

Comparability of different subjects

Response of the Association of School and College Leaders

- 1 The Association of School and College Leaders (ASCL) represents more than 18,500 education system leaders, heads, principals, deputies, vice-principals, assistant heads, business managers and other senior staff of state-funded and independent schools and colleges throughout the UK. ASCL members are responsible for the education of more than four million young people in more than 90 per cent of the secondary and tertiary phases, and in an increasing proportion of the primary phase. This places the association in a strong position to consider this issue from the viewpoint of the leaders of schools and colleges of all types.

General considerations

- 2 This is a very difficult question, generally not addressed by regulators in the past. Indeed, there is a widely-held view that it is an impossible question, that any attempt to compare the difficulty of non-cognate subjects amounts to a category error. ASCL is not necessarily of that opinion, and congratulates Ofqual on attempting it.
- 3 Difficulty, like beauty, is in the eye of the beholder. But some people, places, animals, pictures are generally thought to be more beautiful than others, and some subjects are generally thought to be more difficult.
- 4 Does that perception mean anything? Probably it does; after all, we have a good idea of the relative difficulty of different examinations in the same subject. A graduate-level examination in, say, history requires more knowledge, more understanding of historical techniques and the philosophy of history, more analytic skill, more insight, better exposition than a GCSE history examination, and will be found more difficult by everyone, both those who have an aptitude for the subject and those who do not. This difference in difficulty is deliberate, but it is likely that such differences (though smaller) will occur by accident between two examinations in different subjects unless the comparability question is addressed.
- 5 Some perceived differences are prejudices (Media Studies for example has not infrequently been described as an easy option by people who have never studied and who have no idea of what is required to gain a good grade in it). It would be good to give the lie to such, and also perhaps to reduce the kudos attached to some other subjects that have an air of difficulty but which on closer examination might be found not to be any harder.

- 6 Perceived differences in difficulty can affect students' choice of subjects. Some 14-year olds avoid choosing modern foreign languages (MFL) for example because they fear a lower grade than in an alternative subject. (And, it has to be admitted, they are sometimes so advised by their schools with an eye on performance measures.) This is very unhelpful at a time when as a nation we need more people to study foreign languages. This is not always the case, however; at A level mathematics is widely seen as a difficult subject, but is a very popular choice.
- 7 ASCL therefore welcomes Ofqual's interest in this question and commends Ofqual on tackling it. Hard as it is, it would be very helpful for the regulator to be able to assert that all qualifications at a given level are of similar difficulty. When teachers of mathematics or media studies argue against accepted wisdom they are seen as having (and indeed do have) a personal interest - Ofqual can take a more dispassionate view.
- 8 But how to approach the question?

Ways forward

- 9 Any attempt to compare different subjects on the basis of expert opinion based on the content of syllabi is almost bound to fail in a welter of special pleading. There is some scope for such comparisons between very closely related subjects, but they can have little meaning when trying to make a comparison between widely different ones.
- 10 To make comparisons systematically carefully designed statistical approaches will be needed.
- 11 But before considering what they might be we need to think hard about what we mean by difficulty in this context, otherwise the project is certainly futile. In order to make progress, as a stipulative definition let us consider a thought-experiment: 10000 14 year-olds are chosen at random, taught two subjects over two years for the same number of hours by experienced teachers and then entered for the two GCSEs. If the average grade in one subject is significantly higher than the other it would seem reasonable to regard it as easier.¹
- 12 It will not be possible to assess the general quality of teaching in different subjects and this will need to be assumed to be equal, or to be part of the general experience of difficulty for students².
- 13 Likewise, the different number of hours of tuition students receive for different subjects might be thought to have a bearing on difficulty in the sense that if a grade-pattern is found for a subject where students have received 100 hours of tuition that is similar to a subject where they have received 300 hours it may be thought that the second is the more difficult. Again, this extra complication will not be addressed in this paper.

¹ There is a further complication. It might be that in one subject it is easier to get an A grade, while in the other it is easier to get a grade in the range A*-C. Let us set this aside for the present and consider average grade - matters are complicated enough. If any techniques can be found to effectively compare different subjects' average grades they could be adapted for sub-sets of grades.

² If a general shortage arises of good teachers of a particular subject then that subject does become more difficult for the generality of students, even if its intrinsic difficulty might be thought not to have altered.

- 14 Such experiments are not possible in practice of course. But in the case of maths and English GCSE something similar is possible. These subjects are taken by almost all 16 year-olds. In this case the number of hours of tuition received by students in schools is similar. If one has a significantly different grade-profile than the other this could be said to reflect its difficulty to the general population.
- 15 Otherwise, examining the grade patterns of different subjects (as the Ofqual discussion paper does) is almost totally unhelpful³. They are taken by different groups of candidates, sometimes with very different characteristics, so that the immediate question arises about whether those qualifications that have more high grades do so because they are easier or are simply taken by more intelligent or better-prepared students. Latin GCSE for example has more high grades than most, but the feeling is that it is not particularly easy. As it is taken by a cohort of notably higher prior attainment and significantly better performance in other GCSEs than average this is certainly possible.
- 16 The Ofqual paper makes the second assumption, and indeed goes further in assuming that those subjects with more high grades are actually the harder ones. It is not clear why this should be thought to be the case 'a priori' unless it is accepted that there is already some comparability (based on what?) that validates the extra difficulty of these subjects and justifies the awarding of more higher grades.
- 17 For the most part the nearest we can get to the thought experiment of paragraph 11 above is to compare the grades achieved in two subjects by matched samples of students or, better, by the cohort of students who take both subjects at the same time.
- 18 Apart from the issues raised above in paragraphs 12 and 13 there is a further problem here. It may be that some subjects are more often students' main interest while others are more often taken to make up numbers or because they are seen as of instrumental value. For example at A level, students whose main interest is in natural science are often advised to take mathematics as a supporting subject. So the cohort of students who take, say, maths and physics may include more who regard physics as of more interest or as of more importance to them. If such students do better in physics than in maths it might be that that does not mean that physics is to that extent easier. Again, it would be very hard to allow for such considerations.⁴
- 19 Finally there is a concern that the cohort of students who take a particular pair of subjects may not be representative of the cohort who take either of the subjects without the other. In a sense they cannot be, as they have a particular characteristic in common – the taking of the other subject. This may or may not be seen as an obstacle to the use of this approach. If it is, then a more subtle statistical analysis could potentially address it.
- 20 There have been such subject-pair studies, of course, and these are set out in one of the Ofqual discussion papers alongside other approaches and the critiques of all. For all their faults these studies do point to a possible way forward. It may be that Ofqual can systematically conduct such subject-pair analyses on all possible pairs (or a large sub-set), and construct a measure of difficulty by a system analogous to that used to construct ratings of sports people or chess players after a number of bilateral comparisons (matches).

³ Or at least presupposes an entirely different definition of difficulty.

⁴ And, again, arguably it is right to set this aside to reflect actual practice and experience rather than looking for some intrinsic difficulty. In this example if maths is taken as an obligation rather than a free-choice by some students that does make it more difficult, at least for them.

Foreign language qualifications

- 21 There is a specific difficulty related to the poor take-up of modern foreign languages (MFL) in England. This is due to a number of factors, some very deep-rooted and not related to qualifications in these subjects. But one factor, mentioned above, is the perception of MFL qualifications as of greater difficulty. When the ASCL Curriculum and Assessment Committee addressed the question of comparability it quickly focused on MFL as the more urgent consideration than comparability more generally.
- 22 The committee therefore proposed that there should be a profession-led commission to look at MFL teaching and learning in this country. This should not be limited to qualifications but also consider the reasons for encouraging the learning of foreign languages, the type of learning that is most needed (for example the mix of the four fundamental language skills and emphasis on each, the balance between mastery of one language and basic proficiency in several), and a consideration of the pedagogy of MFL teaching in schools and colleges and how to improve this and better fit it to the aims of language learning. This would not therefore be something for Ofqual to lead on, but as qualifications are of such importance that it would of course benefit from an input from Ofqual.

With reference to your specific question

- 23 The question asks for a choice from four ways forward related to the setting of grade boundaries. The ASCL response to this is more complex than simply picking one of the four options:
- 24 First, is the question well-defined? The treatment seems to make the assumption that the difficulty of a subject is defined by the pattern of grades awarded. For reasons set out above this does not seem an acceptable definition of difficulty.
- 25 Second, the options are framed only in terms of the A/B boundary. Even if the awarded grades are to be used as an indicator of difficulty this particular boundary, of interest to only a minority of students, seems an odd choice. There is a sense of elitism. In practice similar work would need to be done at each grade boundary, and no doubt that is the intention, but different subjects would no doubt appear 'easy' and 'hard' at different levels on this type of approach.
- 26 Third, if there is an intention of addressing variation in difficulty between subjects it is not sufficient to consider manipulating the grade boundaries as a response. There should surely be a consideration of the knowledge and skills sought, hence of the required content, hence of the types of assessment to be used, and only finally of what the grade boundaries should be.
- 27 Taking the example of MFL mentioned above, if it were decided that MFL qualifications are harder than others it would not be sufficient to simply make them easier by moving grade boundaries down, as the ASCL Curriculum and Assessment Committee noted there is a need for a more systemic analysis of MFL teaching and learning and almost certainly a more fundamental change.
- 28 In terms of the options presented ASCL is firmly opposed to option 4. On balance our preferred choice of these options would be number 1, though we are not convinced that this is a well-framed question.

Summary

- 29 This is a hard question, and ASCL congratulates Ofqual on tackling it.
- 30 Please do not proceed with option 4 of your four. And consider other approaches.
- 31 Please be willing to join with our proposed systemic review of MFL learning, teaching and qualifications.

- 32 I hope that this is of value to your consultation, ASCL is very willing to be further consulted and to assist in any way that it can.

Martin Ward
Public Affairs Director
Association of School and College Leaders
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