

**International Baccalaureate Middle Years
Programme (MYP): Grade Comparisons
with the General Certificate of
Secondary Education (GCSE)
BRIEFING DOCUMENT**

Submitted to the International Baccalaureate

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Contents

| | |
|--|-----------|
| Grade Comparisons: GCSE and IB MYP | 3 |
| 1. Introduction | 4 |
| 1.1 Context and Scope | 4 |
| 1.2 Methodology | 5 |
| 2. Findings..... | 6 |
| 2.1 MYP Grade 3 may be considered best comparable to GCSE Grade 4 | 6 |
| 2.2 MYP “No Grade” may be considered best comparable to GCSE Grades X/U..... | 6 |
| 2.3 MYP Grade 7 may be considered best comparable to GCSE Grade 9 | 7 |
| 2.4 MYP Grade 1 may be considered best comparable to GCSE Grade 1 | 8 |
| 2.5 MYP Grade 2 may be considered best comparable to GCSE Grades 2/3..... | 8 |
| 2.6 MYP Grade 4 may be considered best comparable to GCSE Grade 5 | 10 |
| 2.7 MYP Grade 5 may be considered best comparable to GCSE Grade 6 | 12 |
| 2.8 MYP Grade 6 may be considered best comparable to GCSE Grades 7/8..... | 13 |
| 3. Conclusion | 14 |

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Grade Comparisons: GCSE and IB MYP

Table 1: GCSE/MYP Grade Comparisons

| Reformed GCSE Grades | IB MYP Grades |
|----------------------|---------------|
| 9 | 7 |
| 7 & 8 | 6 |
| 6 | 5 |
| 5 | 4 |
| 4 | 3 |
| 2 & 3 | 2 |
| 1 | 1 |
| X and U | No Grade |

Notes:

- 1) This table demonstrates the comparability between GCSE grades and MYP grades at a glance.
- 2) When one MYP grade is listed as comparable to one GCSE grade, stakeholders can simply recognise that the level of these two grades has been judged to be directly comparable.
- 3) When one MYP grade has been listed as comparable to a two-grade range on the GCSE scale, for example MYP 6 to GCSE 7/8, stakeholders should interpret this as a judgement that MYP 6 is the closest and most accurate point of comparison to both GCSE grade 7 and GCSE grade 8. This does not mean that the level of MYP 6 sits exactly at an imagined centre point between GCSE grades 7 and 8 (i.e. better than 7, but worse than 8). Rather, MYP 6 should be interpreted as being comparable to the range of grading covered by GCSE 7 and 8. If stakeholders are interested in what MYP grade most accurately corresponds to a GCSE grade 8, Ecctis's judgement is that the answer is MYP 6. Equally, if a stakeholder is interested in what MYP grade most accurately corresponds to a GCSE grade 7, Ecctis's judgement is that the answer is MYP 6. The same pattern applies to the comparability between MYP 2 and GCSE 2/3.

1. Introduction

The IB MYP is a two- to five-year baccalaureate-style programme designed for learners aged 11-16. It has been running since 1994 and is currently offered across 108 countries worldwide.

The MYP curriculum is organised into subject groups:

- Arts
- Design
- Individuals and societies
- Language acquisition
- Language and literature
- Mathematics
- Physical and health education
- Science.

In the final two years, students take courses from six of the above eight subject groups as well as a personal project and an interdisciplinary unit. Each individual component is graded on a scale of 1-7, where 7 is the highest. In the 2016-17 academic year, the IB MYP eAssessment was introduced for those students wishing to achieve the MYP Certificate. The assessment for the IB MYP Certificate comprises on-screen exams in five subjects, e-portfolio coursework, and a personal project. In order to be awarded the IB MYP Certificate, candidates must achieve at least 28 points total (out of 56 points possible) across 8 components and meet the school's expectations for community service.

1.1 Context and Scope

This piece of research stems originally from a 2019 study by Ecctis (then under the name UK NARIC): *Comparative Analysis of Assessment in the IB Middle Years Programme and the GCSE*. Ecctis's comparison of assessment of the IB MYP to the reformed GCSE in English, mathematics, and science found the two qualifications to be comparable. The qualifications cover similar topics and target and assess a similar range of skills. Both assess English, mathematics, and science through external summative examinations, and similar question types are also used within the examinations. Mark schemes display some clear similarities in approaches to marking.

The most significant point of difference between these programmes is that whereas the GCSE, in certain subjects, assesses at two tiers – Foundation and Higher – all IB MYP students will sit the same assessment. This is important to note since, in the GCSE, students expected to perform at the lower achievement levels will be put forward for a Foundation tier examination where available. The questions in these examinations will typically be designed to assess the level of performance associated with the lower grades, whilst the Higher tier is designed to assess performance with more demanding questions. All IB MYP students sit one tier of examinations where the demand of questions has been found to be comparable to the Higher tier of GCSE.

Some differences can also be seen in the structure and volume of assessment as well as the breadth and depth of content assessed. IB MYP subjects are each assessed through a single

two-hour examination, whilst the GCSE has multiple examinations. In relation to English, mathematics, and science, assessment in the GCSE was found to typically cover a broader range of topics than the IB MYP, whilst the IB MYP assessed some topics in more depth. When considering the cognitive demand placed on students, and the weighting accorded to different skills, comparison is more complex.

Whilst acknowledging the differences in the two qualifications, Ecctis's core finding was that the overall levels of knowledge and skills developed and assessed by the IB MYP and GCSE programmes are comparable.

1.2 Methodology

The initial Ecctis (then UK NARIC) study began with a review of IB MYP documentation, followed by an in-depth review of examination materials. This established the number and type of questions in conjunction with the time available for each, the breadth and depth of content and assessment objective coverage, and the resources available to students in the exam. The accompanying mark schemes were also reviewed. Additionally, the study involved an analysis of item demand informed by the Complexity-Resources-Abstractness and Strategy framework.

To prepare this briefing, supplementary grade-comparison analysis was conducted using the findings of the initial report, in combination with statistical examination of grade distribution data across multiple subjects in both qualifications (for the years 2017, 2018, and 2019), and close linguistic scrutiny of grade descriptors for individual subjects in the GCSE and for the IB MYP programme as a whole.

Regarding grade descriptor analysis, it is important to note that the GCSE has subject-specific grade descriptors but only for the grades 2, 5, and 8. The MYP, on the other hand, has grade descriptors for the full range of grades from 1-7, but these are cross-subject descriptors rather than subject specific. Comparing grade descriptors between these qualifications does not, therefore, involve comparing like-with-like, but instead relies on finding similarities and differences through careful reading of language used and the quality of work implied by adjectives and other qualitative modifiers.

Regarding statistical analysis of grade distribution data, Ecctis has used multiple years of data (2017, 2018, and 2019) in order to develop a full picture which incorporates a view on potential variation – rather than viewing grade distribution as a necessarily static phenomenon. The sum total grades received across all subjects in a qualification is an important foundation for this grade distribution analysis. However, Ecctis also compared subject-specific grade data across more than a dozen different subjects which cover similar disciplinary areas in the GCSE and MYP. This facilitates analysis which focusses at the top-level of the qualification but also considers the unique grading distributions of specific subjects where relevant. Ecctis frequently considered the full range of the grading scale in a single view, but also incorporated analysis which pinpointed a selection of grades within a scale, in order to more closely examine the grade-distribution role played above or below a particular grade threshold. Looking at the data from these multiple perspectives allows the fullest possible understanding

of where similarities and differences emerge between grading scales which use a different number of grades (i.e. 1-9 in GCSE, 1-7 in MYP).

It should also be noted that some GCSE legacy grades (G-A*) were still being used for some subjects in the years covered by Ecctis's data analysis. These grades were taken into account, in the analysis, and are referenced in the findings below where relevant, but Ecctis's focus is on the reformed GCSE grading scale (1-9) as the intention of this research is to find the most accurate MYP grade comparisons to that in-use GCSE grading scale. In figures throughout this report, where reference is made to GCSE grading data on a 1-9 scale this does not include any conversion of G-A* data.

Specific key comparisons were established first and were used as anchors to facilitate further analysis of comparison across the whole grading scale. The findings are discussed below in an order which represents that process. This format offers the most accurate reflection of Ecctis's methodology.

2. Findings

2.1 MYP Grade 3 may be considered best comparable to GCSE Grade 4

Grade 4/C in the GCSE has been widely recognised as an important threshold grade, particularly in subjects such as English and mathematics.¹ It is often used as a benchmark of achievement that enables access to many courses in higher/further education, apprenticeships, and many types of employment. One aim of Ecctis's analysis was to determine the IB MYP grade most closely aligned with GCSE Grade 4, to support stakeholder understanding of the award.

As demonstrated in the grade comparison table at the start of this document, Ecctis has concluded that IB MYP Grade 3 is comparable to GCSE Grade 4. This judgement was made on the basis that:

- Ecctis's 2019 report found that IB MYP assessments fall towards the Higher tier of GCSE (awarding grades 9-4, with allowance for 3).
- Grade-descriptor comparative analysis shows that IB MYP 3 is the closest match to GCSE 4.
- Grade distribution analysis suggests that, though there is substantial variation between subjects, IB MYP 3 falls at a position in the grading spectrum similar to 4 in GCSE.

2.2 MYP “No Grade” may be considered best comparable to GCSE Grades X/U

At the bottom end of both grading scales there are categories for results which did not achieve the lowest grade on the numerical scale. In the case of the IB MYP, these are listed on the statistical bulletin as “No Grade”. In the GCSE, a similar class of results are differentiated

¹ See, for example, Wolf, A., 2011. Review of vocational education. London: DfE. p. 141.

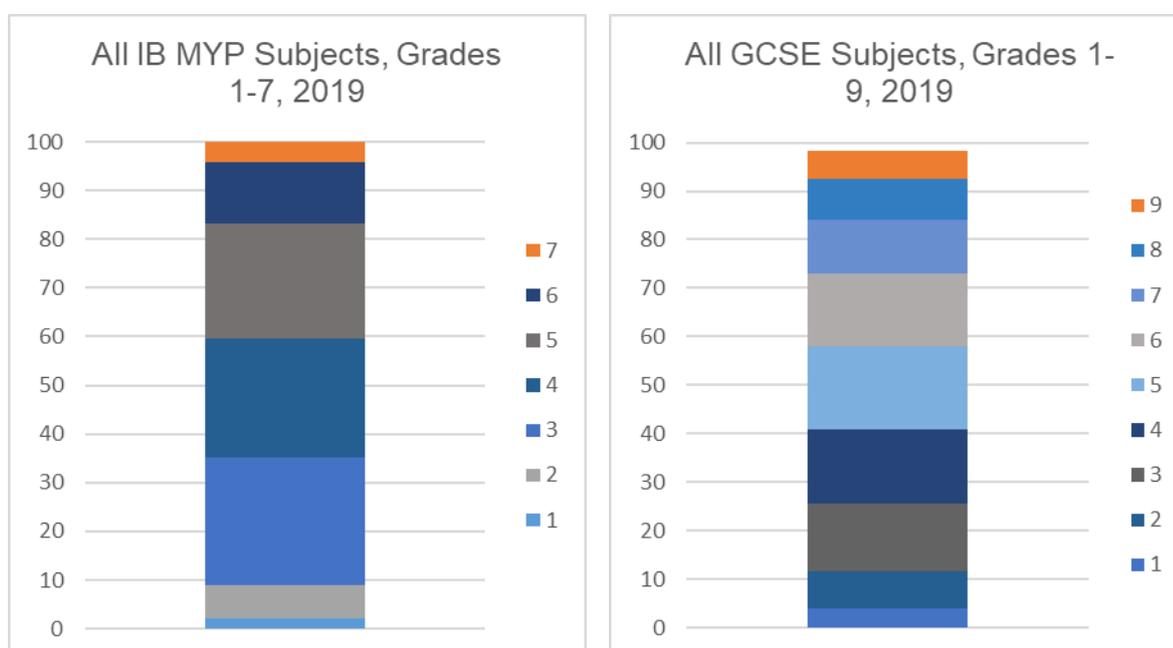
further between X (no result) and U (unclassified). In both programmes the percentage of grades falling below or outside of the numerical grading scale is very small. In 2019, 0.91% of grades in the MYP were listed as “No Grade”, while 0.38% of GCSE subject results in 2019 were classified as X and 1.46% were classified as U.

2.3 MYP Grade 7 may be considered best comparable to GCSE Grade 9

At the top end of the grading scales, both qualifications have a highest available grade achieved by a relatively small proportion of students. In 2019, 4.19% of MYP grades were 7. In the same year, 5.65% of GCSE grades were 9. In 2017 and 2018 the proportion of IB MYP grades awarded at 7 was slightly higher (7.06% and 7.24% respectively), while the proportion of GCSEs awarded at 9 in 2018 was 5.28% (with 6.34% awarded legacy A*) and in 2017 was 3.35% (with 7.40% awarded legacy A*). Although there is a range here, both programmes have consistently awarded the highest grade to a proportion ranging from roughly 3.5-7.5%. This results in a straightforward comparability between the top grades of both programmes.

This comparison is demonstrated by the bar chart below (Figure 1), which shows the 2019 results in the GCSE (grades 1-9) and MYP (grades 1-7) for all subjects. The top segment in the GCSE chart and the top segment of the MYP chart represent the top grades and show clear similarities in relation to the proportion of numerical results within each programme.

Figure 1: grade distribution charts for all MYP subjects (2019) and all GCSE subjects (2019)



This comparability decision was also substantiated by grade descriptor analysis which found that MYP grade 7 contained some suggestions of higher achievement than GCSE grade 8.

2.4 MYP Grade 1 may be considered best comparable to GCSE Grade 1

The lowest numerical grade available in both programmes is 1, and in both programmes a relatively small proportion of grades are awarded at that level. The proportion is slightly lower in the MYP (1.34% in 2017, 1.12% in 2018, 2.03% in 2019) than in the GCSE (4.33% in 2017, 3.81% in 2018, 3.92% in 2019). However, the difference is not substantial and there is natural comparability in the fact that both grades are the lowest numerical result in their respective scales. This is visually represented by figure 1, above.

Moreover, grade descriptor comparison shows that IB MYP Grade 1 implies a lower standard than GCSE Grade 2, thus making 1-1 the most accurate comparison at this end of the grading scales. This is indicated by the evidence of Table 2, below, in which the MYP general grade descriptor for grade 1 is compared against a selection of components from the GCSE English Language grade descriptor for grade 2. These components of grade descriptors have been placed side-by-side to demonstrate that the implications of quality are slightly higher in GCSE English Language grade 2. Keywords, particularly adjectives, implying levels of quality have been underlined.

Table 2: grade descriptor comparisons for MYP 1 and GCSE 2

| IB MYP General Grade Descriptors: Grade 1 | GCSE English Language Grade Descriptors: Grade 2 (extracts) |
|---|---|
| Produces work of <u>very limited</u> quality. | describe and summarise with <u>some accuracy and understanding</u> |
| Conveys <u>many significant misunderstandings</u> or lacks understanding of most concepts and contexts. | communicate <u>simply with some clarity</u> for the reader |
| <u>Very rarely</u> demonstrates critical or creative thinking. | produce texts with <u>basic</u> structures and <u>some awareness</u> of purpose |
| <u>Very inflexible, rarely</u> using knowledge and skills. | make <u>straightforward</u> links between texts |

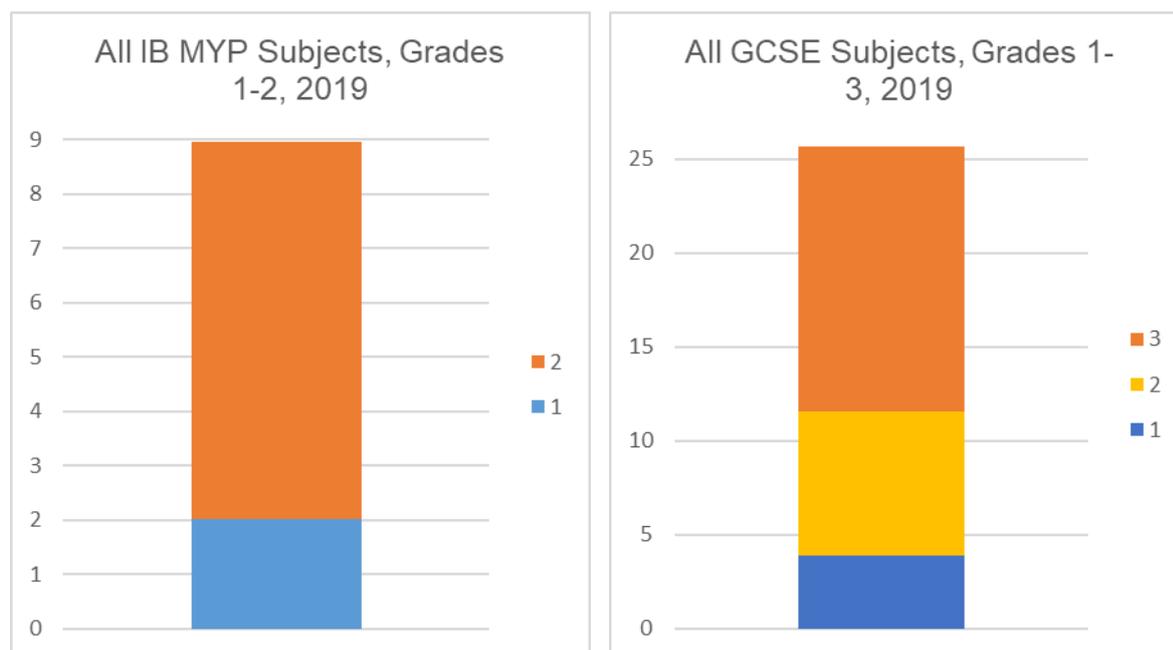
2.5 MYP Grade 2 may be considered best comparable to GCSE Grades 2/3

Having established that GCSE and MYP Grades 1 are comparable, and that MYP Grade 3 is comparable to GCSE Grade 4, it is logical that MYP Grade 2 is comparable to the GCSE grade-range 2-3. However, this comparability is not only a matter of remainders aligning, it is also substantiated by grade descriptor comparisons and grade distributions data.

When considering, side-by-side, the grade distributions for both programmes' numerical grades which fall below the "standard pass" grade (i.e. below 4 in GCSE, below 3 in MYP), it is clear that MYP Grade 2 covers a similar proportion of those results to GCSE Grades 2 and

3.² Falling between GCSE 4 / MYP 3 and the lowest numerical grade (1 in both programmes), there is a natural comparability between MYP 2 and GCSE 2/3. This is visually represented by Figure 2, below, which shows 2019 data for all subjects, focussing on grades 1-3 in GCSE and grades 1-2 in MYP. These charts clearly show MYP grade 2 fulfilling a similar role in the grade distribution compared to GCSE grades 2 and 3 combined.

Figure 2: grade distribution charts for all MYP subjects (2019) - grades 1-2 - and all GCSE subjects (2019) - grades 1-3



Furthermore, the grade descriptors for MYP 2 and GCSE 2 show some alignment, with scope for GCSE 3 (which does not have general grade descriptors in GCSE) to implicitly fall at a level also comparable to MYP 2. Table 3 shows extracts from grade descriptors which highlight the similar implications at grade 2 in both programmes.

Table 3: grade descriptor comparisons for MYP 2 and GCSE 2

| IB MYP General Grade Descriptors: Grade 2 (extract) | GCSE Mathematics Grade Descriptors: Grade 2 (extract) | GCSE Single Science Grade Descriptors: Grade 2 (extract) |
|--|--|---|
| Infrequently demonstrates critical or creative thinking | provide basic evaluation of methods or results | draw simple conclusions from qualitative or quantitative data |

² “Standard pass” is the phrase often associated with GCSE grade 4. The same phrase is not used in the MYP but, in order to receive the MYP Certificate, students must achieve at least a grade 3 in each e-assessment.

2.6 MYP Grade 4 may be considered best comparable to GCSE Grade 5

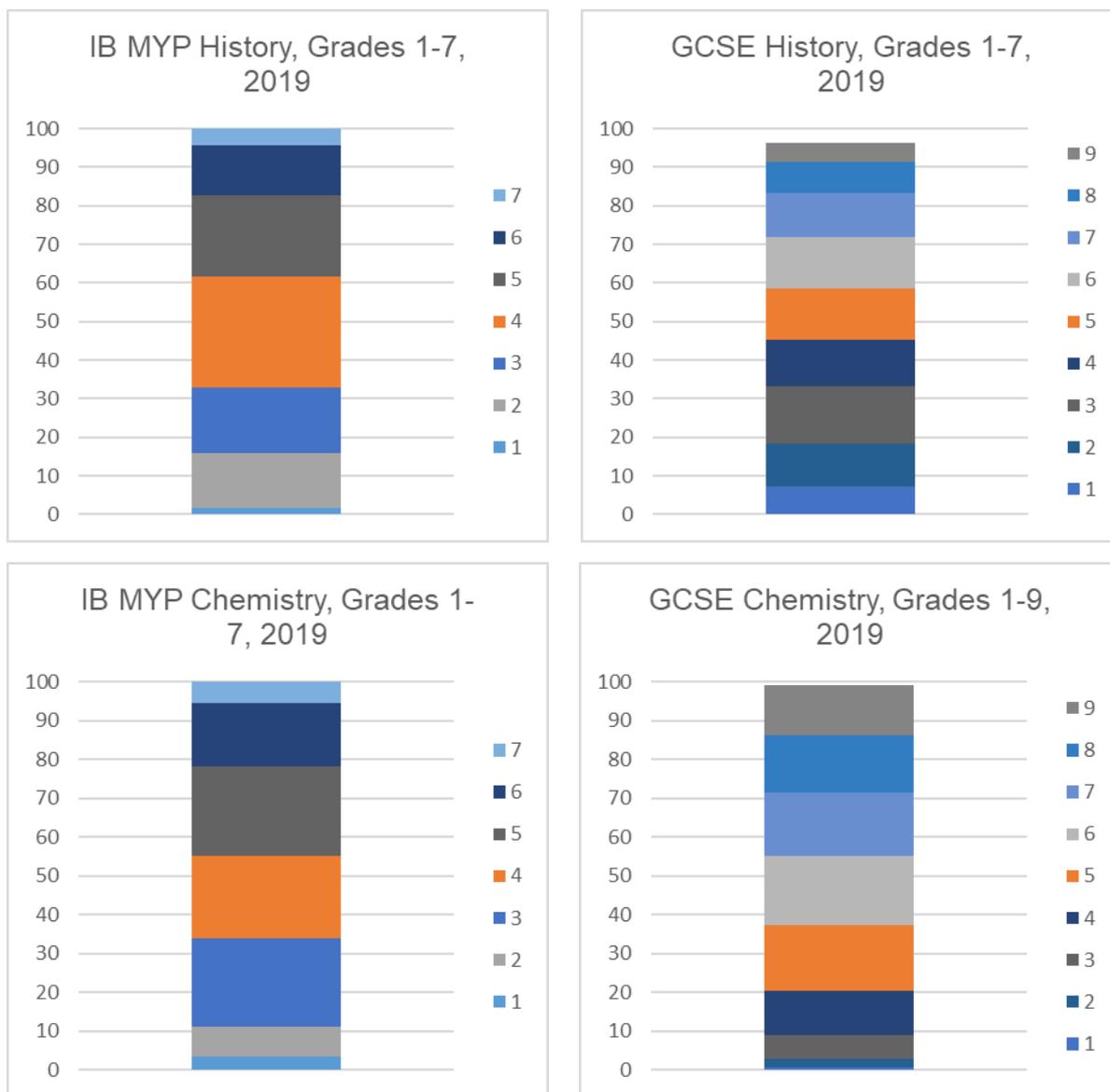
A combination of grade descriptor analysis and grade distribution data analysis also suggests that GCSE grade 5 and MYP grade 4 are comparable. MYP grade 4 was found to be the most accurate match to the grade descriptors provided at GCSE grade 5 in multiple subjects. Table 4, below, highlights some of the similarities using the general MYP descriptors and extracts from GCSE English Language grade descriptors.

Table 4: grade descriptor comparisons for MYP 4 and GCSE 5

| IB MYP General Grade Descriptors: Grade 4 | GCSE English Language Grade Descriptors: Grade 5 (extracts) |
|---|--|
| Produces <u>good quality</u> work | summarise and evaluate <u>with accuracy and clear understanding</u> |
| Communicates <u>basic understanding of most concepts and contexts with few misunderstandings and minor gaps</u> | spell, punctuate and use grammar <u>accurately with occasional errors</u> |
| <u>Often demonstrates basic</u> critical and creative thinking | analyse and <u>evaluate relevant aspects</u> of language, grammar and structure |
| Uses knowledge and skills with <u>some flexibility in familiar</u> classroom situations, but <u>requires support in unfamiliar</u> situations | support their understanding and opinions with <u>apt references</u> to texts, <u>informed by their wider reading</u> |

This evidence is supported by the data, which demonstrates that a similar range of the grade distribution in each qualification is covered by MYP 4 and GCSE 5. This is an area where different subjects can show some slightly different patterns. Figure 3, below, therefore shows the 2019 (1-9) GCSE data in History and Chemistry and the 2019 (1-7) data for MYP History and Chemistry. Comparing these subjects side-by-side shows the potential range of variation, and demonstrates that the comparability between MYP 4 and GCSE 5 is still sustained by subjects with different grade distribution patterns.

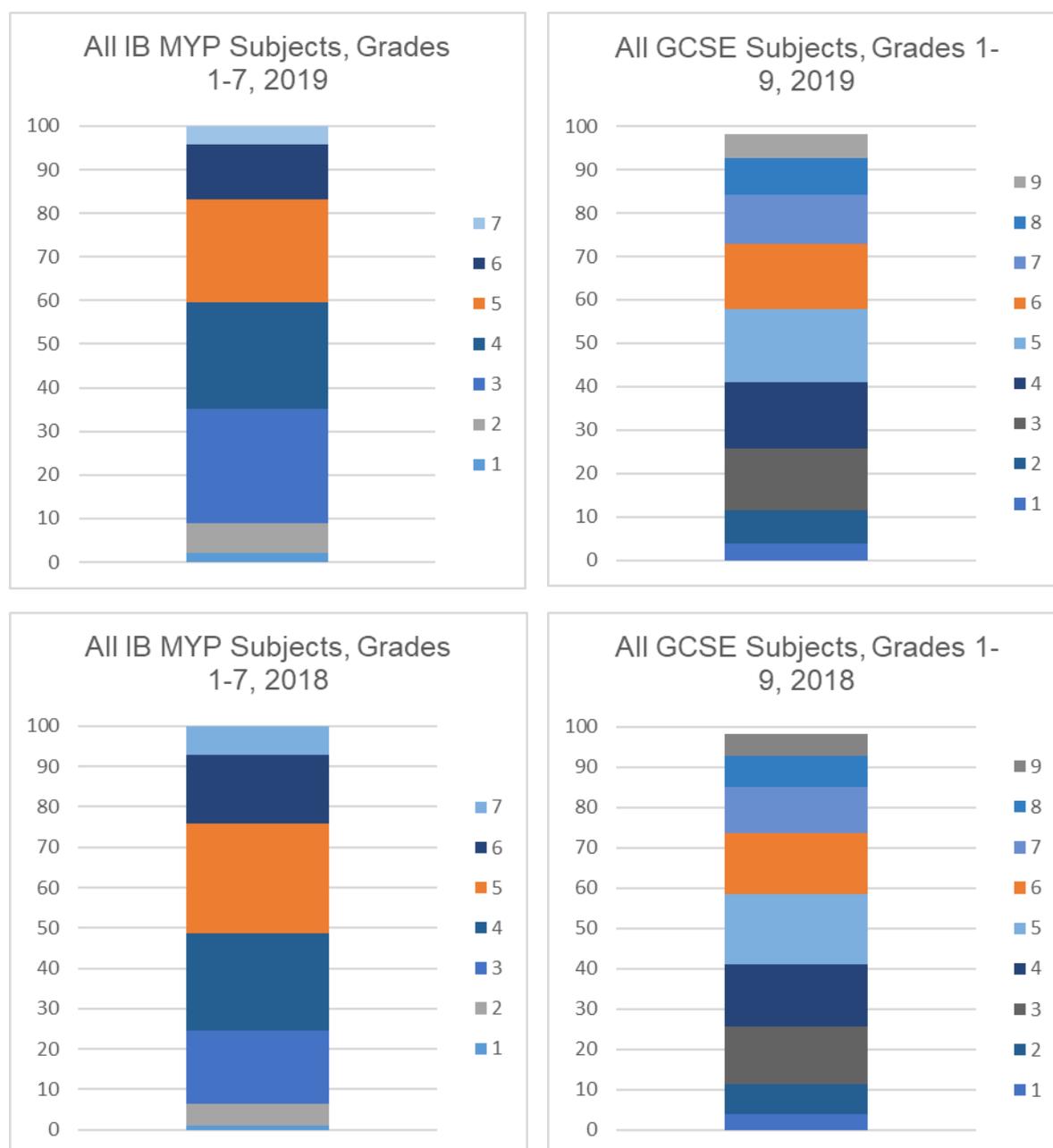
Figure 3: grade distribution graphs for MYP History and Chemistry (2019) and GCSE History and Chemistry (2019)



2.7 MYP Grade 5 may be considered best comparable to GCSE Grade 6

For the comparability between GCSE grade 6 and MYP grade 5, the grade distribution data has varied slightly in recent years. As a result, Figure 4, below, shows the 1-9 grade distribution for all GCSE subjects in 2019 and 2018, alongside the 1-7 MYP data for all subjects in the same years. Both years indicate comparability at this level, despite the slight variation in the placement of MYP grade 5 within the MYP grade distribution in 2018 and 2019.

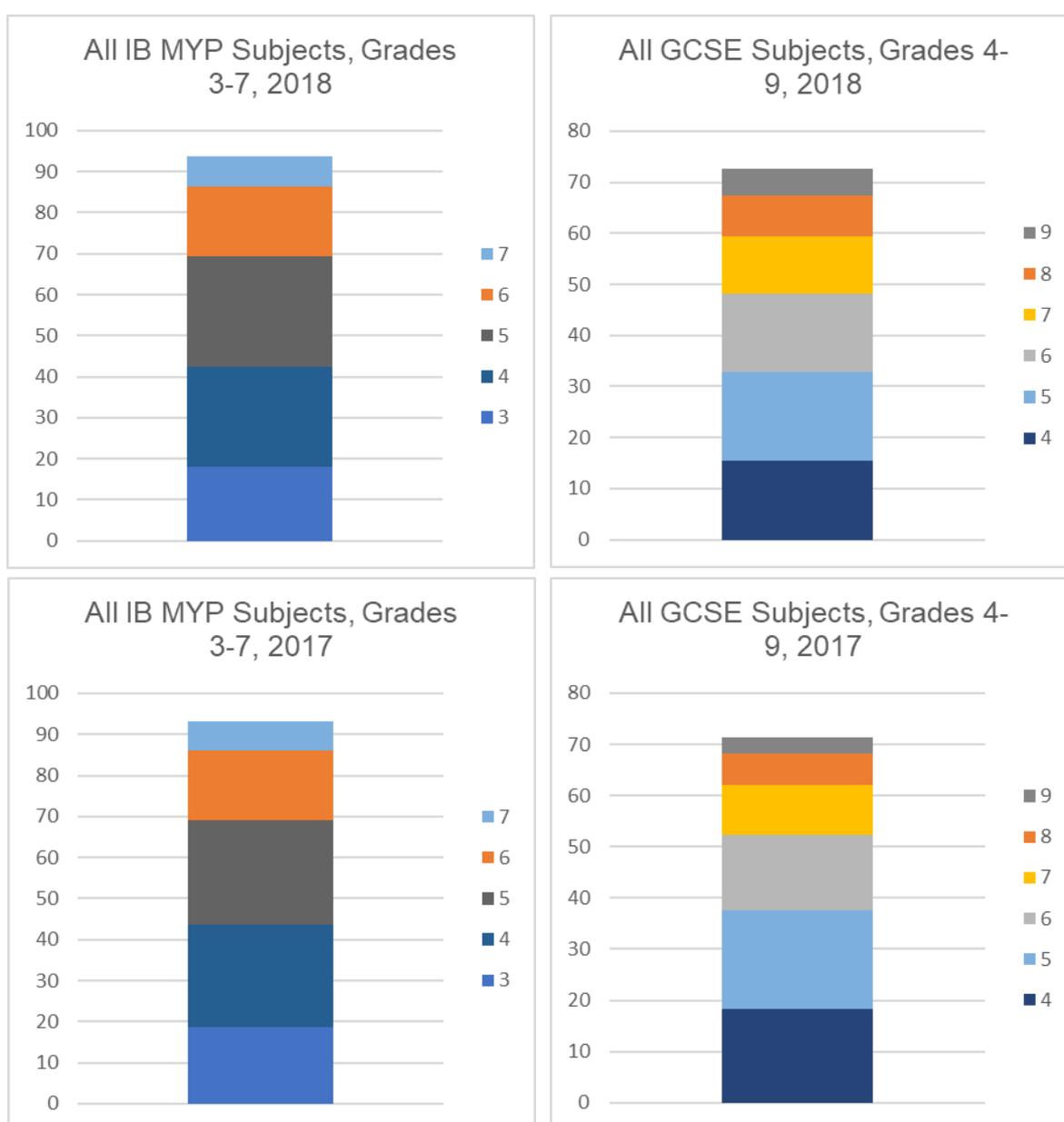
Figure 4: grade distribution graphs for all MYP subjects (2019 and 2018) and all 1-9 GCSE subjects (2019 and 2018)



2.8 MYP Grade 6 may be considered best comparable to GCSE Grades 7/8

MYP grade 6 was found to be comparable to the range spanning GCSE grades 7 and 8. The grade distribution data was particularly important in helping to make this judgement. Specifically, Ecctis closely considered the distribution roles of grades which fall on and above the GCSE “standard pass” threshold of 4. Figure 5, thus, represents the grades awarded from GCSE 4-9 and MYP 3-7 in the years 2017 and 2018 for all subjects. It is evident from these charts that the GCSE grading range that covers 7/8 fulfils a similar role between the “standard pass” level and the top grade as MYP 6 does in its respective scale.

Figure 5: grade distribution graphs for all MYP subjects (2018 and 2017) - grades 3-7 - and all GCSE subjects (2018 and 2017) - grades 4-9



This statistical evidence is supported by the similarities which can be found between the grade descriptors for MYP 6 and GCSE 8 (grade descriptors for GCSE 7 are not available).

Table 5: grade descriptors comparison for MYP 6 and GCSE 8

| IB MYP General Grade Descriptors: Grade 6 | GCSE History Grade Descriptors: Grade 8 |
|---|--|
| Produces <u>high-quality, occasionally innovative</u> work | <u>critically analyse and evaluate</u> , to reach <u>reasoned, substantiated</u> judgements: interpretations and why they may differ |
| Communicates <u>extensive understanding</u> of concepts and contexts | construct a <u>convincing</u> line of reasoning using second order concepts |
| Demonstrates <u>critical and creative</u> thinking, <u>frequently with sophistication</u> | demonstrate <u>relevant and comprehensive knowledge</u> , using first order concepts, combined with <u>a sophisticated understanding</u> of key features and characteristics |
| Uses knowledge and skills in <u>familiar and unfamiliar</u> classroom and real-world situations, <u>often with independence</u> . | <u>critically analyse and evaluate</u> , to reach <u>reasoned, substantiated</u> judgements: <u>a range of sources</u> , in context, to investigate historical issues |

3. Conclusion

Table 1, at the start of this report, demonstrates the comparability between GCSE grades and MYP grades at a glance. In some cases, the interpretation of that comparability is straightforward. For example, when one MYP grade is listed as comparable to one GCSE grade (e.g. MYP 3 and GCSE 4), then stakeholders can simply recognise that the level of these two grades has been judged to be directly comparable.

On the other hand, when one MYP grade has been listed as comparable to a two-grade range on the GCSE scale, then slightly more interpretation is required. This is an inevitable outcome of comparing a 1-9 grade scale with a 1-7 grade scale. For instance, when MYP grade 6 is tabulated as comparable to GCSE grades 7 and 8, stakeholders should interpret this as a judgement that MYP 6 is the closest and most accurate point of comparison to both GCSE grade 7 and GCSE grade 8. This does not mean that the level of MYP 6 sits exactly at an imagined centre point between GCSE grades 7 and 8 (i.e. better than 7, but worse than 8). Rather, MYP 6 should be interpreted as being comparable to the range of grading covered by GCSE 7 and 8. If stakeholders are interested in what MYP grade most accurately corresponds to a GCSE grade 8, Ecctis's judgement is that the answer is MYP 6. Equally, if a stakeholder is interested in what MYP grade most accurately corresponds to a GCSE grade 7, Ecctis's judgement is that the answer is MYP 6. The same pattern applies to the comparability between MYP grade 2 and GCSE grades 2 and 3.