The academic experience and outcomes of students with vocational level 3 qualifications

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Introduction

1. In January 2007 HEPI produced a report "Vocational A levels and university entry: is there parity of esteem?" that considered whether students with different level 3 qualifications progressed to higher education at different rates. The report concluded that students from vocational backgrounds as a whole were not underrepresented in higher education when their prior educational achievement was taken into account. Specifically, a student with VCE A levels or GNVQs progressed to higher education at about the same rate as a student with GCE A levels who had achieved a similar level at GCSE. This new report, which was generously sponsored by the City and Guilds of London Institute, examines the issue in further detail and is concerned in particular with the different experiences both within and on leaving higher education of those who enter with academic and with vocational qualifications.

2. The previous report looked at the progression rates of GNVQ and VCE A level students into higher education. This report is concerned only with the experience of students with VCE A levels, excluding GNVQs. Therefore only those students aged 16 on or after 31 August 2000, when the change from GNVQs was implemented, are included in the analysis.

3. All students whose highest qualification on entry is recorded as being A level or equivalent are analysed in this report and are allocated into one of four groups:

   a. GCE A level only: students recorded with tariff points from GCE A/AS levels only.

   b. VCE A level only: students recorded with tariff points from VCE A/AS levels only.

   c. GCE and VCE A level combination: students recorded with tariff points from a variety of different qualifications including both GCE and VCE A/AS levels. This group is referred to as "Combined" in text.

   d. A level equivalent with unknown tariff score: students with no recorded tariff score are in this group. It cannot be determined which, if any, other group to allocate them to.

Tariff scores are calculated by total UCAS tariff points minus any points gained in Key Skills.

Table 1: Breakdown of English undergraduate young student numbers[1] by prior qualification.

Prior qualification group	Total
GCE A level	254,620
GCE and VCE A level combination	30,420
VCE A level	6,075
A level equivalent with unknown tariff score	20,150
BTEC	14,170
Other	25,650
Grand Total	351,085

Source: 2006-07 HESA Student Record

4. This report is primarily focused on the differences between students with VCE and GCE A level qualifications. It also considers students with a mixture of the two, and treats those with BTECs separately for technical reasons[2]. Students with any other prior qualifications are not analysed in the report. Annex A gives a further breakdown of the types of student in each category in Table 1 above.

5. The report is concerned to establish the differences that are attributable to the differences in level 3 study, and therefore needs to eliminate differences that are attributable to incidental facts, such as the much higher tariff scores achieved by (and for the purposes of this report overall ability of) GCE students, and the different subjects pursued by the two groups. So, in addition to the basic analyses, the report includes analysis that weights the numbers to allow for the higher school achievement and different subjects of those with GCE A levels, thus enabling the differences that are attributable purely to the nature of the level 3 qualification achieved to be isolated.

6. The study considers the differences between students in the prior qualification groups in terms of the nature of their higher education experience, examining the following factors:

- Subject of qualification aim
- Institution type
- Whether or not term time accommodation is at the parental/guardian home.

It then investigates outcome related factors:

- Drop-out rates
- Degree outcomes

[1] The population is defined as: English domiciled undergraduate students at UK higher education institutions aged 18 or 19 on 31 August 2006. The source data set is the 2006-07 HESA student record. This gives a population of 351,085 students.
[2] The vast majority of students in the BTEC group have no recorded tariff score. This makes the analyses carried out in the report largely unavailable for such students.

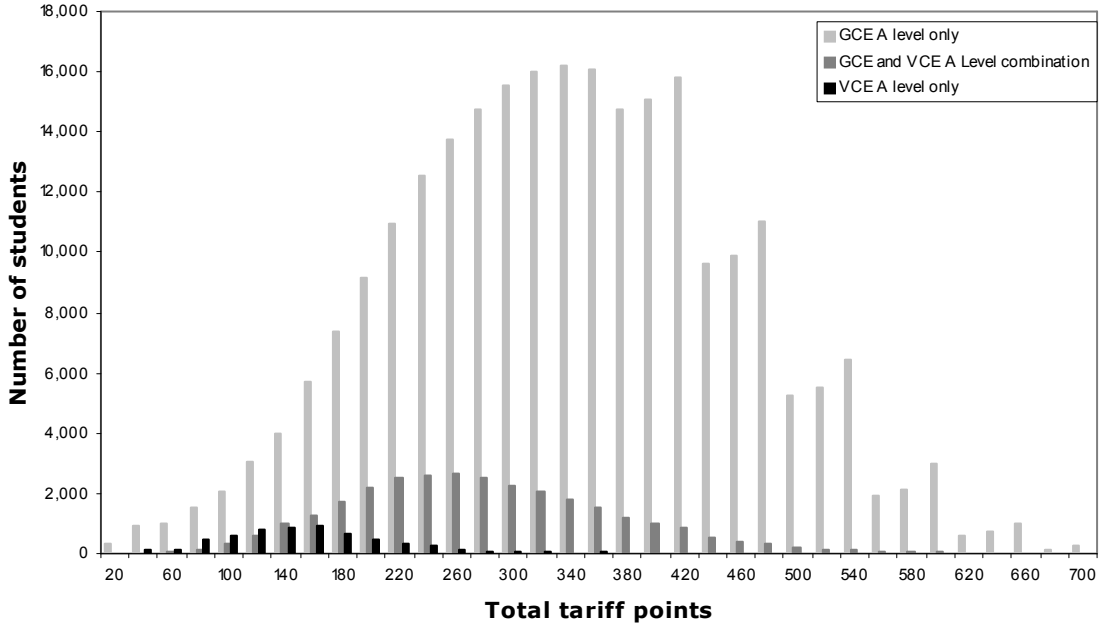
- Destination (employment and the nature of employment).

Tariff point profiles

7. As discussed in the previous HEPI report, students entering higher education with vocational A levels have a much lower tariff score on average than students entering with GCE A levels.

8. Figure 2 below outlines the difference in tariff scores obtained by students in three of the four prior qualification groups analysed. Students taking purely VCE A level qualifications have lower levels of achievement than those with purely academic qualifications, with those with a mixture in between.

Figure 2: Tariff point distributions of students with GCE A level and VCE A level qualifications



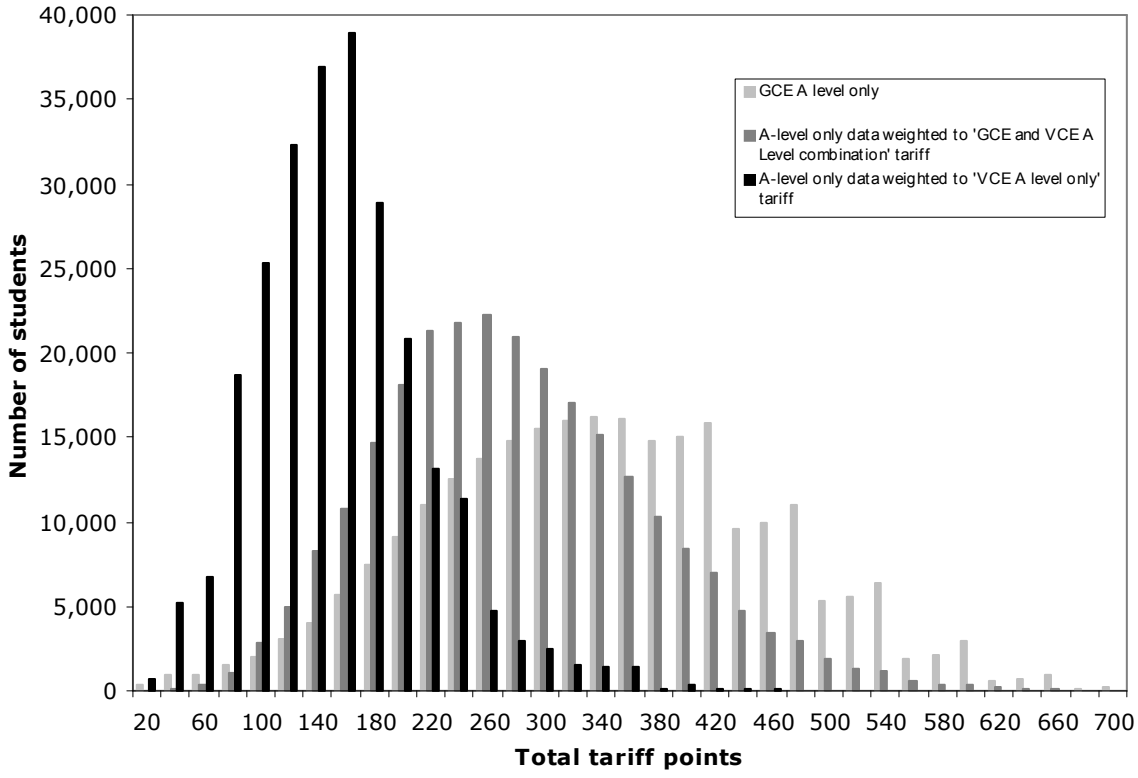
9. As discussed above, in addition to the raw analysis, and in order to discount as far as possible the effects of the higher school achievement of GCE A level students, the data of the analyses that follow have been weighted[3], both to make the GCE A level population more like the VCE A level population and separately to make them more like the Combined population.

[3] The weighting applied is calculated by the proportion of Combined or VCE A level only students with each tariff score divided by the proportion of GCE A level students with the same tariff score; this is effectively calculating the ratio between the two. All tariff scores have been rounded to the nearest 20 due to the very small numbers of VCE students with tariff denominations of 10. The nature of this weighting system means that each dataset contains the same number of students. The largest weighting being applied is 12.5, which remains robust as it is applied to a large number of students.

The subject distributions of the three[4] groups have also been weighted to make them more alike.

10. Figure 3 shows the tariff distribution of the three A level datasets described above between tariff scores of 20 and 700. This shows the extent to which both weightings (the VCE weighting in particular) skew the A level data down in terms of tariff points, making their pattern look more like that of the other two groups shown in Figure 2.

Figure 3: Tariff point distributions of GCE A level students



11. In what follows in this report three tables are produced for most variables under consideration (type of university, degree outcome, etc). In each case the first table shows the unweighted data for each of the four groups of students. The second shows a comparison of GCE A level data (weighted by VCE A level only tariff) with unweighted VCE A level only. The third table compares GCE A level data (weighted by 'GCE and VCE A level combination' tariff) with unweighted 'GCE and VCE A level combination'. Each of the weighted values takes into account not only the differing patterns of tariff scores between the three groups, but also the subject distribution of

[4] The vast majority of students in the BTEC group have no recorded tariff scores, implying that tariff scores for BTEC students are unreliable. The BTEC tariff scores therefore cannot be used to weight the GCE A level numbers and BTEC students are only included in the unweighted tables.

the weighted scores, which should remove any effect due to the differing subjects taken by GCE A level and VCE A level students.

Subject profiles

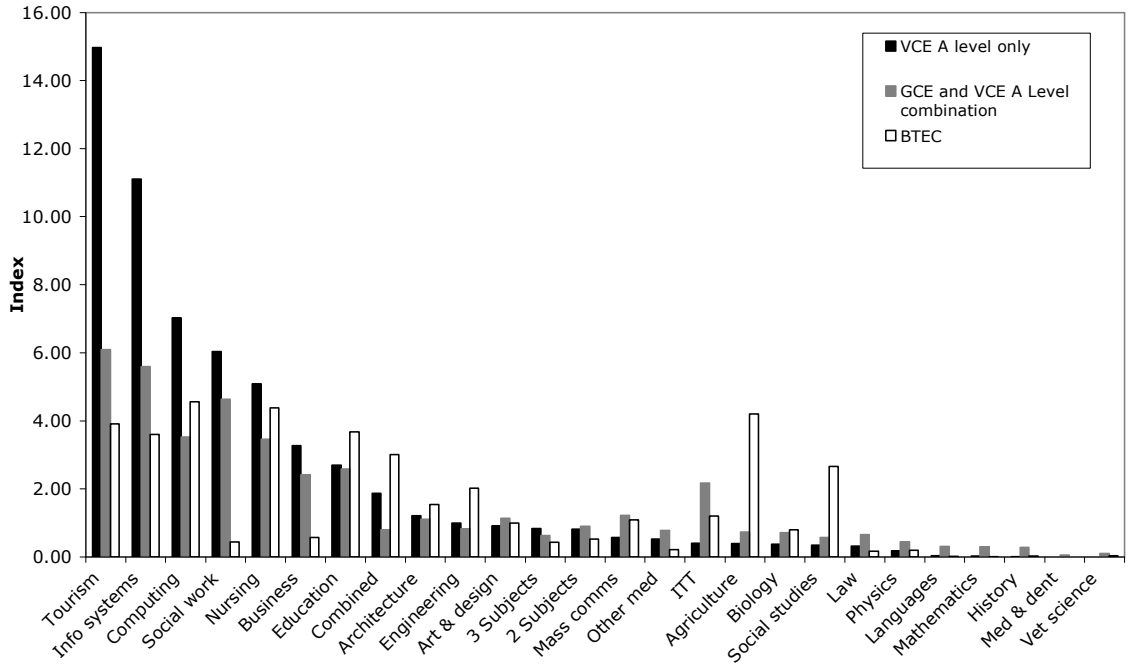
12. The HESA subject definitions have been used initially to allocate each student into 1 of 19 subject groups. In addition to this four of the subject groups have been split further - Nursing from Subjects allied to Medicine; Information Systems from Computer Science; Social Work from Social studies; Tourism, Transport and Travel from Business and Administrative studies. These subgroups have largely different proportions in terms of prior qualification groups when compared with to the rest of the subject area and so have been analysed separately. Students taking a combination of two or three subjects are put into a separate group (either '2 Subjects' or '3 Subjects').

13. Students on all Initial Teacher Training courses have been removed from their respective subject group and grouped together in a separate 'Initial teacher training' group.

14. Figure 4 displays the index values for each prior qualification group who study in each subject area as described above. The index values are a ratio of the proportions of each factor in the chosen prior qualification group and the proportions in the GCE A level group. Index values for GCE A levels will therefore always be 1. We are attempting to model the GCE A levels by VCE A levels and Combined in order to eliminate the effect of tariff points and subject. The best model, using weighted values, therefore brings the index closer to 1 (which would be a perfect model). These values can be interpreted as the likelihood of a VCE or combination student falling into a category, relative to a GCE A level student.

15. For example, the VCE index value for Computer Science (using the values in Annex B, Table 1) is calculated by $\frac{0.14142}{0.02015} = 7.02$ and shows that VCE students are seven times more likely to study Computer Science than GCE students (before weighting the data). A particularly high proportion of VCE A level students is found also in Business & Administrative Studies, and a very high proportion of BTEC students study Art and Design.

Figure 4: Index value distribution by subject area.



16. Tables 1 and 2 in Annex B show the same information in tabular form. A high proportion of the subjects show a large difference between the prior qualification groups, with more extreme index values appearing than for the factors previously investigated. It is for this reason that the subject group of the students has been used in the weighting system adopted in this report.

Mode of study

17. In the analysis of mode of study students are split into one of two groups, with students on full time and sandwich courses classed as 'full time' and all others classed as 'part time'.

18. Table 5 shows the proportion of GCE, VCE, combined and BTEC students who were studying part time in the academic year 2006-07 (full time students make up the remaining proportion not shown). A larger proportion of students from VCE A level backgrounds go on to study part time than those from entirely academic backgrounds. In fact, VCE students are nearly twice as likely to study part time as their GCE A level counterparts. The Combined group appears somewhere in between.

Table 5: Proportion of students on part time courses (unweighted data)

	GCE A level only	GCE and VCE A level combination	VCE A level only	Unknown A level	BTEC
Proportion	1%	2%	2%	19%	7%
Index[5]	1.00	1.44	1.98	15.79	6.17

19. Of course, the values in Table 5 could be telling a different story. It has already been acknowledged that the tariff and subject distributions of the three groups are significantly different so it is possible that the high proportion of VCE students on part time courses could be explained by the fact that students with lower tariff scores on entry tend to be more likely to study part time.

20. The figures in Table 6 show that that is indeed the case: once the 'GCE A level only' numbers are weighted by the VCE tariff and subject distribution, the difference between the two becomes very small, and is in fact slightly reversed. The lower tariff scores achieved by VCE A level students can almost entirely explain the differences between GCE A level and VCE A level students in terms of mode of study. Those with vocational level 3s are more likely to study part time not because they have a vocational background but because of their tariff scores: if they had achieved similar scores at level 3 they would be no more likely – indeed, slightly less likely – to study part time.

Table 6: Proportion of students on part time courses ('GCE A level only' data weighted to 'VCE A level only' tariff and subject distribution)[6]

	GCE A level only	VCE A level only
Proportion	3%	2%
Index	1.00	0.86

21. Similarly, the difference between GCE and Combined students is almost eliminated when effects due to tariff and subject are factored in.

Table 7: Proportion of students on part time courses ('GCE A level only' data weighted to 'GCE and VCE A level combination' tariff and subject distribution)

	GCE A level only	GCE and VCE A level combination
Proportion	2%	2%
Index	1.00	1.07

[5] All figures – here and elsewhere – are rounded.

[6] N.B. part time numbers are dominated by students whose entry qualifications are not recorded by HESA, or are recorded as 'unknown'. This goes some way to explaining the low absolute values for these two groups in this and subsequent tables.

Level of study

22. For the purposes of this analysis level of study is an indicator of whether or not a student is on a first degree (as the population is restricted to undergraduate students). Tables 8 and 9 display the proportions of each prior qualification group on courses other than first degrees.

23. As with mode of study, the Combined group is similar to the GCE group, with an index value close to 1.00. However, it is also clear from Table 8 that a far larger proportion of VCE A level students go on to do undergraduate courses which are not first degrees (for example HNDs or foundation degrees).

Table 8: Proportion of students not taking first degrees (unweighted data)

	GCE A level only	GCE and VCE A level combination	VCE A level only	Unknown A level	BTEC
Proportion	3%	5%	20%	35%	25%
Index	1.00	1.72	7.42	13.25	9.30

24. As with mode of study, the differences shown in the unweighted table might be explained by the tariff and subject distribution of the students. And so it turns out. Including the weightings significantly reduces the difference in index values. The proportion of VCE A level students not taking first degrees is now only 25 per cent higher than for GCE A level students, compared to over seven times higher when subject and tariff are not taken into account; and for Combined students there is also a significant reduction.

Table 9: Proportion of students not taking first degrees ('GCE A level only' data weighted to 'VCE A level only' tariff and subject distribution)

	GCE A level only	VCE A level only
Proportion	16%	20%
Index	1.00	1.25

Table 10: Proportion of students not taking first degrees ('GCE A level only' data weighted to 'GCE and VCE A level combination' tariff and subject distribution)

	GCE A level only	GCE and VCE A level combination
Proportion	4%	5%
Index	1.00	1.15

25. Again, it appears that much of the difference in behaviour between the groups arises from the different levels of ability. Those in the VCE and Combined groups who are as able as their GCE A level peers are just about as likely to study for a first degree.

Accommodation

26. The third factor investigated is whether a student's term time accommodation is at their parental/guardian home (as recorded on the HESA student record). The proportion of students living "at home" is displayed in the tables which follow.

27. Table 11 below shows that VCE A level students appear much more likely – three times as likely - to live at home whilst studying than GCE A level students.

Table 11: Proportion of students living at home (unweighted data)

	GCE A level only	GCE and VCE A level combination	VCE A level only	Unknown A level	BTEC
Proportion	17%	32%	54%	32%	40%
Index	1.00	1.85	3.07	1.82	2.27

28. Previous analysis of this variable has shown some relationship between tariff score and whether a student stays at home while attending university, with higher achieving students tending to move away for their higher education study. Table 12 shows that if we take into account the higher average tariff score of GCE A level students then the difference between them and the VCE A level students is indeed reduced, but it does not disappear completely. Even after making allowance for the differences in tariff score and subject distribution, the proportion of VCE A level students living at home is still 50 per cent higher than GCE A level students. We can therefore say with some confidence that students who took VCE qualifications at level 3 are more likely to live at home than students with GCE qualifications.

Table 12: Proportion of students living at home ('GCE A level only' data weighted to 'VCE A level only' tariff and subject distribution)

	GCE A level only	VCE A level only
Proportion	36%	54%
Index	1.00	1.51

29. Unlike in the case of the other factors described previously, Table 11 above shows a difference in the behaviour of the Combined group with regard to their accommodation: the proportion of Combined students living

at home is almost double that of GCE students. Nor is the difference removed once tariff scores and subject have been factored in. The index value in Table 13 shows the differences have reduced, but there is still an 8 per cent discrepancy. It appears that a high proportion of Combined students choose to live at home whilst studying for a higher education qualification.

Table 13: Proportion of students living at home ('GCE A level only' data weighted to 'GCE and VCE A level combination' tariff and subject distribution)

	GCE A level only	GCE and VCE A level combination
Proportion	24%	32%
Index	1.00	1.34

Institution analysis

30. For the analysis of institution type attended by students, institutions have been grouped in two different ways:

- Mission Groups - Russell, 1994, University Alliance, Million+, GuildHE and Others.
- Institutions were allocated into one of five groups dependent on the median tariff score of their A level entrants, the cut points being 480, 420, 340 and 280 points.

31. The results in Table 14 below show the largest differences yet between the prior qualification groups. The index values show that a much larger proportion of GCE A level students go on to study at Russell Group universities than do students with other backgrounds. Students with only VCEs are as much as 50 times less likely to go to Russell Group institutions than those with GCE A level qualifications.

Table 14: Proportion of students at Russell Group institutions (unweighted data)

	GCE A level only	GCE and VCE A level combination	VCE A level only	Unknown A level	BTEC
Proportion	31%	8%	0%	9%	2%
Index	1.00	0.28	0.02	0.29	0.07

32. This may not necessarily mean that VCE A level students are underrepresented in these institutions: it could perhaps be explained by the fact that Russell Group universities are able to limit their entrants to those with the highest tariff scores, or that they do not offer the subjects sought by students with VCEs. However, the weighted analysis in Tables 15 and 16

shows that although the weighting removes much of the effect, the proportion of GCE A level students in Russell Group universities is still 5 times higher than that of VCE A level students, and almost twice as high as Combined.

Table 15: Proportion of students at Russell Group institutions ('GCE A level only' data weighted to 'VCE A level only' tariff and subject distribution)

	GCE A level only	VCE A level only
Proportion	2%	<1%
Index	1.00	0.22

Table 16: Proportion of students at Russell Group institutions ('GCE A level only' data weighted to 'GCE and VCE A level combination' tariff and subject distribution)

	GCE A level only	GCE and VCE A level combination
Proportion	15%	8%
Index	1.00	0.57

33. In fact, looking more generally at old universities (defined as those in the Russell and 1994 Groups) only 2 per cent of VCE students go to any of these, which is 25 times less than GCE students (Table 17). Applying the weighting still leaves a large difference between the groups (Tables 18 and 19), with the VCE A level students 3 times less likely to go on to study at these institutions.

Table 17: Proportion of students at Russell Group and 1994 Group institutions (unweighted data)

	GCE A level only	GCE and VCE A level combination	VCE A level only	Unknown A level	BTEC
Proportion	47%	15%	2%	16%	7%
Index	1.00	0.33	0.04	0.34	0.15

Table 18: Proportion of students at Russell Group and 1994 Group institutions ('GCE A level only' data weighted to 'VCE A level only' tariff and subject distribution)

	GCE A level only	VCE A level only
Proportion	6%	2%
Index	1.00	0.36

Table 19: Proportion of students at Russell Group and 1994 Group institutions ('GCE A level only' data weighted to 'GCE and VCE A level combination' tariff and subject distribution)

	GCE A level only	GCE and VCE A level combination
Proportion	26%	15%
Index	1.00	0.59

34. It seems clear that the likelihood of going to an old university is not a function of ability or subject studied. There does seem to be a difference based on the nature of the level 3 qualification obtained. Students of similar ability studying similar subjects tend to go, depending on the nature of the level 3 qualification obtained, either to old (GCE) or new (VCE) universities. This study does not attempt to show whether that is because their application behaviour is different, or if it is because university acceptance behaviour favours one over the other.

35. However, there is some information available that sheds light on this. Table 20 below is derived information supplied by UCAS[7] that shows the institutional type (Russell Group, 1994 Group, etc) of the universities applied to by students with different tariff scores, separately for those with VCE and GCE A levels. Although students with VCE A levels show a greater tendency not to make applications to Russell Group or 1994 Group universities than GCE students with similar tariff scores, that is on nothing like the scale of the difference revealed in the above analysis: students with GCE A levels are likely to apply to around twice as many Russell Group or 1994 Group universities than students with the same number of tariff points who took VCEs – but they are three times more likely to attend one of these universities. It does appear that score for score, admissions tutors may strongly favour GCE over VCE students.

Table 20 GCE and VCE Applications by Institution Type

Tariff	Institution Types	% of applications from GCE students in tariff band	% of applications from VCE students in tariff band	Total % of applications from students in tariff band
360-479	1994 Group	15.3	7.6	13.4
	Russell Group	30.5	16.1	26.9
480 and over	1994 Group	17.9	9.6	17.6
	Russell Group	48.1	22.2	47.1

[7] UCAS Private Communication

36. The second approach adopted for grouping institutions is to use the entry tariff points. Here the median of the total tariff points gained by each student entering each institution is considered, and taking into account the number of students at each institution and previous groupings by HEFCE[8] each institution is allocated into one of five groups:

- Group 1 – Median tariff score at least 460 points (5 per cent of all students attend such universities)
- Group 2 – Median tariff score at least 420 and below 460 (14 per cent)
- Group 3 – Median tariff score at least 340 and below 420 (23 per cent)
- Group 4 – Median tariff score at least 280 and below 340 (19 per cent)
- Group 5 – Median tariff score less than 280 (39 per cent)

37. The results in Table 21 show a large difference between the prior qualifications of students within each of the five institution groups. However, there is a large difference between the tariff scores of students in the three prior qualification groups, and therefore it is to be expected that the institutions with high entry requirements will have a higher proportion of GCE A level students than any others.

Table 21: Proportion of students (unweighted data)

		GCE A level only	**GCE and VCE A level combination**	**VCE A level only**	**Unknown A level**	**BTEC**
Group 1	Proportion	8%	1%	0%	3%	0%
	Index	1.00	0.10	0.01	0.35	0.00
Group 2	Proportion	15%	3%	0%	5%	1%
	Index	1.00	0.22	0.01	0.32	0.07
Group 3	Proportion	25%	12%	1%	11%	7%
	Index	1.00	0.48	0.05	0.42	0.27
Group 4	Proportion	26%	34%	24%	33%	29%
	Index	1.00	1.32	0.92	1.27	1.12
Group 5	Proportion	26%	49%	74%	49%	63%
	Index	1.00	1.91	2.88	1.88	2.44

38. Table 22 shows a comparison of VCE A level and GCE A level students with the tariff and subject distribution weights applied. The index values in this table show that the proportions in four of the five groups have become much closer. (The index value for Group 4 – which showed the least difference between VCE A level and GCE A level when unweighted – has remained broadly the same). These results can be seen more clearly in Figure 24 below.

[8] See HEFCE report 2003/32, Annex B Table 6.

Table 22: Proportion of students ('GCE A level only' data weighted to 'VCE A level only' tariff and subject distribution)

		GCE A level only	VCE A level only
Group 1	Proportion	0%	0%
	Index	1.00	0.50
Group 2	Proportion	1%	0%
	Index	1.00	0.15
Group 3	Proportion	5%	1%
	Index	1.00	0.29
Group 4	Proportion	30%	24%
	Index	1.00	0.79
Group 5	Proportion	64%	74%
	Index	1.00	1.17

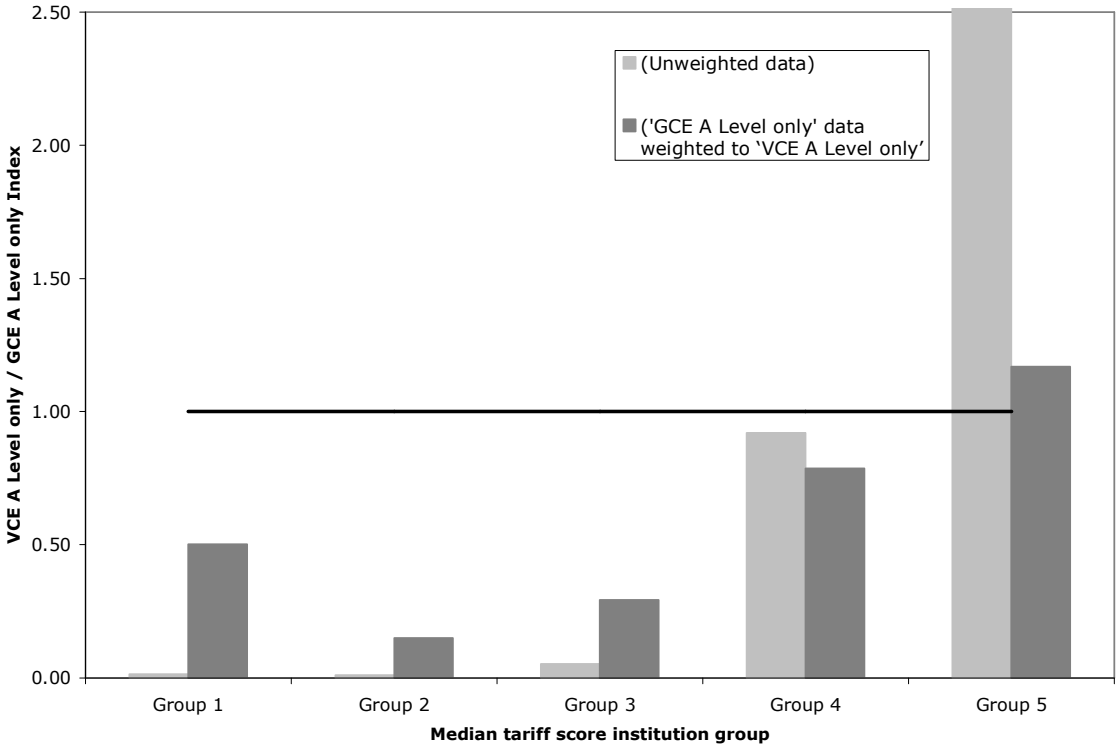
39. A similar effect can be shown to occur when weighting the results by the Combined tariff and subject distribution.

Table 23: Proportion of students ('GCE A level only' data weighted to 'GCE and VCE A level combination' tariff and subject distribution)

		GCE A level only	GCE and VCE A level combination
Group 1	Proportion	3%	1%
	Index	1.00	0.31
Group 2	Proportion	7%	3%
	Index	1.00	0.47
Group 3	Proportion	18%	12%
	Index	1.00	0.70
Group 4	Proportion	33%	34%
	Index	1.00	1.04
Group 5	Proportion	40%	49%
	Index	1.00	1.24

40. Figure 24 displays the low participation of vocationally qualified students in the most selective institutions in the UK. The horizontal line on the chart represents the ideal model; it is the difference from this line that indicates differences between academic and vocational students. The lighter bars in Figure 24 show the unweighted data indexes, while the darker bars show the results when weighted by tariff and subject. Although the weighting does reduce the differences, even when differing achievement of GCE and VCE students is taken into account, GCE A level students are still over three times as likely as VCE students with similar grades to go to an institution that requires average tariff scores of at least 340 points (grades of AAB in GCE/VCE A levels – Groups 1, 2 or 3 in this analysis). The difference is very similar to that revealed by the analysis of mission grouping.

Figure 24: Index values for VCE proportions relative to unweighted and weighted GCE proportions by institution group



41. There is no information available the enables analysis of universities by institutional entry requirements as was done for mission group, but it is a reasonable assumption that the pattern of attendance described here, again, is not explained wholly by tariff score groups. It is not possible to tell with these data whether this is because of application behaviour by students or the selection behaviour of institutions. However, given the correlation of mission grouping and entry requirements, it is a reasonable assumption that the pattern of attendance described here is not because of student application choices, but is in part due to because of universities' selection decisions.

Performance once in higher education

42. This section considers the experience once in higher education of students with different prior qualifications, beginning with an account of what has happened to them after one year of study. Specifically it compares the proportion of full time first degree students from each prior qualification group. It identifies the proportions that are still undertaking full time first degree study, the proportions that have changed mode or level, changed institution or dropped out. Table 25 illustrates the population used for analysis.

Table 25: Breakdown of full time first degree young entrants[9] by prior qualification

Prior qualification group	Total
GCE A level	143,320
GCE and VCE A level combination	15,420
VCE A level	3,965
A level equivalent with unknown tariff score	6,205
BTEC	5,340
Other	8,555
Grand Total	182,805

Source: 2004-05 HESA Student Record

Dropout

43. Table 26 below shows that, for this sample, the vast majority (91 per cent) of students with GCE A level continued to be on a full time course after one year. This compares with 79 per cent of those with VCE A levels. Of the 12 percentage points difference, the majority are categorised as "inactive (i.e. no longer studying)".

Table 26: Status of full time first degree entrants after first year (unweighted data)

		GCE A level only	GCE and VCE A level combination	VCE A level only	Unknown A level	BTEC
On full time course	Proportion	91%	88%	79%	81%	80%
	Index	1.00	0.96	0.87	0.89	0.88
On part time course	Proportion	1%	2%	4%	2%	2%
	Index	1.00	1.78	3.93	2.35	1.69
Qualified	Proportion	0%	0%	0%	1%	1%
	Index	1.00	1.64	1.75	3.74	2.13
Transferred to another institution	Proportion	3%	3%	4%	4%	4%
	Index	1.00	1.18	1.61	1.56	1.51
Inactive	Proportion	5%	7%	13%	12%	14%
	Index	1.00	1.46	2.49	2.39	2.76

44. As with the results in the previous sections, in order to interpret these results account must be taken of the effect of tariff point and subject

[9] The population is defined as: English domiciled undergraduate students at UK higher education institutions aged 18 or 19 on 31 August 2004 and beginning their higher education course in the 2004-05 academic year. The source data set is the 2004-05 HESA student record. This gives a population of 182,805 students.

differences. Tables 27 and 28 respectively display the results for the progression analysis when GCE A level results are weighted to make them more like the VCE A level and Combined groups. The results show a reduction in the index values, with even the largest effects being reduced to a factor of less than 2. This is a strong indication that much of the difference shown in Table 26 is due to the ability of the students than the nature of the level 3 qualifications they hold.

45. Table 27 suggests that VCE A level students are slightly more likely than GCE A level students to change from their full time first degree course onto either an equivalent part time or sub-degree course. These students also appear more likely to be inactive (most likely dropped out) one year after commencing their studies. Although the index values for these proportions are relatively low, it is worth noting that a VCE A level student is or 25 per cent more likely to drop out of higher education than a GCE A level student in a similar subject with an equivalent level 3 tariff score.

Table 27: Status of full time first degree students after first year ('GCE A level only' data weighted to 'VCE A level only' tariff and subject distribution)

		GCE A level only	**VCE A level only**
On full time course	Proportion	83%	79%
	Index	1.00	0.96
On part time course	Proportion	3%	4%
	Index	1.00	1.36
Qualified	Proportion	1%	0%
	Index	1.00	0.62
Transferred to another institution	Proportion	4%	4%
	Index	1.00	1.07
Inactive	Proportion	10%	13%
	Index	1.00	1.25

Table 28: Status of full time first degree students after first year ('GCE A level only' data weighted to 'GCE and VCE A level combination' tariff and subject distribution)

		GCE A level only	GCE and VCE A level combination
On full time course	Proportion	89%	88%
	Index	1.00	0.99
On part time course	Proportion	1%	2%
	Index	1.00	1.15
Qualified	Proportion	0%	0%
	Index	1.00	1.22
Transferred to another institution	Proportion	3%	3%
	Index	1.00	1.01
Inactive	Proportion	7%	7%
	Index	1.00	1.12

Completion

46. The degree outcomes of students have also been compared by taking students who started in the 2003-04 academic year on full time first degree courses lasting three years and investigating whether or not they had completed their degree by 2006-07, and if so the degree classification achieved. Table 29 illustrates the population used for analysis.

Table 29: Breakdown of full time first degree young student numbers[10] by prior qualification

Prior qualification group	Total
GCE A level	85,470
GCE and VCE A level combination	8,370
VCE A level	2,610
A level equivalent with unknown tariff score	7,535
BTEC	3,935
Other	8,975
Grand Total	116,895

Source: 2003-04 HESA Student Record

47. Table 30 below shows the proportion of students who did not complete their studies within the period. The results are similar to those seen for other variables. GCE A level and VCE A level students differ

[10] The population is defined as: English domiciled full time first degree students at UK higher education institutions aged 18 or 19 on 31 August 2003 and on courses lasting 3 years. The source data set is the 2003-04 HESA student record. This gives a population of 116,895 students.

significantly: twice as many VCE A level as GCE A level students fail to complete.

Table 30: Proportion of full time first degree students not completing after four years (unweighted data)

	GCE A level only	GCE and VCE A level combination	VCE A level only	Unknown A level	BTEC
Proportion	19%	26%	38%	30%	34%
Index	1.00	1.40	2.03	1.58	1.80

48. Tables 31 and 32 below display the results of applying the same weightings as before. When the differences in tariff scores and subject between VCE and GCE A level students are discounted, the difference in non-completion reduces, but is still significant. VCE A level students are only 3 percentage points – or 8 per cent – more likely not to complete their course within four years. A similar thing can be said of the Combined students.

Table 31: Proportion of full time first degree students not completing after four years ('GCE A level only' data weighted to 'VCE A level only' tariff and subject distribution)

	GCE A level only	VCE A level only
Proportion	35%	38%
Index	1.00	1.08

Table 32: Proportion of full time first degree students not completing after four years ('GCE A level only' data weighted to 'GCE and VCE A level combination' tariff and subject distribution)

	GCE A level only	GCE and VCE A level combination
Proportion	24%	26%
Index	1.00	1.11

Degree classification

49. The final part of this section looks at the degree classifications of those students who complete their studies[11].

50. Table 33 shows large differences between the groups, but of course it is to be expected that GCE A level entrants, with their much higher tariff scores, achieve better degrees.

[11] This uses a subset of the population outlined above: we are now only interested in those students who qualified within four years, which reduces the population to around 90,000 students.

Table 33: Proportion of graduates from full time first degree courses by degree classification (unweighted data)

		GCE A level only	GCE and VCE A level combination	VCE A level only	Unknown A level	BTEC
First class honours	Proportion	10%	6%	3%	10%	6%
	Index	1.00	0.56	0.31	0.92	0.60
Upper second class honours	Proportion	54%	42%	29%	50%	40%
	Index	1.00	0.78	0.53	0.93	0.73
Lower second class honours	Proportion	34%	49%	62%	38%	50%
	Index	1.00	1.47	1.86	1.12	1.50
Third class honours / Pass	Proportion	1%	1%	3%	1%	2%
	Index	1.00	1.76	4.10	1.59	2.60
Unclassified	Proportion	1%	1%	2%	1%	1%
	Index	1.00	1.69	3.17	1.64	1.87

51. Predictably, weighting by tariff scores reduces all of the index values, bringing the GCE A level and VCE A level proportions much closer together. However, this does not remove the effect entirely. Tables 34 and 35 show that a student with VCE A levels is less likely to achieve a high degree classification than a GCE A level student with the same tariff score, and indeed the differences in first class and unclassified degrees are quite marked.

Table 34: Proportion of graduates from full time first degree courses by degree classification ('GCE A level only' data weighted to 'VCE A level only' tariff and subject distribution)

		GCE A level only	VCE A level only
First class honours	Proportion	4%	3%
	Index	1.00	0.81
Upper second class honours	Proportion	34%	29%
	Index	1.00	0.86
Lower second class honours	Proportion	58%	62%
	Index	1.00	1.08
Third class honours / Pass	Proportion	3%	3%
	Index	1.00	1.16
Unclassified	Proportion	2%	2%
	Index	1.00	1.26

Table 35: Proportion of graduates from full time first degree courses by degree classification ('GCE A level only' data weighted to 'GCE and VCE A level combination' tariff and subject distribution)

		GCE A level only	GCE and VCE A level combination
First class honours	Proportion	7%	6%
	Index	1.00	0.82
Upper second class honours	Proportion	48%	42%
	Index	1.00	0.89
Lower second class honours	Proportion	43%	49%
	Index	1.00	1.15
Third class honours / Pass	Proportion	1%	1%
	Index	1.00	1.14
Unclassified	Proportion	1%	1%
	Index	1.00	1.16

Career prospects

52. The Destination of Leavers from Higher Education (DLHE) survey, which is sent to students six months after completion of their studies, has been used to establish what becomes of students with different entry qualifications once they leave university. The DLHE asks students what they were doing on a particular census date, and therefore provides a snapshot of a student's activities post graduation.

53. The DLHE used in this study was issued in 2007 and therefore relates to students who completed their studies in the 2005-06 academic year. The population includes only students aged 20 or 21 on 31 August 2005 to ensure that they completed their level 3 education after 2000. Table 36 below shows the breakdown of the population analysed in this section of the report.

Table 36: Breakdown of young student numbers[12] by prior qualification

Prior qualification group	Total
GCE A level	69,360
GCE and VCE A level combination	6,335
VCE A level	1,380
A level equivalent with unknown tariff score	3,895
BTEC	2,160
Other	5,010
Grand Total	88,135

Source: 2005-06 HESA Student Record

54. This analysis was particularly concerned with the overall employment status of students on the census date, which indicates whether students were employed, self-employed, looking for work, travelling, unemployed or not looking for work. For those students who were employed, the survey also establishes whether or not this was in a "graduate" job. For consistency only full time first degree graduates are considered in this analysis.

55. Table 37 displays the employment status of students on the census date. The status with the largest proportion of students (Employed full time) shows very little variation between level 3 qualification groups, indicating that there is no effect. Former VCE students appear to be more likely to work part time or be looking for employment while the former GCE students are more likely to be travelling or possibly studying for further qualifications (categorised under 'Something else').

[12] The population is defined as: English domiciled full time first degree students at UK higher education institutions aged 20 or 21 on 31 August 2005. The source data set is the 2005-06 HESA student record. This gives a population of 88,135 students.

Table 37: Proportion of students by employment status six months after completion (unweighted data)

		GCE A level only	GCE and VCE A level combination	VCE A level only	Unknown A level	BTEC
Employed full time in paid work	Proportion	57%	63%	57%	59%	59%
	Index	1.00	1.11	1.01	1.04	1.05
Employed part time in paid work	Proportion	10%	13%	17%	12%	15%
	Index	1.00	1.28	1.72	1.19	1.44
Self-employed or freelance	Proportion	2%	2%	2%	3%	5%
	Index	1.00	0.96	1.31	1.94	2.80
Taking time out in order to travel	Proportion	5%	4%	3%	4%	4%
	Index	1.00	0.73	0.53	0.79	0.76
Looking for work or due to start a job in the next month	Proportion	7%	8%	11%	7%	7%
	Index	1.00	1.20	1.61	1.05	1.06
Unemployed and not looking for employment	Proportion	4%	2%	3%	3%	3%
	Index	1.00	0.64	0.85	0.72	0.87
Something else	Proportion	16%	9%	7%	12%	7%
	Index	1.00	0.53	0.41	0.76	0.45

56. Table 38 displays the weighted GCE A level proportions and this reduces most of the differences in the index values as would be expected. However, the proportion of GCE A level students in full time employment has increased, taking it slightly further away from the VCE A level proportion. This implies that if GCE A level students were to achieve lower tariff scores at level 3 then they might be more likely to go into full time employment after graduation. It appears that this option would be favoured over postgraduate education, which is understandably relatively popular with students with GCE A levels.

57. Table 39 shows the same analysis, but weighted to the GCE and VCE combined group.

Table 38: Proportion of students by employment status 6 months after completion ('GCE A level only' data weighted to 'VCE A level only' tariff and subject distribution)

		GCE A level only	VCE A level only
Employed full time in paid work	Proportion	61%	57%
	Index	1.00	0.94
Employed part time in paid work	Proportion	13%	17%
	Index	1.00	1.32
Self-employed/freelance	Proportion	2%	2%
	Index	1.00	1.05
Taking time out in order to travel	Proportion	4%	3%
	Index	1.00	0.75
Looking for employment or due to start a job in the next month	Proportion	9%	11%
	Index	1.00	1.11
Unemployed and not looking for employment	Proportion	3%	3%
	Index	1.00	1.22
Something else	Proportion	8%	7%
	Index	1.00	0.81

Table 39: Proportion of students by employment status 6 months after completion ('GCE A level only' data weighted to 'GCE and VCE A level combination' tariff and subject distribution)

		GCE A level only	GCE and VCE A level combination
Employed full time in paid work	Proportion	62%	63%
	Index	1.00	1.02
Employed part time in paid work	Proportion	11%	13%
	Index	1.00	1.19
Self-employed/freelance	Proportion	2%	2%
	Index	1.00	0.82
Taking time out in order to travel	Proportion	5%	4%
	Index	1.00	0.82
Looking for employment or due to start a job in the next month	Proportion	7%	8%
	Index	1.00	1.12
Unemployed and not looking for employment	Proportion	3%	2%
	Index	1.00	0.81
Something else	Proportion	11%	9%
	Index	1.00	0.78

58. Table 40 displays the results of DLHE question 2: "Will you be involved in either full time or part time study, training or research?" The proportions of students in part time study on the census date do not show much variation between the prior qualification groups, although the proportion of VCE students is slightly lower than that of the GCE students. However, there are larger differences in the proportions relating to full time study. As might be expected, students with academic level 3 qualifications are more likely to study at a postgraduate level than students with vocational level 3 qualifications. GCE students are 2.5 times more likely to continue studying full time after graduation.

Table 40: Proportion of students by study status 6 months after completion (unweighted data)

		GCE A level only	**GCE and VCE A level combination**	**VCE A level only**	**Unknown A level**	**BTEC**
Full time study	Proportion	20%	11%	8%	15%	8%
	Index	1.00	0.55	0.39	0.78	0.42
Part time study	Proportion	7%	7%	5%	6%	7%
	Index	1.00	0.98	0.73	0.91	1.07
Not in study, training or research	Proportion	73%	82%	87%	78%	84%
	Index	1.00	1.12	1.19	1.07	1.15

59. Table 41 shows that when the GCE A level results are weighted, the three index values are reduced. The significant reduction in the proportion of GCE students in full time study means that the results in Table 40 can be largely explained by the subject distribution and academic ability of these students whilst in higher education. Table 42 paints a similar picture for the weighting by the GCE and VCE combination.

Table 41: Proportion of students by study status 6 months after completion ('GCE A level only' data weighted to 'VCE A level only' tariff and subject distribution)

		GCE A level only	**VCE A level only**
Full time study	Proportion	10%	8%
	Index	1.00	0.78
Part time study	Proportion	6%	5%
	Index	1.00	0.79
Not in study, training or research	Proportion	84%	87%
	Index	1.00	1.04

Table 42: Proportion of students by study status 6 months after completion ('GCE A level only' data weighted to 'GCE and VCE A level combination' tariff and subject distribution)

		GCE A level only	**GCE and VCE A level combination**
Full time study	Proportion	13%	11%
	Index	1.00	0.82
Part time study	Proportion	7%	7%
	Index	1.00	1.02
Not in study, training or research	Proportion	80%	82%
	Index	1.00	1.03

60. Finally, the type of job is investigated, with jobs categorised as either "Graduate" or "Non-graduate"[13]. The following tables show the proportion of the students recorded as being in employment on the census date (i.e. those in the first three categories in Tables 37-39) who were employed in graduate jobs.

61. Table 43 shows that a higher proportion of those students who gained GCE A levels at level 3 were employed in a graduate job after completing higher education, compared to students with other level 3 qualifications. In fact, 11 per cent fewer of the VCE A level students who were employed were in a graduate job, and these were 20 per cent less likely to be employed in a graduate job than GCE equivalents.

[13] This categorisation has been done using answers to Section B of the DLHE survey and is consistent with that used by HEFCE.

Table 43: Proportion of employed students in a graduate job six months after graduation (unweighted data)

	GCE A level only	GCE and VCE A level combination	VCE A level only	Unknown A level	BTEC
Proportion	58%	55%	47%	56%	51%
Index	1.00	0.95	0.80	0.96	0.87

62. Table 44 factors in tariff and subject, and contains the weighted GCE A level proportions. Subject of study is particularly important here because some subject areas will be more likely than others to lead into a graduate job. This effect is allowed for in the weights applied, and a student with VCE A levels is still 15 per cent less likely to go into a graduate job after completing higher education when compared with an equivalent student with GCE A levels.

Table 44: Proportion of employed students in a graduate job six months after graduation ('GCE A level only' data weighted to 'VCE A level only' tariff and subject distribution)

	GCE A level only	VCE A level only
Proportion	55%	47%
Index	1.00	0.85

63. Similarly, Table 45 shows that the weighting brings the combined group significantly closer to the GCE only group.

Table 45: Proportion of employed students in a graduate job six months after graduation ('GCE A level only' data weighted to 'GCE and VCE A level combination' tariff and subject distribution)

	GCE A level only	GCE and VCE A level combination
Proportion	59%	55%
Index	1.00	0.94

64. Causality, of course, is extremely difficult to establish here. This report has already established that students with VCE A levels are likely to attend universities with less demanding entry requirements than students who gained the same tariff points through GCE A levels. It has also established that they are less likely to obtain good degrees than their GCE counterparts. These factors are likely to impact the nature of the jobs that they obtain, and so the difference that has been observed in the likelihood of

obtaining graduate jobs is unlikely to be attributable directly to the nature of the level 3 qualifications obtained.

Conclusion

65. The January 2007 HEPI report "Vocational A levels and university entry: is there parity of esteem?" left a number of questions unanswered about the potential differing experiences of GCE A level and VCE A level students in entering and whilst in higher education. This analysis has investigated these differences and also explored what happens to students upon completion of their studies.

66. On the face of it there are large differences in the experience of students with vocational level 3s, into, within and out of higher education. However, when allowance is made for the fact that GCE A level students tend to have much higher grades and may study different subjects, all the differences reduce – but in general they do not disappear completely, and remain significant.

67. The smallest differences – though still significant – relate to the mode of study (more part time), level (more sub-degree) and location (more living at home).

68. An unexpectedly small proportion of students with vocational level 3s attend selective universities. A student with vocational level 3 qualifications is five times less likely to attend a Russell Group university than a GCE A-level student with the same number of tariff points studying the same subject, and three times less likely to attend any pre-1992 university. Similar patterns apply when universities are grouped by the extent of their selectiveness rather than their mission groups. The disparity in admissions is much greater than the disparity in applications. The difference is not in the applications pattern of students but in the selection practices of universities.

69. This does not necessarily mean bias on the part of selective universities – though it might. Other possibilities are:

- Tariff scores for vocational qualifications are not perceived by universities as equivalent. If this were so then that would be a serious matter for UCAS and would suggest that they may have mis-calibrated their tariffs.
- Despite subject normalisation, subject differences may remain – in particular under the same name different universities may offer academically orientated and vocationally orientated degrees, which may not be equally suitable for students with GCE and VCE A-levels.
- Related to the above, some of the degree programmes at selective universities may not be suitable for students who do not have the academic grounding that academic A levels provide. This is an

academic, not a social, judgement, and would not be indicative of bias if it were so. It suggests that good careers and academic advice is essential for students post-GCSE as they are deciding what to do at level 3. Wrong choices at this stage may rule out certain options later.

70. Once in a university, students with VCEs have significantly poorer outcomes (in terms of non-completion as well as degree class) than their peers with GCEs who have similar tariff points and study similar subjects. This is sobering. Again, the reasons are not clear-cut. It may be because tariff points for GCE and VCEs are not equivalent; or it could be because VCEs are not a good preparation for higher education study; or it could be because universities are not providing suitable programmes to make the most of the capabilities of students with a vocational bent.

71. This disparity between the achievements of students with apparently similar abilities may have implications for the new 17+ diplomas. To the extent that many of those diplomas may be vocationally based, it would be a serious matter if the Government were introducing new level 3 qualifications that did not prepare students for university as effectively as the ones they are intended eventually to replace. Although that has not been the subject of this report, it is a subject that needs to be studied.

72. The fact that students with the VCEs are as likely to get jobs as GCE students with the same grades, but less likely to get "graduate" jobs, is in fact no surprise given earlier findings about the nature of the universities attended and the degree outcomes of students with vocational level 3 qualifications. It is because they do less well at university – and are less successful at securing places at prestigious universities – that they are less successful in the job market, not because they did vocational level 3s, though it does seem that that in turn may have influenced what universities they attended and how well they did there.

Annex A: Breakdown of student numbers by highest qualification on entry

Prior qualification group	Highest qualification on entry	Total
GCE A level	'A' level equivalent qualification not elsewhere specified	7,100
	Any combinations of GCE 'A'/SCE 'Higher' and GNVQ/GSVQ or NVQ/SVQ at level 3	247,520
GCE A level total		**254,620**
GCE and VCE A level combination	'A' level equivalent qualification not elsewhere specified	2,060
	Any combinations of GCE 'A'/SCE 'Higher' and GNVQ/GSVQ or NVQ/SVQ at level 3	28,360
GCE and VCE A level combination total		**30,420**
VCE A level	'A' level equivalent qualification not elsewhere specified	805
	Any combinations of GCE 'A'/SCE 'Higher' and GNVQ/GSVQ or NVQ/SVQ at level 3	5,270
VCE A level total		**6,075**
A level equivalent with unknown tariff score	'A' level equivalent qualification not elsewhere specified	3,820
	Any combinations of GCE 'A'/SCE 'Higher' and GNVQ/GSVQ or NVQ/SVQ at level 3	16,335
A level equivalent with unknown tariff score total		**20,150**
BTEC	ONC or OND (including BTEC and SQA equivalents)	14,170
BTEC total		**14,170**
Level 2	GCSE/'O' level qualifications only; SCE 'O' grades and Standard grades	3,980
	Other non-advanced qualification	2,320
Level 2 total		**6,300**
Other	Higher degree of UK institution	85
	Postgraduate diploma or certificate, excluding PGCE	40
	PGCE with QTS/GTC Registration	5
	PGCE without QTS/GTC Registration	5
	Postgraduate equivalent qualification not elsewhere specified	5
	Undergraduate qualifications with QTS	20
	first degree of UK institution	275
	Graduate of EU institution	20
	Graduate of other overseas institution	35
	GNVQ/GSVQ level 5	50
	NVQ/SVQ level 5	45
	Graduate equivalent qualification not elsewhere specified	10
	O.U. credit(s)	35
	Other credits from UK HE institution	985
	Certificate or diploma of education (i.e. non-graduate initial teacher training qualification)	825
	HNC or HND (including BTEC and SQA equivalents)	3,245
	Dip HE.	430
	GNVQ/GSVQ level 4	60
	NVQ/SVQ level 4	55
	Professional qualifications.	165
	Foundation course at HE level	950
	Other HE qualification of less than degree standard	330
	Foundation Degree	345
	Foundation course at FE level	2,025
	Access course (QAA recognised)	360
	Access course (not QAA recognised)	70
	Baccalaureate	2,040
	Accreditation of Prior (Experiential) Learning (APEL/APL)	20
	Mature student admitted on basis of previous experience (without formal APEL/APL) and/or institution's own entrance examinations	170
	Advanced Modern Apprenticeships	45
	Other non-UK qualification, level not known	545
	Student has no formal qualification	375
	Not known	5,680
Other total		**19,345**
Grand Total		**351,085**

Source: 2006-07 HESA Student Record

Annex B: Student profiles

Table 1: Proportion of students by subject (unweighted data)

	GCE A level only	GCE and VCE A level combination	VCE A level only	Unknown A level	BTEC
Agriculture & related subjects	1%	0%	0%	1%	3%
Architecture, building & planning	2%	2%	2%	4%	3%
Biological sciences	10%	7%	4%	5%	10%
Business & administrative studies (excluding Tourism)	7%	17%	23%	8%	6%
Combined	0%	0%	1%	4%	0%
Computer science (excluding Information systems)	2%	7%	14%	3%	6%
Creative arts & design	7%	7%	6%	17%	30%
Education	1%	2%	2%	4%	3%
Engineering & technology	5%	4%	5%	4%	9%
Historical and philosophical studies	5%	1%	0%	2%	0%
Information systems	0%	2%	4%	1%	1%
Initial teacher training	2%	5%	1%	2%	3%
Languages	5%	2%	0%	3%	0%
Law	5%	3%	2%	2%	1%
Mass communications & documentation	3%	3%	1%	2%	3%
Mathematical sciences	2%	1%	0%	0%	0%
Medicine & dentistry	3%	0%	0%	1%	0%
Nursing	1%	3%	5%	16%	4%
Physical sciences	5%	2%	1%	2%	1%
Social studies (excluding Social work)	6%	4%	2%	3%	1%
Social work	0%	2%	2%	1%	1%
Subjects allied to medicine (excluding Nursing)	4%	3%	2%	3%	2%
Tourism, transport & travel	0%	2%	4%	1%	1%
Veterinary science	0%	0%	0%	0%	0%
2 Subjects	21%	18%	17%	10%	11%
3 Subjects	2%	1%	1%	1%	1%
All Subjects	100%	100%	100%	100%	100%

Table 1: Index values by subject (unweighted data)

	GCE A level only	GCE and VCE A level combination	VCE A level only	Unknown A level	BTEC
Agriculture & related subjects	1.00	0.73	0.38	2.01	4.20
Architecture, building & planning	1.00	1.11	1.21	1.80	1.54
Biological sciences	1.00	0.71	0.37	0.52	1.00
Business & administrative studies (excluding Tourism)	1.00	2.41	3.26	1.10	0.80
Combined	1.00	0.79	1.87	9.49	0.57
Computer science (excluding Information systems)	1.00	3.53	7.02	1.47	3.00
Creative arts & design	1.00	1.13	0.90	2.61	4.56
Education	1.00	2.59	2.69	5.41	3.67
Engineering & technology	1.00	0.82	0.99	0.89	2.02
Historical and philosophical studies	1.00	0.28	0.01	0.48	0.03
Information systems	1.00	5.59	11.10	2.66	3.60
Initial teacher training	1.00	2.17	0.39	0.85	1.20
Languages	1.00	0.31	0.03	0.61	0.02
Law	1.00	0.66	0.32	0.43	0.17
Mass communications & documentation	1.00	1.22	0.57	0.78	1.09
Mathematical sciences	1.00	0.29	0.02	0.18	0.01
Medicine & dentistry	1.00	0.05	0.00	0.24	0.00
Nursing	1.00	3.46	5.08	16.37	4.38
Physical sciences	1.00	0.44	0.18	0.31	0.21
Social studies (excluding Social work)	1.00	0.57	0.34	0.48	0.19
Social work	1.00	4.63	6.04	2.95	2.66
Subjects allied to medicine (excluding Nursing)	1.00	0.78	0.53	0.65	0.43
Tourism, transport & travel	1.00	6.09	14.97	2.11	3.91
Veterinary science	1.00	0.10	0.00	0.10	0.04
2 Subjects	1.00	0.89	0.81	0.51	0.53
3 Subjects	1.00	0.63	0.83	0.38	0.43