

Report to ARWP on the potential for incorporating GCSE attainments into the University's widening participation policy of offer-making.

Abstract

In this W.P. Research Cluster paper we explore the case and the evidence for extending the University's policy and practice of 'contexting' admissions decisions, currently based on A Level grades, to the earlier, GCSE stage. Section 1.1 outlines the logic for doing so while 1.2 summarises the contexting methodology we have previously developed (so those familiar with this can skip it) and 1.3 outlines some other starting points. The main analysis and results (Section 2) considers in turn the selection of data (2.1), the definition of 'poor performing' schools for GCSEs (2.2), the measurement of candidate performance (2.3), the resulting evidence for educational disadvantage (2.4), the consequential specification of equi-potential groups (2.5), and guidance notes for the selection of school/student performance measures (2.6). Finally, 3.1 summarises our main findings and 3.2 our recommendations for the University's consideration.

1. Introduction

1.1 Why our interest in GCSEs?

For the last two UCAS admissions cycles the University has pioneered the contexting of admissions decisions on the basis of the best evidence available to it on the likelihood of educational disadvantage (ED) being experienced by certain groups of candidates relative to others. This (ie ED) matters in the cause of widening participation (WP) because it means that the educational attainments with which those ED-affected candidates present through their UCAS forms may be a downwards-biased reflection of their true academic potential at Bristol. This policy now commands widespread support from within the University and has attracted considerable interest outside it, elsewhere in the Higher Education (HE) sector and national press. It also complies with the advice on contexting now provided to the sector by its admissions good-practice watchdog, SPA (Supporting Professionalism in Admissions - <http://www.spa.ac.uk/contextual-data/index.html>), that contexting based on ED is an appropriate and recommended practice as long as a) it is supported by appropriate empirical evidence and b) it is not used mechanistically to the wholesale advantage of one group of candidates over another, but as part of a holistic assessment of individual candidates by university admissions tutors. The Bristol approach to contexting meets both these criteria.

However, as currently framed it can respond only to pre-university attainment as measured by A level grades. So, with the increasing diversity of school-leaving qualifications (IBs, Welsh Baccalaureates, Pre-Us etc), many are excluded. As these proliferate, and as grade inflation erodes the value of A levels in discriminating among the types of highly-graded candidates likely to be seriously considered for admissions at Bristol, so the value of the current version of Bristol's contexting policy will be steadily reduced too (*pace* the new A* grade, which we will not be able to incorporate into our approach for at least two more academic sessions). This has resulted in many in the HE sector turning their attention more towards GCSE grades as a possible complementary or even replacement way to discriminate amongst otherwise equally-attaining students.

At the same time, the University has received representations from schools and colleges that, while they understand and support our approach to contexting, it fails to respond to ED that can arise *before* the A level stage is reached. So a candidate may attend a school where A level teaching is effective, providing grades that are a true reflection of their university potential. And as such they will (rightly) receive no compensation through our current contexting approach. But their previous teaching, at GCSE, may be less effective either at the same school or, more probably, at a feeder school from which they have since transferred. Either way they will not have achieved as highly at GCSE as equally-able peers in better teaching environments. *'Is it not therefore logical'*, we have been asked, *'to extend the Bristol contexting approach to this earlier level?'* The answer is undeniably *'yes'* and this report summarises our thinking and research to this end.

1.2 Our contexting approach as applied to A Levels

For those unfamiliar with it, it will be helpful first to explain how this existing methodology and policy works. Its basis is analysis conducted by the University's Widening Participation Research Cluster (WPRC) some three years ago. First, we identified certain groups of students for which there was a *prima facie* case for their having suffered some ED compared to their peers – such as those from state schools, schools with low performance levels, from low social classes, etc – these we call the 'WP' group(s). Second, we examined whether there was a differential between the attainment of these WP students at A level (their 'prior attainment') and again at their final degree levels at Bristol, when compared with the corresponding 'entry' and 'exit' attainments of their equivalent 'non-WP' group of candidates – so, for instance, those from poor performing schools would be compared with those from higher performing schools.

Third, where we found statistical evidence of such a change in relative attainment in the direction that the ED hypothesis would suggest (eg the low performing school students raised their attainments between entry and exit relative to their 'high performing' peers) we calibrated these differences based on 'equi-potential' pairs of students as where, say, 'poor performing' students with BBB or better at A Level achieved the equivalent final degree attainment as those from 'high performers' achieving AAB or better at A Level. Fourth, these equi-potential pairings were reported to Admissions Tutors who would identify the one(s) most appropriate to their own admissions circumstances, with the advice that they should take note of these differentials in their holistic assessment of candidates, perhaps making offers to those from the appropriate WP backgrounds with lower predicted or achieved grades than they would normally consider and/or make them lower conditional offers. Finally, we used the equi-potential WP/non-WP pairing which best represented the University's current overall admissions profile to calculate an evidence-based Intake Milestone to specify in our OFFA Access Agreement.

The version of this methodology that the University chose to adopt was indeed that based on defining WP candidates as those from poor performing schools, although other options were then, and still are now, available to it. (The WPRC has recently published research which attracted considerable outside interest to the effect that school type may be a more effective predictor of ED than school performance, generating an Freedom of Information Act request from the Head Masters' Conference, presumably to re-examine these 'suspicious' findings.) The definition of 'poor performing' schools the WPRC went on to develop is a multi-faceted one, based on three measures of school attainment and progression to HE, and also, importantly, based on the relative

achievements of each school against the corresponding national overall distributions, not against a fixed threshold or score which could become overtaken by changes in overall national educational standards.

In its detail this methodology undoubtedly has some simplifying features – dividing candidates just into those attaining above and below the cohort median on entry and on exit, and dividing schools just into poor and high performing based on their missing or meeting the three measures of attainment and progression against national norms. However, this is no different to the ‘yes/no’ WP discriminates the University had specified in its WP policy previously (eg those from schools above/below 265 UCAS tariff points, those living/not living in low HE participation neighbourhoods) but then without the evidence base it now has to hand. As so specified our approach is relatively easy to implement both by ‘tagging’ UCAS forms and through briefing notes to admissions staff, and also to monitor and revise on an annual basis (as the University has done since its inception). Furthermore, it is not portrayed as a cast-iron identifier of candidates with ED in their previous educational experience, but simply as indicative of those from backgrounds which the University’s best-available evidence shows had suffered in this way among the most recent cohorts to have competed their degrees here. Ultimately, the decision of whether and how to factor this into the decisions of individual candidates is, and must remain, vested in the judgement of those taking those decisions.

1.3 Transferring our contexting approach to GCSEs

In its basic outline, our methodology can smoothly transfer to the GCSE stage of attainment, with two qualifications. First, as Bristol departments do not prescribe the types of attainment profiles they expect at GCSE in their Departmental Admissions Statements with the same specificity as they do for A levels - often citing a good profile of academic grades across a range of subjects but leaving the details on one side - it is more difficult to specify, *ex ante*, those equi-potential pairings appropriate to any Bristol entry school. We will reflect on this later in our report. Second, on the ‘good news’ front, GCSEs are almost always attained and certificated by the time of UCAS applications, rather than being the predicted grades of most A level candidates, with all the possible biases and uncertainties the latter introduces.

Four other introductory points. First, in this extension of contexting to GCSE grades we have focused on the same ‘school performance’ criterion that the University has chosen to adopt at A level. We recognise that this may not be the only option (see above), but it makes sense to adopt a consistent policy for specifying ED at these two sequential educational stages, *ceteris paribus*, as well as simplifying our analysis for the University (it soon became complicated enough to be getting on with anyway!). Second, we are also well aware of the continually disappointing picture of Bristol from the latest annual admissions WP statistics available to the University. (One of us – AGH – took part in a discussion of these by the WP statistics group of Faculty WP representatives and Senate House officers earlier in the session.) It was recognised there that even if the ED potential of the contexting methodology were to be adopted to the very fullest extent, in some ideal world, it might still only make a small difference to the University’s intake statistics should the ‘leverage’ it exerted on the total population of applications be small – ie the sub-set of candidates to whom the ED methodology applied was only a small fraction of all those presenting through the UCAS system. We therefore have explored whether, by changing the thresholds at which we specify potential ED candidates for

contexting purposes, we can raise the leverage achieved. While we apply this here to our GCSE results it is, of course equally appropriate to revisit our A Level policy with this in mind too. In the present post-Browne world of strong imperatives to apply well-founded WP criteria in practice, *and to show clear progress through outcomes to justify above minimum fee levels to OFFA and the Coalition Ministers*, the University needs to consider *all* the possible means at its legitimate disposal to move out of the relegation zone of the national WP league tables.

Third, there is no 'fifth' stage in the GCSE contexting methodology – the conversion of a University-wide equi-potential pairing into an Intake Milestone. This will remain as now, determined by our A Level contexting outcomes. However, insofar as students with ED at the A Level stage are disproportionately likely also to suffer ED at the GCSE stage, whether at the same or different schools, incorporating this earlier stage into our contexting will add to the likelihood that those 'ED at A Level' students will receive an offer, whether at normal or reduced grades. Finally, and linked to this, we are anticipating that the eventual outcome of this extension of our methodology to GCSE may be that any UCAS candidate can be considered as a candidate for 'contexting' *either* because of ED at the GCSE, *or* the A Level stage, *or both*. This raises the interesting issue of whether there might not also be some 'spill-over' effect of ED at GCSE level on A level attainment for candidates who have transferred from a poor performing school (which attracts contexting through ED) to a better one (which doesn't). Such a candidate may still suffer in exams two years later through the weak inheritance of transferable study skills from her/his previous school experience. However, for the present we leave this intriguing potential interaction on one side.

2. Analysis and results

2.1 Identifying data

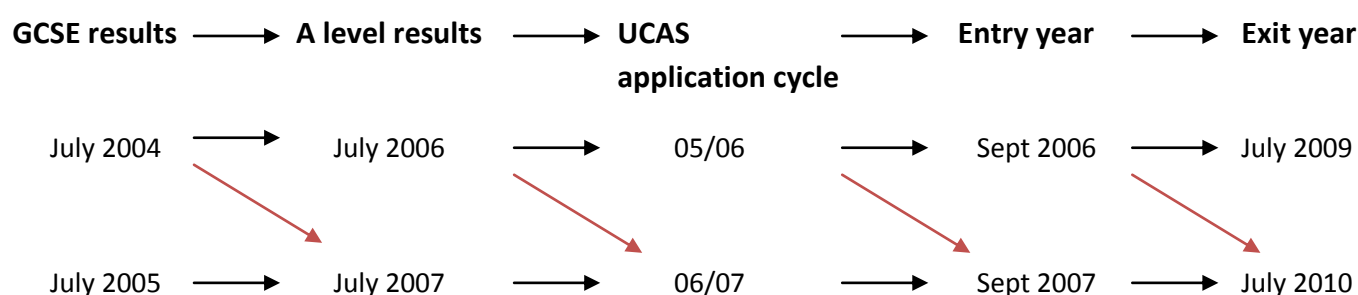
The first step in our analysis was to select the pool of students who would be examined for ED. Ideally, we wanted the most recent graduated cohort data available, whilst also including enough students for the analysis to be statistically reliable. Data for student GCSE attainment were provided by special purchase from UCAS and with UoB records providing 'exit' data, whilst data for 'school performance' came from the Department of Education (DfE) (see Table 1 below). Several factors determined the size and nature of our sample.

1. UCAS began electronically storing data on GCSE and equivalent qualifications in UCAS cycle 2005/6. Ideally, we wished to collect three cohorts of data, so starting from 2005/6 we would also include 2006/7 and 2008/9. Taking the shortest length of time required to complete an undergraduate degree (three years), these cohorts would graduate in 2009, 2010 and 2011 respectively. Unfortunately, at the time of research Bristol did not yet have data on the 2008/9 entry cohorts exit attainment for 2011. The other option was to include an earlier cohort, 2004/5. However, whilst Bristol holds paper records of applicants' GCSE qualifications prior to these 'electronic' years, collecting and inputting this information would be very resource-intensive. It was therefore decided that, for the purposes of this research, two years worth of students' would be sufficient. (It is worth noting that for any future repeat exercise, three years worth of electronic data could now be used.)

2. We select only English students who have taken GCSEs, as we have no way of cross-calibrating this with other school-leaving qualifications, such as Scottish Standard Grades. We also do not have easy access to Welsh, Scottish and Northern Irish measures of school performance. (Our earlier A Level methodology had these same constraints.)
3. We select only those students who have completed a three-year undergraduate course, and for whom SITS hold final year unit marks. This excludes students studying Medicine, Veterinary and Dentistry Sciences, and those on four-year MSci courses. It also excludes any student who has changed course, or suspended studies. (Again, the same applied to the A level case.)
4. It is also worth noting that a further number of students have been removed from the analysis due to incomplete data (such as no recorded school performance measures) or difficulties in matching the data (as UCAS and the DfE use different school codes).

The diagram below shows the relevant years that our cohorts took their GCSEs, entered UoB and graduated.

Table 1: Years applicants take GCSE's, enter and exit university



School performance – DfE School performance tables for GCSEs results 2004 – 2005.

Student performance entry - UCAS application cycles 05/06 and 06/07.

Student performance exit – SITS (UoB) data

Black arrows : normally expected progression pathways

Red arrows: possible leakages of progression to subsequent years

2.2 Identifying poor performing GCSE schools

As with our A level contexting work, school performance was used to define students from WP and NWP backgrounds. Again, we wished to adopt a multi-faceted approach and thus explored a number of different measures used by the DfE in their annual school performance tables. These tables have the benefit of being widely used, easily accessed and annually updated. Comparing the measures used through time, it quickly became clear that many measures are introduced in one year

only to disappear the next, and hence useless for any methodology designed for long-term application. However, we did identify two measures that were used in 2004 and 2005 (the years in which our cohort groups would have taken their GCSEs) and which continue to be used to the present. It should be noted that the first measure underwent a minor methodological change between 2004 and 2005, but, on testing we found that it was robustly consistent across both years, with 97% of schools falling in the same or neighbouring performance quintile when classified separately on each alternative measure.

The chosen measures of school performance thus were;

SP1 - % of 15 year olds (2004)/pupils (2005) achieving Level 2 threshold

Notes – Level 2 threshold is the attainment of 5 A-Cs (or equivalent).*

SP2 – average uncapped GCSE (or equivalent) point score per pupil

Notes – Previous measures used capped scores where only the best 8 GCSEs (or equivalent) were used to calculate a pupil's point score

We would have preferred also to incorporate a 'progression' measure (to post-16 education or even to HE), as we did in the A level contexting work, but unfortunately such data were only available for state schools and not also for independent schools.

To determine if a school fell into a low (LSP) or high (NLSP) school performance category we looked at their *relative position* in comparison to all other schools in England. To understand how this works, consider the case of, say, academic attainment by average point score. We rank all 2000+ English schools for which we have these data and think of them as if laid out in a single file, based on their rank position. We then start at the top end (highest average attainment) of the file and count downwards until we have included schools containing 20% of the total number of pupils in the relevant year group (in 2004 this was pupils aged 15, whilst in 2005 this was KS4 pupils) from the entire set of schools. This then represents our top quintile based on this attainment measure. We then continue downwards until we can slice off the next 20% of the total cohort, and so on, ending up with five equally-sized (by pupil numbers) quintiles of descending average per-student attainment. We can then repeat the exercise for the other performance measure, so placing each English school in one quintile for each performance measure, often but not necessarily the same on both.

We then had several ways of defining 'high' (NLSP) and 'low performing' (LSP) schools. For example, we might consider a low performing school as one in the lowest quintile, or the lowest two or three quintiles, for either measure, or both. In total we generated a set of 12 possible definitions of 'poor' performing schools and, by default for those not so captured, of 'high' performing ones too. So a 'poor' performing school (LSP) can be one that is in any of the following categories:

- Bottom 40% of SP1 and/or SP2
- Bottom 60% of SP1 and/or SP2
- Bottom 40% of both SP1 and SP2
- Bottom 60% of both SP1 and SP2
- Bottom 40% of SP1 with any result in SP2
- Bottom 60% of SP1 with any result in SP2
- Bottom 40% of SP1 but not in SP2

- Bottom 60% of SP1 but not in SP2
- Bottom 40% of SP2 with any result in SP1
- Bottom 60% of SP2 with any result in SP1
- Bottom 40% of SP2 but not in SP1
- Bottom 60% of SP2 but not in SP1

2.3 Measuring candidate GCSE performance

Exit attainment is determined by a student's mean final year (exit) unit mark. (The more 'obvious' measure of degree classification was not suitable due to the high percentage of students graduating with an upper second, producing an analysis with two very unequal 'halves'.) Students were then identified as being equal to/above or below the median final year attainment of the cohort. Entry attainment proved more complex, as there were a number of different ways this could be measured. Our data from UCAS provided information on each grade for each GCSE taken. Possible ways of measuring attainment included:

- Total/Percentage A*s
- Total/Percentage A*-As
- Total/Percentage A*-Cs
- Any of the above but must include all or combinations of Maths, English, Science

We made the decision to take the first two options forward, giving us four possible ways of measuring GCSE (entry) attainment. Total/Percentage A*-Cs was ruled out as the UoB high entry requirements meant competition was largely based on number of A*s and As than on the lower grades. Whilst having good grades in Maths, English and Science is important for many admissions tutors, the practicalities of filtering the data to analyse attainment in certain GCSE subjects were too complex to make this easy to implement, particularly if this methodology is to be re-implemented each successive year. Again, students were identified as being equal to/above or below the median entry (GCSE) attainment, regardless of which measure used. Using medians allows us to subdivide the cohorts as evenly as possible, given the level of coarseness of the original data.

2.4 Testing of Educational Disadvantage

We then tested each of these low/high definition school sub-sets for ED as outlined earlier, giving us 48 possible combinations to test for educational disadvantage. A chi-square analysis was run on each combination, testing whether the number of pupils who achieved at/above median entry results compared to the number getting at/above median exit results proportionately increased more for LSP students than NLSF students.

Not surprisingly, this generated a number of possible 'candidates'. Exactly half the different combinations of ways of defining 'poor' and 'high' performing schools and candidate achievement showed evidence of educational disadvantage (statistically significant outcomes in the direction consistent with the ED hypothesis), see Table 2. This is far above the number to be expected by chance, giving us confidence of the existence of ED amongst our student cohorts from the GCSE stage in attainment.

Table 2: Statistically significant (at 99%) cases of educational disadvantage

		Total A*			Total A* - A			% A*			% A*-A		
		NLSP	LSP	TOTAL	NLSP	LSP	TOTAL	NLSP	LSP	TOTAL	NLSP	LSP	TOTAL
SP1 &/OR SP2, 40%	Entry										1175	53	1228
	Exit										1331	101	1432
	Total										2506	154	2660
	Chi-square										9.08		
SP1 &/OR SP2, 60%	Entry	1158	193	1351	1445	240	1685	1138	187	1325	1073	155	1228
	Exit	1168	264	1432	1168	264	1432	1168	264	1432	1168	264	1432
	Total	2326	457	2783	2613	504	3117	2306	451	2757	2241	419	2660
	Chi-square	8.72			10.04			9.40			16.84		
BOTH SP1 AND SP2, 40%	Entry	1312	39	1351				1286	39	1325	1196	32	1228
	Exit	1362	70	1432				1362	70	1432	1362	70	1432
	Total	2674	109	2783				2648	109	2757	2558	102	2660
	Chi-square	7.40						6.86			9.34		
BOTH SP1 AND SP2, 60%	Entry	1230	121	1351	1528	157	1685	1207	118	1325	1130	98	1228
	Exit	1249	183	1432	1249	183	1432	1249	183	1432	1249	183	1432
	Total	2479	304	2783	2777	340	3117	2456	301	2757	2379	281	2660
	Chi-square	10.44			9.55			10.62			16.11		
SP1, ANY SP2, 40%	Entry	1304	47	1351				1279	46	1325	1191	37	1228
	Exit	1353	79	1432				1353	79	1432	1353	79	1432
	Total	2657	126	2783				2632	125	2757	2544	116	2660
	Chi-square	6.68						6.65			9.94		
SP1, ANY SP2, 60%	Entry	1200	151	1351	1492	193	1685	1179	146	1325	1104	124	1228
	Exit	1216	216	1432	1216	216	1432	1216	216	1432	1216	216	1432
	Total	2416	367	2783	2708	409	3117	2395	362	2757	2320	340	2660
	Chi-square	9.27			8.95			9.97			14.74		
ANY SP1, SP2, 40%	Entry										1180	48	1228
	Exit										1340	92	1432
	Total										2520	140	2660
	Chi-square										8.39		
ANY SP1, SP2, 60%	Entry	1188	163	1351	1481	204	1685	1166	159	1325	1099	129	1228
	Exit	1201	231	1432	1201	231	1432	1201	231	1432	1201	231	1432
	Total	2389	394	2783	2682	435	3117	2367	390	2757	2300	360	2660
	Chi-square	9.46			10.44			9.67			17.88		

2.5 Calibrating Educational Disadvantage

Here we explore two options for calculating the extent of educational disadvantage experienced by LSP applicants. The first, based on identifying detailed equi-potential pairings, echoes our A level contexting work. The second, a more coarse-grained approach, compares LSP and NLSP *average* entry attainments for those who obtain a) at or above and b) below median exit results. We provide both outcomes for consideration below. We have concentrated on the same school performance measures used for the University's A level contexting work (that is SP1 and/or SP2 at both 40% and 60%). However, others could be generated if required.

Taking first the more fine-grained approach, Table 3 summarises the equi-potential groupings of several school performance and student attainment measures. It should be noted that, due to some instances of low student numbers amongst the LSP cases, we decided to adopt a qualifying threshold of 40 students for inclusion.

Table 3: Equi-potential groups

Notes: Groups are made conservatively, with LSP equivalent grades always being higher than their NLSP pair.

School performance : Bottom 40% SP1 &/OR SP2		GCSE performance: % A*-A		
Equi-potential groups	NLSP		LSP	
	At/above grade	% above median on exit	At/above grade	% above median on exit
1	90%	63%	80%	66%
2	70%	61%	60%	62%
3	50%	59%	50%	60%
4	Any	56%	40%	58%

School performance : Bottom 60% SP1 &/OR SP2		GCSE performance: % A*-A		
Equi-potential groups	NLSP		LSP	
	At/above grade	% above median on exit	At/above grade	% above median on exit
1	90%	63%	70%	63%
2	70%	60%	50%	60%
3	50%	58%	40%	59%
4	30%	57%	20%	57%

School performance : Bottom 60% SP1 &/OR SP2			GCSE performance: % A*	
Equi-potential groups	NLSP		LSP	
	At/above grade	% above median on exit	At/above grade	% above median on exit
1	70%	73%	70%	76%
2	50%	66%	40%	67%
3	40%	65%	30%	65%
4	30%	62%	20%	63%
5	10%	58%	10%	60%

School performance : Bottom 60% SP1 &/OR SP2			GCSE performance: Total A*-A	
Equi-potential groups	NLSP		LSP	
	At/above grade	% above median on exit	At/above grade	% above median on exit
1	10	65%	8	65%
2	7	60%	6	62%
3	6	59%	5	59%
4	5	58%	4	58%
5	4	57%	3	57%

School performance : Bottom 60% SP1 &/OR SP2			GCSE performance: Total A*	
Equi-potential groups	NLSP		LSP	
	At/above grade	% above median on exit	At/above grade	% above median on exit
1	6	69%	6	69%
2	5	66%	5	68%
3	4	63%	3	64%
4	3	61%	2	62%
5	1	58%	1	59%

So, for example, in the first case (% A*- As with LSP schools the bottom 60% in either SP1 or SP2) LSP candidates with 80% A*-As at GCSE were doing as well as NLSP's with 90%. This example follows the grain of our findings for the A level contexting. However on a whole, the outcome is more fragmented in the GCSE contexting work. Take, for instance, the fourth case which considers total A*-As with LSP schools being the bottom 60% in either SP1 or SP2. The table above shows a clear pairing between LSP candidates with 8 A*-As (65% obtaining above median on exit) and NLSP's with 10 (65%). Yet if we look at LSP candidates with 10 A*-As, only 62% achieve an above median score on exit. This is *below* their NLSP GCSE equivalents (65%), but *above* NLSP students with 11 A*-As (61%).

A number of reasons may underlie such inconsistencies. First, the lack of consistency of GCSE entry policy across different schools compared to the 'norm' of 3-A Level programme two years later makes inter-school comparisons less straight-forward. Second, it is natural to expect that the correlations between prior-attainment and University degree attainments, while still positive, will weaken with the greater length of time between them (normally three years for A Levels but five for GCSEs). Third, it may be that in some cases we simply do not have enough students for the groupings for a smoother result similar to that with A Levels. Next year, with an additional cohort being available, this last problem, at least, should be resolved.

However, for the present these combine to reinforce the case for considering also our coarser and simpler alternative approach, outlined above. Table 4 details the results of this, showing clear evidence that, on average, LSP students have lower entry attainment in both the exit categories, but with the largest differences seen in the entry attainment measures of % A*-A and % A*. This offers a reasonable guide for calibrating LSP against NLSP candidates for admissions tutors to adapt in their own specific circumstances, perhaps even being a more appropriate approach in this GCSE case as now specific entry grades, to be read-off the sorts of equi-potential groups shown in Table 3, are rarely if ever specified. Instead, we might reasonably average the pairs of 'differences' shown for any specific case to represent the appropriate equi-potential calibration. So a Department that prioritised the percentage of A* or A* and A grades at GCSE might take this as 10 percentage points. It follows that a 'poor school' candidates with 40% or 60% of subjects at that level would then equate with their peers with 50% and 70% respectively from better performing schools. If, instead, the Department's emphasis was on numbers of A* and A grades, and with one grade now being taken as the 'difference average', a 'poor school' candidate with four A*s might equate with a better school candidate with five, and a 'poor' one with seven at A* and A with one achieving eight from a better school.

Table 4: Average entry attainment for LSP and NLSP students with at or above and below median exit attainment

% A*-A Bottom 40% of SP1 &/or SP2			
Exit attainment	Average entry attainment		Difference (=NLSP - LSP)
	LSP	NLSP	
At or above median	76.0%	85.9%	9.9%
Below median	62.3%	77.2%	14.9%
% A*-A Bottom 60% of SP1 &/or SP2			
Exit attainment	Average entry attainment		Difference (=NLSP - LSP)
	LSP	NLSP	
At or above median	77.7%	86.9%	9.2%
Below median	66.2%	78.2%	12.1%
% A* Bottom 60% of SP1 &/or SP2			
Exit attainment	Average entry attainment		Difference (=NLSP - LSP)
	LSP	NLSP	
At or above median	37.4%	48.4%	11.0%
Below median	27.1%	36.3%	9.2%
Total A*-A Bottom 60% of SP1 &/or SP2			
Exit attainment	Average entry attainment		Difference (=NLSP - LSP)
	LSP	NLSP	
At or above median	7.51	8.38	0.86
Below median	6.45	7.52	1.07
Total A* Bottom 60% of SP1 &/or SP2			
Exit attainment	Average entry attainment		Difference (=NLSP - LSP)
	LSP	NLSP	
At or above median	3.59	4.65	1.06
Below median	2.63	3.49	0.86

2.6 Selecting school performance and student attainment measures

The final choice of a preferred combination of school performance and student attainment measures should be based on three criteria:

- The scale of the difference between the entry and exit performance of the two school performance groups. We took a statistically significant difference at the conventional 99% level as our 'bottom line' here, but even so 24 cases still qualified.
- The percentages of overall English Year 11 schools and pupils, and of Bristol's 2006-2007 undergraduates, that are from 'poor' schools. We wished to avoid these percentages being either too high or low, lest this resulted in our own contexting practices being overly sensitive to the decision-making vagaries of a comparatively small handful of LSP or NLSP schools and their pupils. However, it is also advantageous, other things being equal, to include as many LSP candidates as possible within the scope of our GCSE contexting policy, to maximise its leverage, as discussed earlier (Section 1.3). Adopting 60% as the criterion over 40% would still leave the clear majority of Bristol's applicants being classified as from high performing schools, such is the extent to which we normally draw disproportionately from the better schools from within the national distributions. Below (Table 5), we provide data on the number and percentage of LSP candidates indentified under different (statistically significant) measures of school performance in our sample. Bear in mind that we ideally should be using the LSP component of *all our applicants*, rather than of those who *graduated*: the former data are not readily available without further work, but are likely to be a somewhat higher proportion of the corresponding total student population than they appear in Table 5 (in the absence of contexting LSP, students are likely to have a higher rejection rate than NLSPs). Even so, they will still represent a minority component in total applicants, maybe above 20% but not much more, even were the University to adopt the 'maximum leverage' case of students from schools in the bottom three quintiles, on either or both of SP1 and SP2.

Table 5: Numbers and percentages of LSP candidates for significant measures of school performance.

School Performance Measure	LSP	Total	% LSP
Bottom 40% of SP1 &/or SP2	190	2568	7%
Bottom 60% of SP1 &/or SP2	473	2568	18%
Bottom 40% of both SP1 and SP2	126	2568	5%
Bottom 60% of both SP1 and SP2	322	2568	13%
Bottom 40% of SP1 with any result in SP2	148	2568	6%
Bottom 60% of SP1 with any result in SP2	382	2568	15%
Bottom 40% of SP2 with any result in SP1	168	2568	7%
Bottom 60% of SP2 with any result in SP1	413	2568	16%

- A measure of entry performance that makes most sense to the University and Admissions Tutors, being reliable and producing meaningful, easy-to-use equi-potential groups. Here again we have the dilemma that GCSE requirements are less clearly specified by Departments, and so may often be treated in an impressionistic way during a candidate's holistic assessment. This sits less easily with any contexting advice that applied previously with the A Level case. There seem to be two ways forward. First, where Departments have a clear, if informal, view on the GCSE profiles they look for, this could be used to identify the appropriate equi-potential LSP standards, whether via our fine or coarse-grained approach. Second, where the first proves unsuccessful then the WPRC could be asked to investigate whether any clear GCSE-attainment thresholds emerged from an *ex-post* analysis of recent Departmental admissions decisions, so distinguishing candidates more and less likely to have received an offer over recent years where SITS contains an electronic GCSE record for each applicant (we believe SITS started recording GCSE data in the 2009/10 application cycle). This could highlight any latent *de facto* GCSE expectations for particular entry schools. And if no clear outcome emerged here too, it might be safer to exclude any GCSE contexting advice for such Departments.

3. Outcomes

3.1 Main conclusions

- If it is logical to context UCAS candidates' prior-attainment against their A Level performance it is equally so for GCSEs, evidence allowing. And this earlier educational stage is likely to become more rather than less important in university admissions decisions in the near future in Bristol and beyond.
- There is clear evidence for Educational Disadvantage among the GCSE attainments of recent graduating Bristol cohorts, as there was earlier for A Levels, and using a similar methodology.
- We can specify this in a variety of ways for candidates from poor performing schools in terms of their equivalent equi-potential pairing from other schools, depending on a) how we define those sets of schools, b) the aspect(s) of the GCSE profile of primary interest and c) the level of detail we choose in the 'pairing up' process.
- In particular, we can identify and defend measures of 'poor performing schools' in a more and less inclusive way, thus affecting the leverage this extension of contexting can exert on the applications process.
- Implementing any advice on contexting GCSE results is more complicated than at A Level, given the range of ways in which Departments can treat GCSE attainments of candidates and the apparent lack of current specificity in this. But some alternative approaches can still be suggested.

3.2 Recommendations

- The University considers introducing GCSE contexting for those candidates where appropriate data exist from the 2011/12 UCAS round, and advising relevant admissions staff accordingly. (Of course, as with A Levels, the decision on whether to apply such contexting advice must remain the personal and informed judgement of the admissions staff concerned, taking a holistic view of each individual candidate's application.)
- To maximise the effect of this contexting, it should adopt the most inclusive definition of poor performing schools for which it has supporting evidence – this is the 'bottom 60% on either SP1 and/or SP2' case.
- The University should consult with Departments over the preferred ways to specify appropriate GCSE attainments in their own contexts, and should ask for further research to be undertaken where they cannot currently provide such information.
- The University should monitor the continuing case for ED at GCSE and responses of Admissions Tutors and Officers as part of annual review process, as it does for A Levels.
- To maximise the leverage effect of the existing A Level contexting work, the University should also adopt a more inclusive definition of poor performing schools there too, where supporting evidence exists.

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