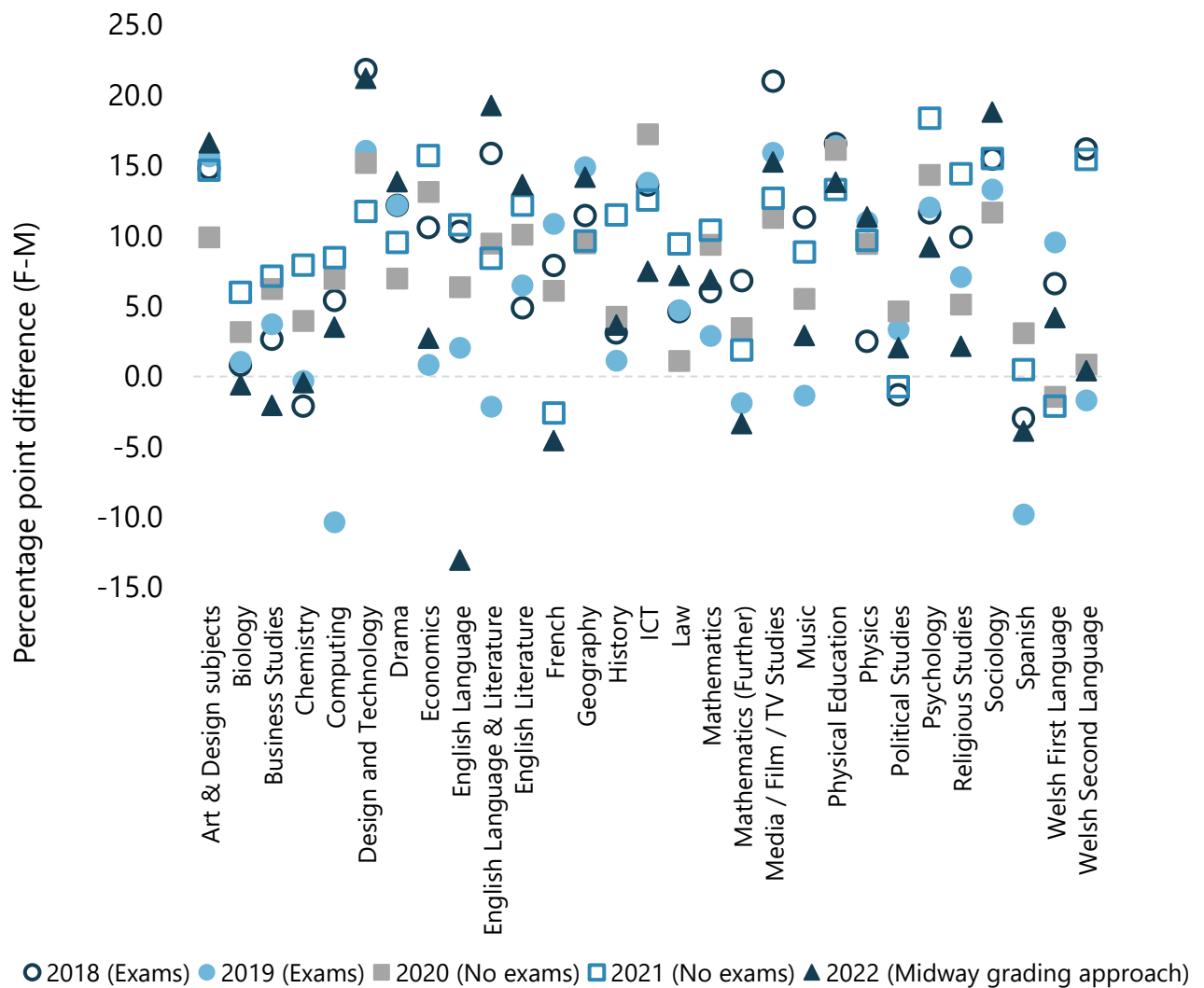


Source: JCQ

The largest attainment gap at grades A-C in favour of female learners in 2022 were in Design and Technology (21.2pp) and English Language & Literature (19.3pp). In 2022, the attainment gap most in favour of male learners was in English Language (13.1pp).

Figure 8: AS gender attainment gap (females – males, percentage point) at grade A-C by JCQ subject grouping

17-year-olds, summer series, subjects with at least 30 entries in each group in each year



Source: JCQ

Welsh Index of Multiple Deprivation (WIMD)

The Welsh Index of Multiple Deprivation (WIMD) is the Welsh Government’s official measure of relative deprivation for small areas in Wales. It identifies areas with the highest concentrations of several different types of deprivation. More information on WIMD can be found [on the Welsh Government website](#). This analysis compares grades across these areas of deprivation, grouped into 10 deciles. WIMD is a measure over area so no assumptions about individuals in the area can be made. For example, a learner living or studying in a deprived area is not necessarily a “deprived” learner. Due to different population sizes and other factors, different numbers of grades were awarded in each decile, and this will impact the results. Details of the sample sizes can be found in the data tables published alongside this release.

Table 1: Percentage of A grades at AS in each overall WIMD decile

All ages, summer series, learners in maintained schools and further education providers for whom postcode/LSOA data was available

Year	Percentage of grades awarded at grade A in each decile of deprivation (1 = most deprived 10% of LSOAs, 10 = least deprived 10%) (%)										All Deciles	Difference between most (1) and least (10) deprived areas
	1	2	3	4	5	6	7	8	9	10		
2022	18.5%	22.1%	23.3%	23.9%	25.3%	27.6%	29.2%	31.2%	34.3%	37.5%	28.8%	19.0pp
2021	27.8%	26.2%	28.3%	30.8%	32.6%	36.1%	37.3%	39.8%	39.9%	44.3%	35.7%	16.4pp
2020	20.8%	19.6%	22.7%	22.2%	27.7%	28.8%	26.9%	30.7%	32.6%	36.3%	28.3%	15.5pp
2019	12.2%	13.7%	14.7%	15.5%	15.4%	16.9%	17.8%	18.8%	21.6%	23.9%	18.1%	11.7pp

Source: WEDPLASC, LLWR, WIMD, QW Awarding Body data collection

Table 1 shows that attainment gaps exist between WIMD deciles at AS. Generally, there are a greater proportion of A grades at AS in the least deprived areas and fewer in the most deprived areas. In general, the difference between the most and least deprived areas reflects the overall trend in results for the year, so in years where results are higher overall, the gap between the most and least deprived areas is greater. However, the gap increased in 2022, despite overall results decreasing.

A level

The following analysis uses the data provided by awarding bodies and Welsh Government for A level results in the summer series. Data relating to gender is for all 18-year-olds in Wales and is based on data published by JCQ. Analysis of results by Welsh Index of Multiple Deprivation is for learners of all ages in maintained schools and further education providers for whom a valid Welsh postcode/LSOA was available.

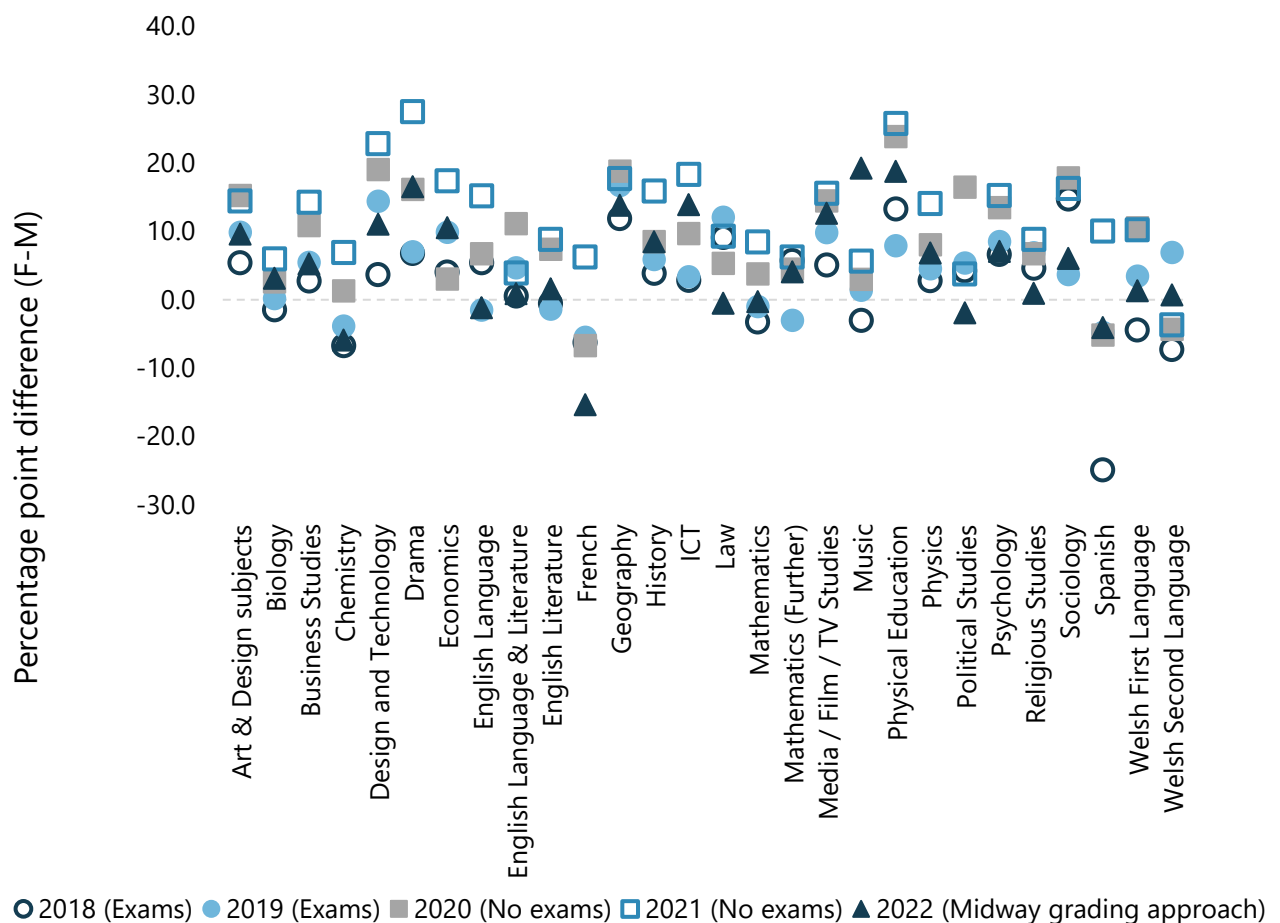
Gender

A gender attainment gap exists in all subjects, mostly favouring female learners, with some exceptions.

The largest attainment gap in favour of female learners for the 2022 A*-A grades were in Music (19.3pp) and Physical Education (18.8pp). The subjects where the attainment gap favoured male learners the most was French (15.4pp). The attainment gaps vary by subject from year to year.

Figure 9: A level gender attainment gap (females – males, percentage point) at grade A*-A by JCQ subject grouping

18-year-olds, summer series, subjects with at least 30 entries in each group in each year

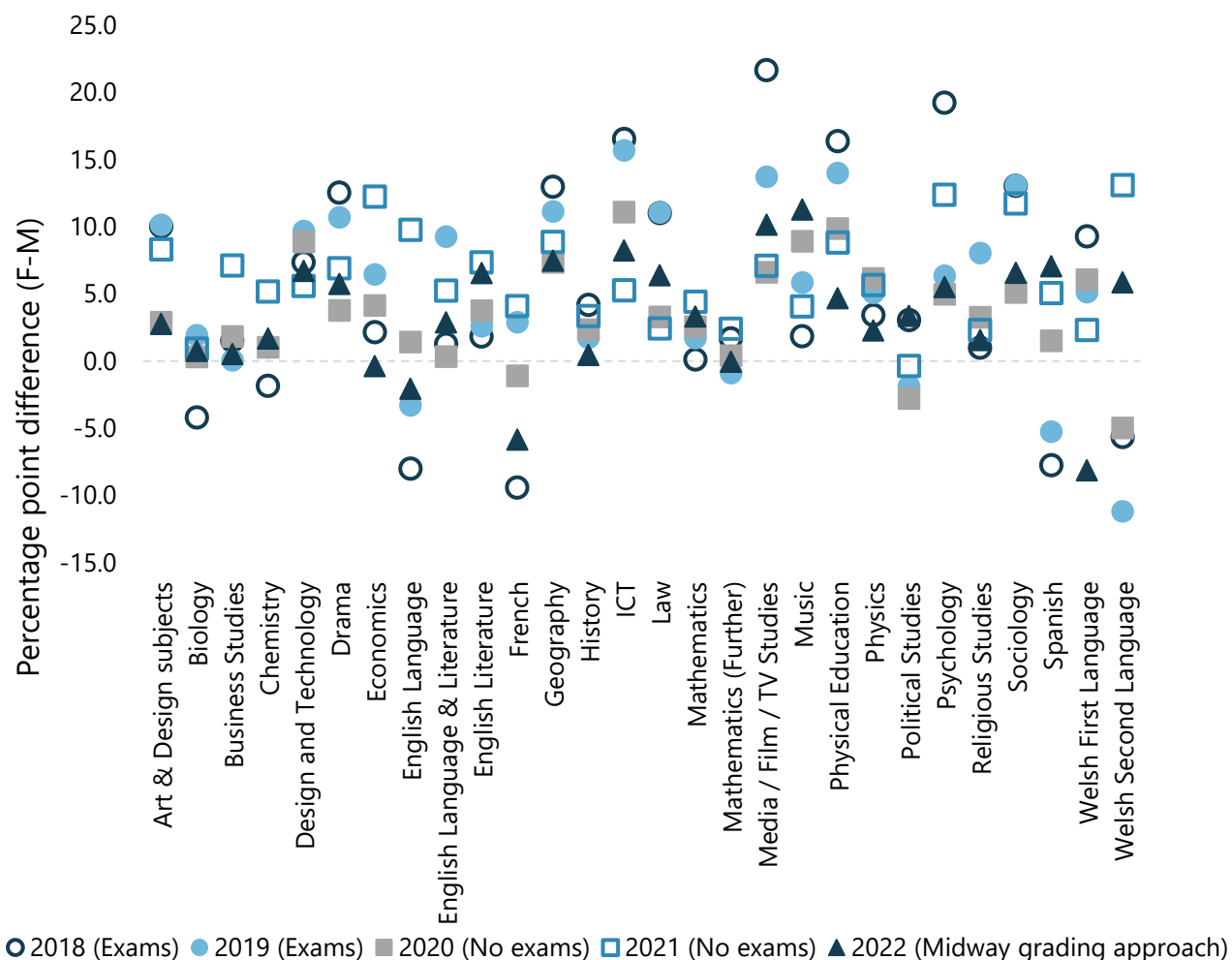


Source: JCQ

In 2022, the largest attainment gaps in favour of female learners at grades A*-C were in Music (11.3pp) and Media / Film / TV Studies (10.2pp). For the 2022 grades, the attainment gap most in favour of male learners was in Welsh First Language (8.1pp).

Figure 10: A level gender attainment gap (females – males, percentage point) at grade A*-C by JCQ subject grouping

18-year-olds, summer series, subjects with at least 30 entries in each group in each year



Source: JCQ

Welsh Index of Multiple Deprivation (WIMD)

The Welsh Index of Multiple Deprivation (WIMD) is the Welsh Government’s official measure of relative deprivation for small areas in Wales. It identifies areas with the highest concentrations of several different types of deprivation. More information on WIMD can be found [on the Welsh Government website](#). This analysis compares grades across these areas of deprivation, grouped into 10 deciles. WIMD is a measure over area so no assumptions about individuals in the area can be made. For example, a learner living or studying in a deprived area is not necessarily a “deprived” learner. Due to different population sizes and other factors, different numbers of grades were awarded in each decile, and this will impact the results. Details of the sample sizes can be found in the data tables published alongside this release.

Table 2: Percentage of A* grades at A level in each overall WIMD decile

All ages, summer series, learners in maintained schools and further education providers for whom postcode/LSOA data was available

Year	Decile of Deprivation (1 = most deprived 10% of LSOAs, 10 = least deprived 10%)										All Deciles	Difference between most (1) and least (10) deprived areas
	1	2	3	4	5	6	7	8	9	10		
2022	10.7%	9.1%	10.4%	11.7%	12.9%	13.4%	14.0%	16.1%	17.8%	21.7%	14.9%	11.0pp
2021	11.9%	11.3%	14.3%	14.8%	17.9%	19.1%	17.7%	19.9%	21.5%	25.8%	18.7%	13.9pp
2020	9.4%	10.7%	11.0%	12.0%	11.6%	12.8%	14.1%	15.0%	15.4%	17.5%	13.7%	8.0pp
2019	4.1%	4.6%	4.9%	5.8%	6.8%	7.3%	7.2%	7.8%	10.0%	10.4%	7.5%	6.3pp

Source: WEDPLASC, LLWR, WIMD, QW Awarding Body data collection

Table 3: Percentage of A*-A grades at A level in each overall WIMD decile

Year	Decile of Deprivation (1 = most deprived 10% of LSOAs, 10 = least deprived 10%)										All Deciles	Difference between most (1) and least (10) deprived areas
	1	2	3	4	5	6	7	8	9	10		
2022	30.4%	27.4%	29.7%	33.4%	35.0%	36.9%	36.6%	41.4%	43.2%	49.5%	38.3%	19.1pp
2021	34.3%	36.0%	37.1%	40.7%	45.4%	46.4%	45.7%	48.2%	50.5%	54.9%	45.8%	20.6pp
2020	30.1%	33.6%	35.7%	36.5%	35.3%	40.1%	40.8%	40.7%	44.0%	46.8%	39.9%	16.7pp
2019	16.8%	16.6%	17.8%	19.6%	23.2%	23.6%	23.3%	24.9%	27.8%	30.4%	23.8%	13.5pp

Source: WEDPLASC, LLWR, WIMD, QW Awarding Body data collection

Tables 2 and 3 show that attainment gaps exist between WIMD deciles at A level. Generally, there are a greater proportion of A* and A grades at A level in the least deprived areas and fewer in the most deprived areas. The difference between the most and least deprived areas reflects the overall trend in results for the year, so in

years where results are higher, the gap between the most and least deprived areas is greater. This difference is more pronounced at A* than at A grades.

© (2022) *Permission is granted to reproduce provided reference is made to Qualifications Wales as the original source.*