

Vocational A levels and university entry¹

Is there Parity of Esteem?

Phil Vickers and Bahram Bekhradnia

Introduction

1. The fact that a smaller proportion of those taking vocational qualifications at Level 3 progress to higher education in comparison to those taking academic qualifications is sometimes cited as evidence that there is prejudice against vocational qualifications². For example, in the 2004 HEFCE General Meeting, Sir Howard Newby confronted this issue, stressing how the low level of participation in higher education from those taking vocational qualifications “really isn’t good enough”, and expressing his opinion that somewhere between 60 per cent and 70 per cent would be an appropriate proportion³.
2. Based largely on data from the Youth Cohort Study, this report considers the question of the relationship between vocational and academic Level 3 qualifications from a number of different angles. It considers:
 - a. If differences in participation might be attributable not to differences in the qualifications – or the attitudes of universities to the qualifications – but to the abilities⁴ of the students taking them
 - b. Whether differences in attitude – if they exist – might be justified, because students of a given level of ability taking vocational qualifications are awarded higher grades on average than students of similar ability taking academic Level 3s
 - c. Whether students with vocational Level 3s do not go to higher education in greater numbers because they have no intention of doing so – the Level 3 route they choose might be determined by whether they want to go to HE, not vice versa
 - d. Related to point a. above, whether it is in any case true that vocational Level 3 holders participate less in HE than their academic Level 3 colleagues, once ability is controlled for.
3. The scope of this report is limited to statistical analysis of rates of progression and the characteristics of vocational and academic Level 3 holders. It takes no

¹ References in this summary report are restricted to a minimum. Full references, and methodological explanations, can be found in the web version of this report.

² The Youth Cohort Study Cohort 11 shows that 51 per cent of those taking vocational Level 3 qualifications and 84 per cent of those taking GCE A Levels (having achieved at least 5 passes at GCSE) go on to higher education before the age of 20.

³ Sir Howard Newby, HEFCE General Meeting, 2004.

⁴ Most of the analyses in this report focus on students’ prior academic achievements in terms of number of GCSE passes. In individual cases GCSE achievement may not be a fair reflection of the ‘ability’ of the pupils concerned, but as an average across the entire pupil population no better measure exists at present, and it is likely to be sufficient for these purposes. Any specific issues arising from the use of these figures are raised where relevant.

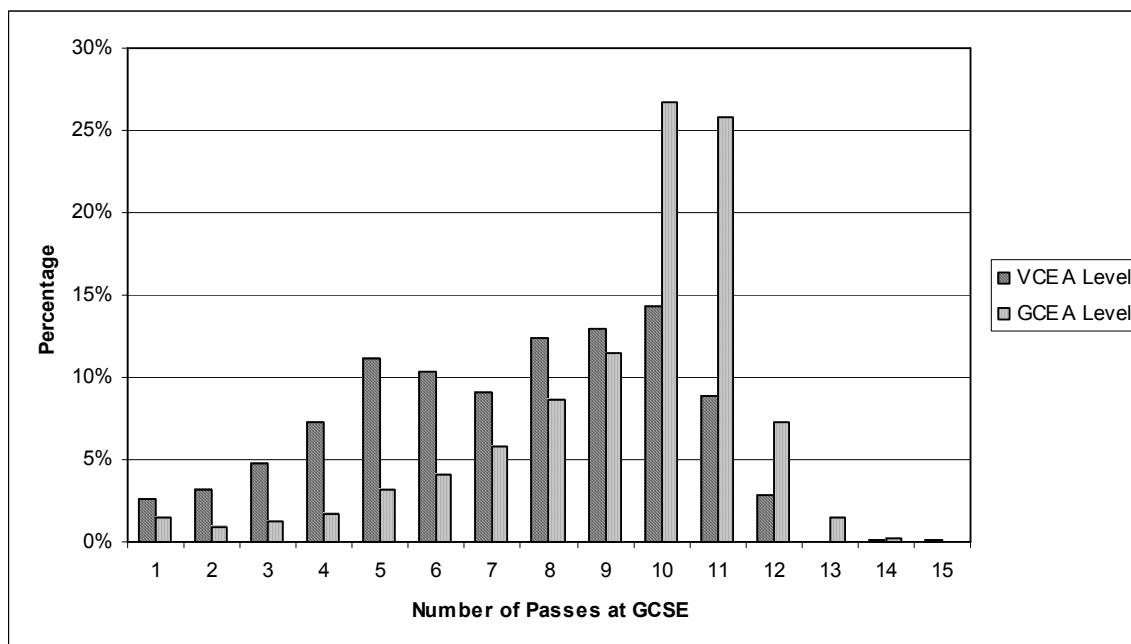
account of the intrinsic suitability of academic or vocational preparation for specific university courses.

Comparing the characteristics of those taking vocational and academic Level 3 qualifications

4. The difference in rates of progression between those from vocational and academic backgrounds (51 per cent and 84 per cent respectively) is often cited as indicating that there is disparity of esteem between the two types of qualification. Is this really what these numbers indicate, or is there another way of explaining them? To interpret these figures properly we need to consider the different ability of students taking academic and vocational qualifications.

5. Figure 1 below shows that on average those taking GCE A Levels achieved a greater number of GCSE passes than those taking VCE A Levels. For example, 61.4 per cent of those taking GCE A Levels achieved 9 or more passes at GCSE, compared to just 26.2 per cent of those taking VCE A Levels. Conversely, just 8.5 per cent of those taking GCE A Levels were awarded less than 5 GCSE passes, compared to 28.9 per cent of those taking VCE A Levels.

Figure 1: Distribution of GCSE passes for those taking GCE and VCE A Levels



Source: Youth Cohort Study, Cohort 12, Sweep 1: finished compulsory education in 2003 HEQAC
NB: Half GCSEs are rounded down.

6. There is no surprise here: those doing academic Level 3s are on average more able than those doing vocational qualifications. But this already goes a long way towards explaining the different rates of progression to higher education. The question though remains whether progression of vocational Level 3 holders is less than might be expected, even allowing for this, and this is discussed further in the final section.

7. The other contextual issue to be mentioned is that there are so many more secondary school pupils who take GCE A levels than VCE A levels, that in absolute terms considerably more pupils taking GCE A levels do not go to university than those taking vocational Level 3 qualifications. If widening participation is the concern – and it should be – then it is more important to concentrate on the reasons that GCE A level students choose not to go to university.

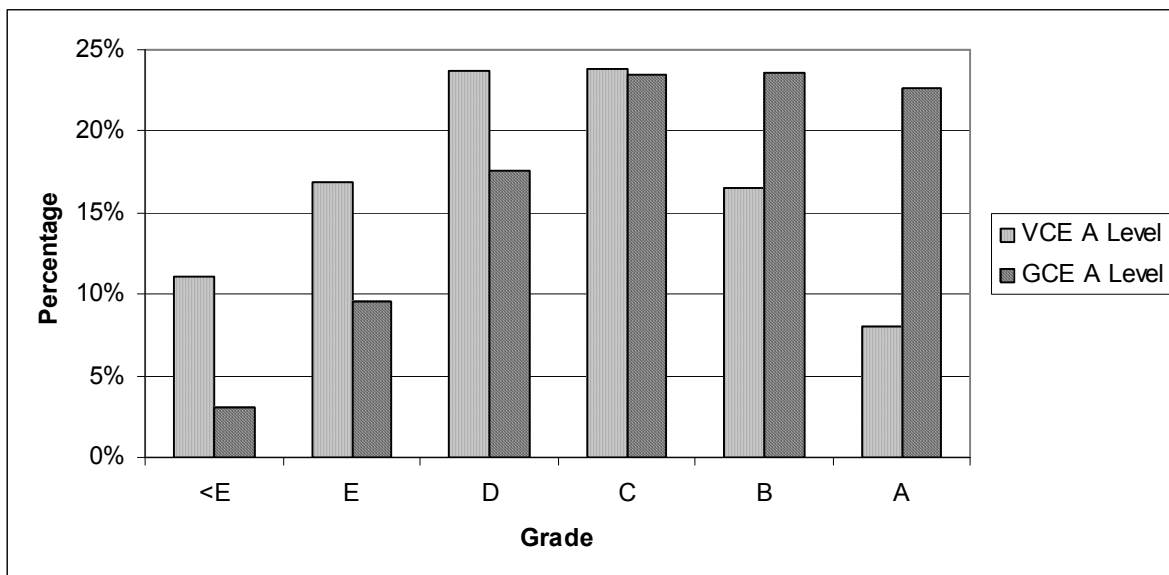
An analysis of vocational and academic Level 3 qualifications

Comparison of VCE and GCE A Levels

8. Many of the arguments surrounding vocational and academic qualifications cite the general perception that vocational qualifications are viewed by the various stakeholders as being inferior to their academic equivalents. But perhaps such perceptions – if they exist – are justified. If a student of a given level of ability stands a greater chance of receiving the top grades on a VCE A Level course than on a GCE A Level course, despite their supposedly similar difficulty, then this would have implications for how the two groups are, and should be, viewed.

9. Figure 2 shows that in fact fewer of the top grades are awarded to those taking vocational qualifications. This, of course, only tells half the story: if students of a given ability were equally likely to succeed on one course of study as on the other, one would expect there to be a greater number of As and Bs awarded to those taking GCE A Levels (as shown in Figure 2), as they are taken by the more academically able students, as shown previously in Figure 1.

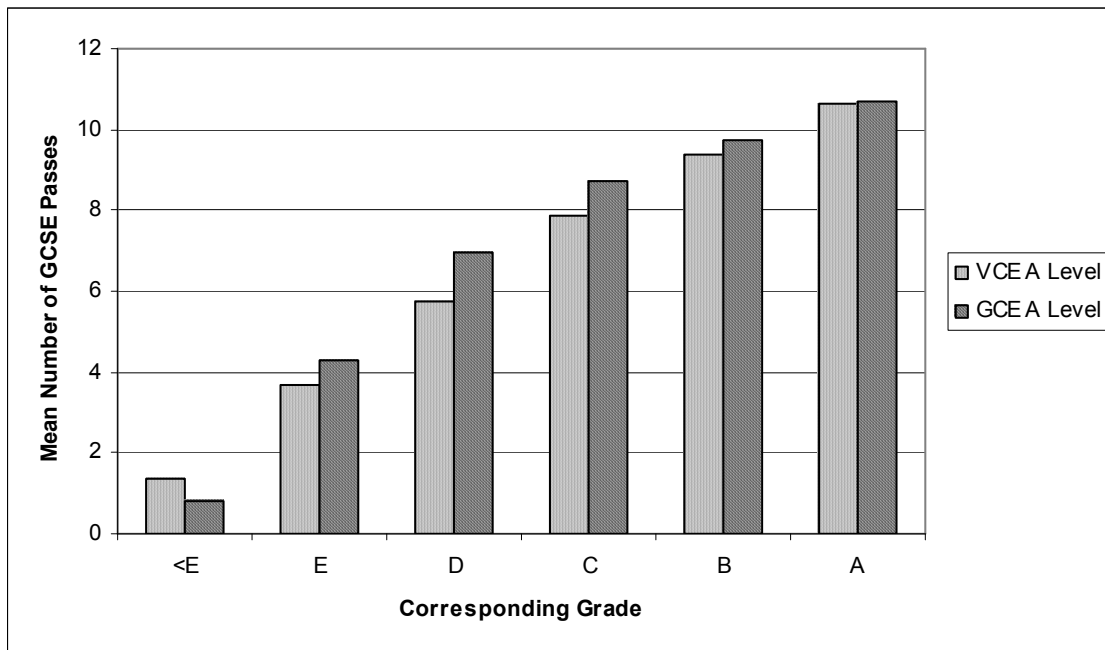
Figure 2: Distribution of results for GCE and VCE A Levels



Source: "GCE/VCE A/AS Examination Results for Young People in England, 2004/05": DfES Statistical First Release, June 2006

10. Figure 3 shows the number of GCSE passes for those receiving each grade at GCE and VCE A Level.

Figure 3: Number of GCSE passes for those with each grade in GCE and VCE A Levels⁵



11. Figure 3 appears to show that the ability of individuals obtaining each of the possible grades at A Level was very similar for the GCE and VCE qualifications – only in the case of those receiving D grades in the above graph does the mean number of GCSE passes differ by more than one between those taking GCE and VCE A Levels. The small differences could easily be explained by the reality that GCSE attainment may be a slightly better indication of suitability for GCE A Levels than for VCE A Levels. Broadly speaking, controlling for academic achievement at GCSE, it appears that for a student of given ability their choice of Level 3 course has little bearing on the success they can expect on that course. This finding, that the performance of both groups is more or less what would be expected given their GCSE performance, should be noted by those responsible for admissions to university and by employers.

Comparison of GCE A Levels and Advanced GNVQs

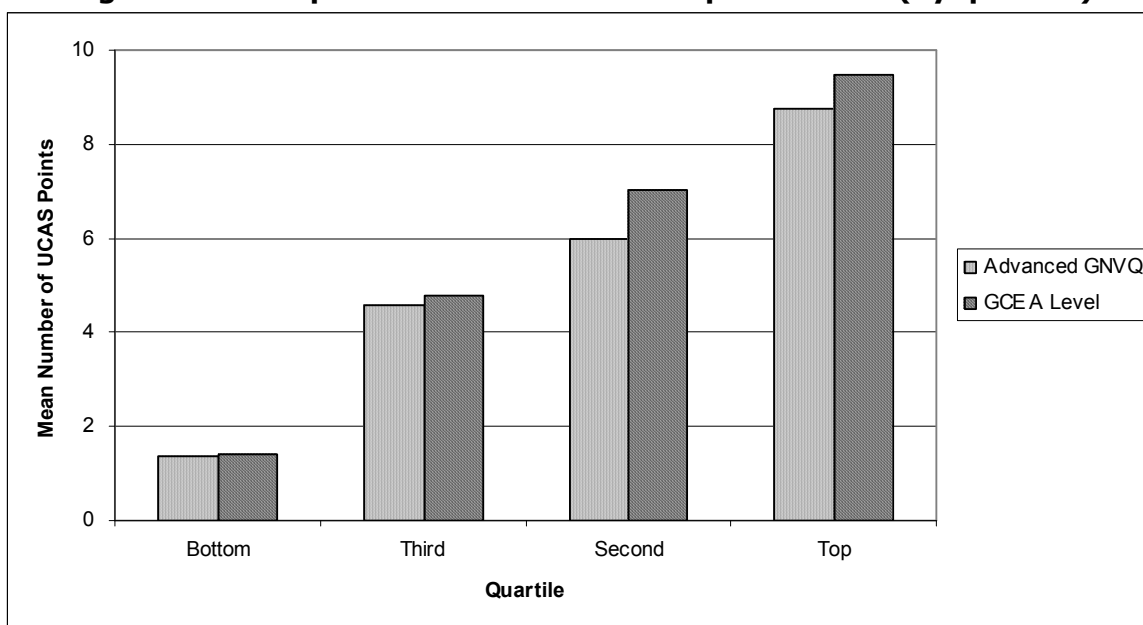
12. Having established that students of a given ability are – generally speaking – equally likely to receive a given grade in GCE and VCE A Levels, it is interesting to see if this has always been the case. If vocational qualifications have not always been as rigorous as their academic equivalents this would provide at least some explanation for any perception that vocational qualifications are a ‘lower standard’ qualification.

13. Figure 4 below compares the distribution of grades awarded for the Advanced GNVQ (the vocational equivalent to GCE A Levels immediately pre-dating the VCE A Level) in the year 2001, and the distribution of grades awarded for GCE A Levels

⁵ See full report for the method by which these numbers were derived.

in the same year, in terms of the number of UCAS points awarded. It does this by dividing the grade distributions into quartiles (the top 25 per cent, the second 25 per cent, etc), and showing the mean number of UCAS points awarded for each qualification in each quartile.

Figure 4: Mean points awarded for each qualification (by quartile)

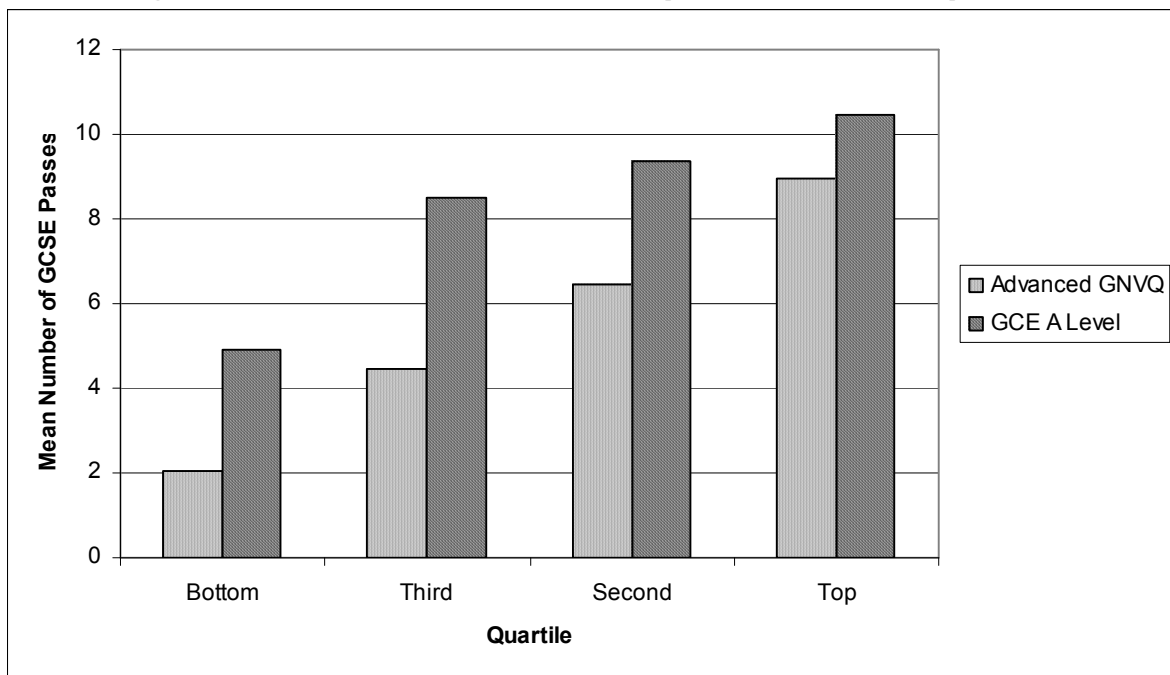


14. Unlike in the comparison of VCE and GCE A Levels shown in Figure 2, the distribution of grades awarded for GNVQs and GCE A Levels is very similar. The top quartile of results received on average 8.8 and 9.5 UCAS points for Advanced GNVQ and GCE A Level respectively; the equivalent figures for the second quartile were 6 and 7 UCAS points; 4.6 and 4.8 for the third quartile, and 1.4 UCAS points for both groups in the bottom quartile, showing marginally better results in GCE A Levels than Advanced GNVQs on average⁶.

15. As before, this information on its own means little if the abilities of students are not accounted for. Since the mean number of UCAS points awarded for the different quartiles in each qualification was almost the same, we would expect the distribution of the number of GCSE passes to also be similar. Figure 5 shows that in fact those taking Advanced GNVQs had, on average, a much lower number of GCSE passes than those taking GCE A Levels. Individuals in the top quartile of those taking Advanced GNVQs had an average of 9 GCSE passes, compared to the top quartile of GCE A Level students, who had an average of 10.5 GCSE passes. The disparity of GCSE performance increases in the lower quartiles: the equivalent figures for the second quartile are 6.5 and 9.4 passes for Advanced GNVQ students and GCE A Level students respectively, 4.5 compared to 8.5 in the third quartile, and 2 GCSE passes compared to 5 in the bottom quartile.

⁶ Advanced GNVQs are equal to 2 A Levels: see the full report for how this is accounted for in the analysis.

Figure 5: Mean number of GCSE passes for each quartile



Source: Adapted from the Youth Cohort Study, Cohort 10: finished compulsory education in 1999 HEQAC

16. This suggests that unlike in the current system of GCE and VCE A Levels (where students are awarded similar grades on average, once GCSE attainment is controlled for), under the old system, those taking Advanced GNVQs were awarded significantly higher grades in their Level 3 qualifications than those taking GCE A Levels, once GCSE attainment is controlled for.

17. Evidence that there has not always been consistency in the grades awarded in the various Level 3 qualifications may offer some explanation for any perception that vocational qualifications are a 'softer' qualification. Indeed, since it can be shown that only five years ago there was a clear disparity in the pattern of grades awarded such an attitude would be justified, if now outdated.

What is the impact of the changing distribution of grades awarded on the relative difficulty of vocational and academic qualifications?

18. A paper produced by Action on Access, which seeks to examine the problems facing students taking vocational qualifications in entering higher education, reports that continuous improvements in GCE A Level results are having a detrimental effect on those applying to higher education with non-academic qualifications. Higher education entry requirements, it is argued, tend to be set with GCE A Level grades in mind, and the required number of UCAS Tariff points is set accordingly. Since GCE A Level performance improves on a yearly basis, with a greater proportion of students achieving the top grades (thus increasing entrance requirements in terms of UCAS Tariff points) the paper states that:

"It is unlikely that the performance distribution of all qualifications will mirror the A-level trends and so raising their entry points too can result in fewer of these applicants gaining entry."

19. The paper is quite right in one respect: the performance distribution of VCE A Levels has not changed in the same way as that of GCE A Levels, but the effect is the opposite of that suggested, as shown in Tables 6a and 6b:

Table 6a: Changing distribution of VCE A Level results over time

VCE A Levels

	A	B	C	D	E	<E	Mean UCAS points per entry:	Annual Change (%)	Index
2002	3.8%	9.9%	18.8%	25.9%	25.4%	16.2%	55.20	-	100
2003	5.6%	12.8%	20.1%	23.5%	20.0%	18.0%	57.70	+4.53%	104.53
2004	6.7%	14.2%	22.3%	23.6%	18.6%	14.6%	61.68	+6.90%	111.74
2005	8.0%	16.5%	23.8%	23.7%	16.9%	11.1%	66.12	+7.20%	119.78
2006†	12.1%	21.4%	26.4%	21.5%	13.1%	5.5%	75.13	+13.63%	136.11

† Provisional

Table 6b: Changing Distribution of GCE A Level Results over time

GCE A Levels

	A	B	C	D	E	<E	Mean UCAS points per entry:	Annual Change (%)	Index
2002	20.5%	21.8%	22.8%	18.5%	11.1%	5.3%	80.18	-	100
2003	21.5%	22.7%	23.2%	18.3%	10.4%	3.9%	82.20	+2.52%	102.52
2004	22.3%	23.2%	23.4%	17.9%	9.8%	3.4%	83.34	+1.39%	103.94
2005	22.7%	23.6%	23.5%	17.6%	9.5%	3.1%	84.00	+0.79%	104.76
2006†	23.9%	23.8%	23.5%	17.0%	9.0%	2.9%	85.02	+1.21%	106.04

† Provisional

Sources: "GCE/VCE A/AS Examination Results for Young People in England, 2004/05": DfES Statistical First Release, June 2006

"GCE/VCE A/AS and Equivalent Examination Results in England, 2005/06 (Provisional)": DfES Statistical First Release, October 2006

20. Grades awarded in VCE A Levels are improving at a far faster rate than in GCE A Levels: over the years shown, the proportion of entries for VCE A Levels that are awarded an A grade has more than tripled from 3.8 per cent in 2002 to 12.1 per cent in 2006, whilst the proportion awarded grade B has more than doubled from 9.9 per cent to 21.4 per cent over the same period. On the other hand, the changing distribution of grades awarded for GCE A Levels has been far more modest: the proportion awarded A grades increased from 20.5 per cent to 23.9 per cent, whilst those awarded B grades increased from 21.8 per cent to 23.8 per cent. Tables 6a and 6b above also show that the average number of UCAS points awarded per entry increased by over 36 per cent for VCE A Levels over the four years examined, compared to just a 6 per cent increase for GCE A Levels.

21. If the Action on Access report is correct, and entrance requirements are set with GCE A Level grades in mind, the impact of changing relative grade distributions on students taking vocational Level 3 qualifications would in fact be in their favour, and not to their detriment as the paper suggests. This issue is more important than ever: under the UCAS Tariff system, an A grade in a GCE A Level is by definition equal in value to an A grade in VCE A Level when applying for courses in higher education. If this trend were to continue – and if an individual of given ability continues to experience an ever-greater probability of achieving higher grades in one qualification than the other, and therefore a greater likelihood of

gaining entry to university - then sooner or later that will require a rethink of the UCAS Tariff system.

Students' attitudes toward higher education

Students' attitudes immediately post-GCSEs

22. Examination of attitudes to higher education of those in vocational and academic courses might also help explain the differences in rates of progression. One of the reasons for disparities in HE participation between those taking vocational and academic qualifications may be that those taking vocational courses simply do not wish to attend higher education. A report by the DfES examining post-compulsory vocational qualifications examined the future intentions of those taking both vocational and academic qualifications. The study asked participants aged 17-18, with 5 or more passes at GCSE (at age 15-16) whether they intended to apply for a higher education course. The results are shown in Table 7 below:

Table 7: Attitudes of Students with more than 5 Passes at GCSE

Whether applying for a higher education course at age 17/18 by main study aim at age 16/17: students with 5 or more A*-C GCSEs in full-time education at age 16/17, YCS 10 'Higher Education' sample.

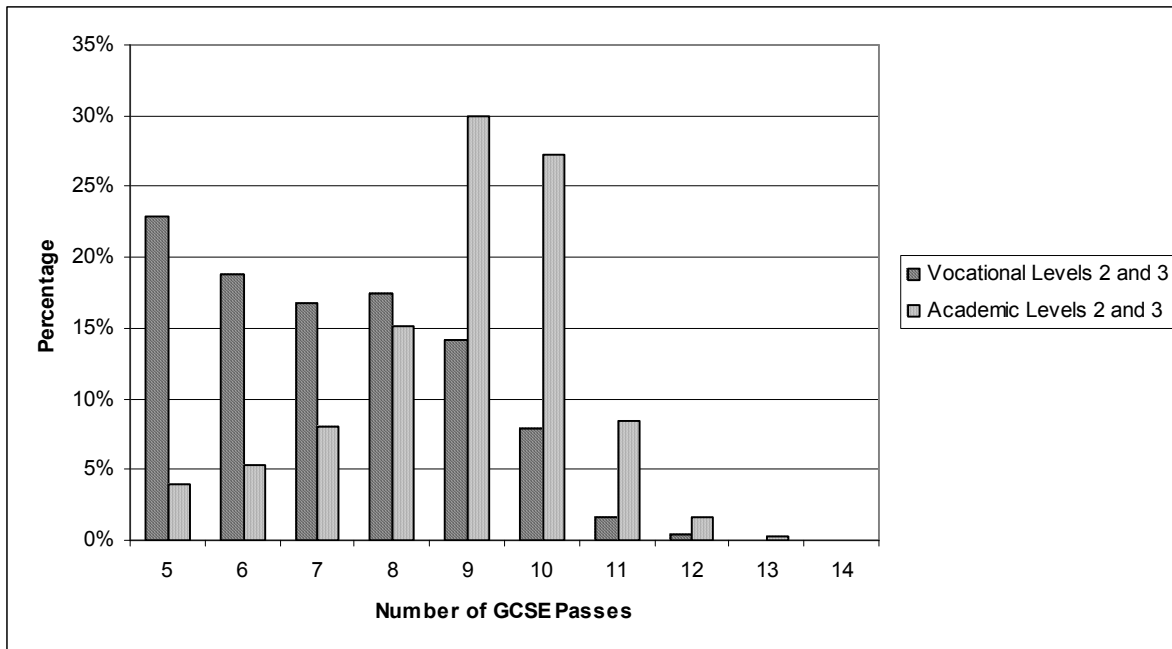
	<i>Main study aim at 16/17:</i>	
	Academic qualifications %	Level 2 or 3 vocational qualifications %
Yes, current academic year	79	50
Yes, next academic year	11	13
Yes, sometime in the future	3	7
No	7	31
Total	100	100
Base N	1,653	283

Source: "Vocational Pathways at Age 16-19", DfES Research Report, 2003, pp. 58

23. 93 per cent of those taking academic qualifications intend to apply for a higher education course at some point in the future, compared to 70 per cent of those taking Level 2 or 3 vocational qualifications. The system used in this evaluation however does not tell the whole story. The 'banding' structure employed is intended to distinguish between high- and low-ability students (those who obtained less than 5 passes at GCSE were separated into a different category, and asked a different range of questions relating to future aspirations⁷). However, Figure 8 looks at this in more detail, and shows the distribution of the number of GCSE passes for those who achieved 5 or more passes at GCSE at age 16, and who continued to do either vocational or academic courses at Levels 2 or 3.

⁷ A far lower proportion of those falling into this lower 'band' (taking *either* vocational *or* academic qualifications) displayed a desire to attend higher education.

Figure 8: Distribution of GCSE passes for students taking vocational and academic Level 2 and 3 qualifications, having achieved 5 or more passes at GCSE



Source: Youth Cohort Study, Cohort 11, Sweep 1 HEQAC

24. All had 5 or more passes at GCSE, but Figure 8 shows that those taking academic courses post-16 have, on average, more passes than those taking vocational courses. The mean number of passes for those in this group taking vocational qualifications is 7.1, compared to 8.9 for those taking the academic equivalents. Past studies have shown that those with better achievements at GCSE level are more inclined to continue into higher education. Taking this, along with the above finding, it appears as though Table 7 may overstate the effect of Level 3 qualification aim on the attitudes of students toward higher education.

25. In reality, therefore, the difference in attitudes to higher education between the students from vocational and academic backgrounds is likely to be considerably less pronounced than the figures of 93 per cent and 70 per cent found by the DfES study suggest – the apparent effect shown there may simply be a realistic reflection of differing abilities. It could even be the case that once academic ability is controlled for, there is little (if any) difference between the two groups in terms of attitudes toward higher education.

Vocational and academic qualifications and higher education entry

Are students from vocational backgrounds under-represented in higher education?

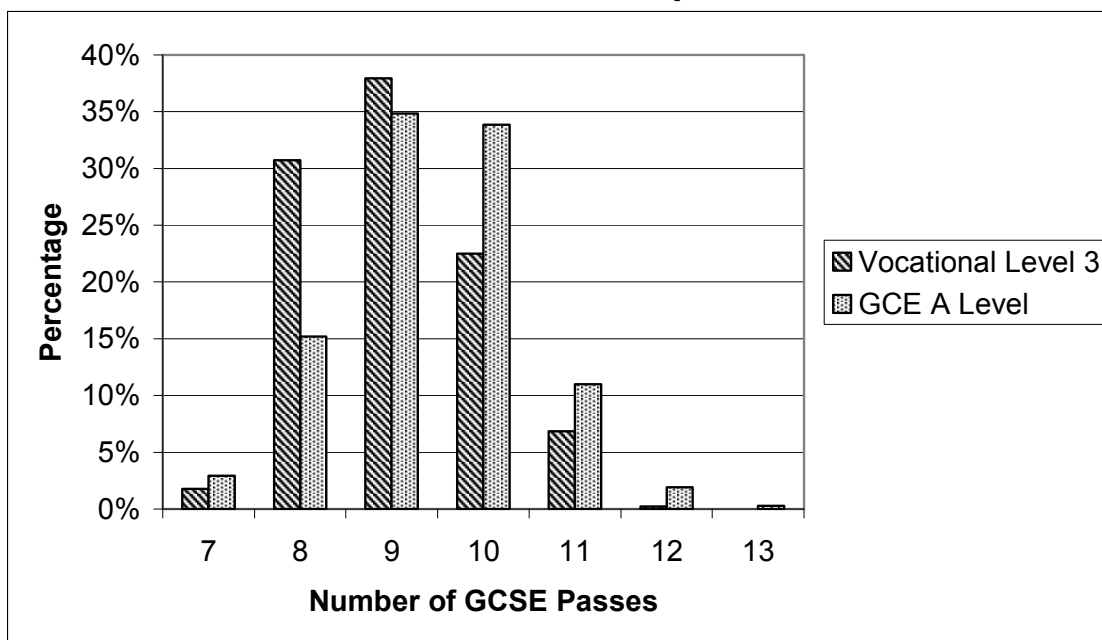
26. We can now return to the difference in rates of progression between those from vocational and academic backgrounds, which are frequently cited as evidence that those from vocational backgrounds are under-represented in higher education. As demonstrated earlier there is a disparity in the abilities of students taking each qualification in terms of GCSE achievement: those taking vocational qualifications have, on average, significantly fewer GCSE passes than those taking

the equivalent academic qualifications. This section aims to determine whether or not the differences in rates of progression can all be attributed to the difference in the ability of students, or if there is some other contributory explanation.

27. By comparing the ability – in terms of GCSE passes – of the top 84 per cent of students taking A Levels (with at least 5 passes at GCSE) to the top 51 per cent of students taking vocational Level 3 qualifications (also having achieved at least 5 passes at GCSE), it is possible to get some idea of whether or not one group is under-represented in higher education⁸.

28. If neither group was under-represented in higher education (using number of GCSE passes as a proxy for ability), it would be expected that the distribution of GCSE passes would be similar for both groups. Figure 9 shows the distribution of the top 84 per cent of students taking GCE A Levels, having obtained at least 5 passes at GCSE, and the distribution of GCSE passes for the top 51 per cent of students taking vocational Level 3 qualifications, also with 5 or more passes at GCSE:

Figure 9: Distribution of number of GCSE passes for those taking vocational and academic qualifications



Source: Youth Cohort Study, Cohort 11, Sweep 1 HEQAC

29. On average, achievement at GCSE for the groups as described above was marginally better for those taking GCE A Levels, suggesting that those taking vocational qualifications at Level 3 are if anything overrepresented in higher education with respect to their achievements at GCSE. The mean numbers of GCSE passes for those in each of the groups examined are 9.0 and 9.4 for vocational and academic qualifications respectively. Whilst some of this difference is likely to be because of the imperfect suitability of GCSE achievement as a proxy for potential achievement in vocational studies, it does still suggest that the rates

⁸ It will be remembered that 84 per cent of those taking GCE A level go on to HE, and 51 per cent of those taking VCE A levels.

of progression of students from vocational and academic backgrounds are not out of line.

30. The disparity in rates of progression between vocational and academic students has frequently been used in a variety of policymaking contexts to show the problems faced by students taking vocational qualifications. This analysis does not actually indicate a problem - at least not the one that is often cited; rather the differences can be explained to an extent by the varying achievements of each group. On the other hand there is a different problem that a focus on non-participation of vocationally qualified pupils may obscure, and that is non-participation by pupils with A levels. As mentioned in paragraph 7, in numerical terms pupils with A levels who do not proceed to higher education are far more significant than vocationally qualified pupils who do not participate. If our concern is with widening participation, then that is where our focus should be.

31. It would also be useful to examine the actual experiences of students applying to and within higher education. As far as applications are concerned, the data available are not sufficient for an in-depth analysis. UCAS data from 2001 (when Advanced GNVQs were the vocational equivalent of GCE A Levels) show that those applying to courses in higher education with Advanced GNVQs experienced, on average, a slightly lower success rate than those applying with GCE A Levels, with a similar number of UCAS points. The fact that the available data do not take into account the nature of the course or the HEI to which the individuals apply, means that it is impossible to come to any firm conclusions based on this. But this finding should not come as a surprise anyway in view of the earlier finding that for any given number of UCAS points students with Advanced GNVQs had lower GCSE attainment than those with A levels. It would be unfortunate if this state of affairs has continued with the switch to VCE A levels, now that the rigour of that qualification has apparently been addressed.

32. The other thing that this study does not shed light on is the nature of the course or the institution attended by pupils with the different Level 3 qualifications. This study looks at macro level, and not at the details of their experiences. Study of the UCAS handbook will confirm that many of the courses at many of the most prestigious higher education institutions are explicit that they will only accept UCAS points earned by GCE A level.

33. It is difficult to argue that it is unreasonable that an academic course of study that assumes a great deal of prior knowledge should require a qualification that provides an appropriate preparation: that a subject like medicine for example should require GCE A levels in specific subjects. On the other hand it is essential in this case that secondary school pupils should be adequately advised post-GCSE about the implications of the different routes open to them - and in particular that taking VCE A levels will effectively close off certain options in the future. It is also essential, if they have the aptitude, that they are given the opportunity to take GCE A level, and are not forced to take VCE A levels because of a lack of choice or appropriate guidance.