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Unmet Demand? Characteristics and Activities of University Applicants Not Offered a Place

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EXECUTIVE SUMMARY

This report focuses on Year 12 students who apply to go to university but are not offered a place. This group is commonly referred to as indicating a level of 'unmet demand' for university. The size and nature of the group are potentially important considerations in planning higher education.

The report compares the 'Applied, no offer' group with other groups of young people. The Longitudinal Surveys of Australian Youth (LSAY) program provides a rich source of data on young people – their social and educational backgrounds, intentions, Year 12 performance, enrolments in post-school education and training, and labour market activities. The report analyses the LSAY cohort that was first sampled in Year 9 in 1998. Most were in Year 12 in 2001, and their post-school activities were analysed for 2002 and 2003.

The report analyses the characteristics and activities of six groups of young people who comprise the LSAY cohort. The groups and their relative sizes are:

Group 1: In Year 12 in 2001 and applied to enter university, but not offered a place (5 per cent of the LSAY cohort)

Group 2: In Year 12 in 2001, received an offer of a university place, but did not enrol in university in either 2002 or 2003 (5 per cent)

Group 3: In Year 12 in 2001, received an offer of a university place, and enrolled in 2003 after a 'gap' year in 2002 (3 per cent)

Group 4: In Year 12 in 2001, and entered university in 2002 (38 per cent)

Group 5: In Year 12 in 2001, but did not apply for a university course (22 per cent)

Group 6: Other. This group comprises those who left school before Year 12 and those with no post-school information (28 per cent)

The main findings are as follows.

- The 5 per cent of the sample who were in the 'Applied, no offer' group (Group 1) amounted to about 10 per cent of the 2001 Year 12 students who applied for a university place.
- The 'Applied, no offer' group expressed clear intentions to go to university. In Years 9 and 11, about 70 per cent of the group indicated that they wished to attend university. In Year 12 in 2001, 75 per cent said that they intended to go to university. These percentages are higher than for the group who received an offer of a university place but who did not enrol in either 2002 or 2003 (Group 2), and for the group that did not apply (Group 5).
- Overall, the demographic and social characteristics of the 'Applied, no offer' group were similar to those of other students enrolled in Year 12 in 2001. Young persons from middle occupational and educational backgrounds were only marginally more likely to be in the 'Applied, no offer' group.
- Similarly, school sector was not associated with belonging to the 'Applied, no offer' group.

- In contrast, membership of the 'Applied, no offer' group was strongly associated with achievement in literacy and numeracy in Year 9: the lower the achievement score, the more likely students were to be in the group. Very few students in the top achievement quartile belonged to this group, unlike those who were offered a university place.
- Membership of the 'Applied, no offer' group was even more strongly associated with tertiary entrance performance. The 'Applied, no offer' group (Group 1) had much lower Equivalent National Tertiary Entrance Rank (ENTER) scores than the other university applicant groups. Their average ENTER score was about 54 compared to 80 for those who enrolled in university (Groups 3 and 4). Only 14 per cent of Group 1 had ENTER scores above 70.
- Multivariate analyses revealed that, of demographic and social background factors, only parental occupational background had a significant impact on belonging to the 'Applied, no offer' group. A professional background, and to a lesser extent, a managerial background, significantly reduced the odds of being in Group 1. However, these effects were not strong and disappeared when controlling for Year 12 ENTER score.
- In 2003, two years after doing Year 12, about 65 per cent of the 'Applied, no offer' group were 'fully engaged' in either working full-time (37 per cent) or studying full-time (27 per cent). This compares to 72 per cent of the 'Did not apply' group who were fully engaged in 2003 and 71 per cent of the 'Not in year 12 in 2001' group. The latter two groups were more likely to be working full-time (57 per cent and 63 per cent, respectively) than the 'Applied, no offer' group.
- In contrast, the 'Applied, no offer' group showed low levels of unemployment in 2003 (4 per cent) compared to 7 and 8 per cent respectively among the 'Did not apply' and 'Other' groups.
- Although the 'Applied, no offer' group missed out on going to university after Year 12, by 2003 around 45 per cent were doing some form of post-school education and training. About 24 per cent were enrolled in a TAFE Diploma course, 11 per cent in a traineeship, 6 per cent in a TAFE Certificate course, and 5 per cent in an apprenticeship.

In summary, the report indicates that a relatively small proportion of the Year 12 students who applied for university did not receive an offer of a place. The principal reason why these students did not receive an offer was that they achieved a low ENTER score. Two years later, around 45 per cent of the 'Applied, no offer' group were engaged in some form of education or training, all of it in the vocational education and training sector, indicating their continuing interest in learning.

Unmet Demand?
Characteristics and Activities of University Applicants not offered a Place

1. RATIONALE AND APPROACH

Rationale

This report analyses the characteristics and subsequent activities of the young people who enrol in Year 12 and apply for university, but are not offered a place. This group can be understood as constituting 'unmet demand' for university places.

The extent of unmet demand is a recurring issue in Australian higher education. For example, the Australian Vice-Chancellors' Committee (AVCC) provides an annual estimate of the level of unmet demand. Based on data from State tertiary admissions authorities, the AVCC (2004:8) estimated that 23 per cent of eligible Year 12 home state applicants aged 20 and under did not receive an offer of a university place in 2004. Among all eligible Year 12 applicants aged 20 and under, 26 per cent did not receive an offer. The AVCC estimated that the rate of unmet demand among mature-age university applicants (aged over 20) was even higher at 32 per cent. Commentators often cite such estimates in arguing that the number of higher education places should be expanded.

The AVCC estimates indicate that unmet demand varies substantially across States with Victoria showing the highest level of unmet demand in 2004 at 37 per cent compared to 19 per cent for South Australia and 14 per cent for Tasmania. (AVCC, 2004:2; Phillips et al., 2003:19). It should be noted, however, that the States are not strictly comparable on this measure since they differ in their definition of an eligible applicant. Unmet demand also varies widely across fields of study: it is very low for agriculture and the natural sciences, but nearly 80 per cent for veterinary and medical studies (AVCC, 2004:3).

However, as the AVCC and other analysts note, such estimates overstate the level of unmet demand since they do not take into account less qualified applicants, double counting of interstate applicants, the number of preferences expressed by applicants, and the offer rejection rate by successful applicants.

Following discounting for these factors, the AVCC (2004: 14) estimated that in 2004 the number of unsuccessful applicants was in the range of 19 200 to 24 300 nationally, compared to the 'gross' estimate of 63 300. These estimates suggest that among the group who are the focus of this study – applicants direct from Year 12 – the 'discounted' measure of unmet demand is about one-third of the gross estimates, or in the range of 8 to 10 per cent of eligible applicants. Phillips et al. (2003:20) noted that the 'discounted figures offer the only realistic measure of unmet demand'.

Although the discounted estimates of unmet demand are substantially lower than the gross estimates, they still represent a sizeable number of people whose expectations could not be realised. Do these people have particular socio-demographic or educational characteristics? Is the reason they were not offered a place because of low tertiary entrance scores or was their performance comparable with other applicant groups, just missing out on their preferred courses? Harvey-Beavis and Elsworth's (1998) study of university admission data concluded that students' interests are the key driver of their preferences for university study; students do not simply wish to attend university. This would suggest that the reason that applicants were not offered a place was because their performance was not strong enough for them to enter courses that interested them, although they could have been accepted into other courses.

A further information gap in the analysis of unmet demand relates to the subsequent labour market and educational activities of those who apply for university but are not offered a place. Do they have a smooth transition to the labour market or are their initial post-school experiences characterised by part-time work and unemployment? Do they continue their education and take up vocational training?

The purpose of this report is to examine the background and education characteristics, academic performance and subsequent activities of the 'unmet demand' group so as to improve the knowledge base for higher education policy.

The benefits of using longitudinal data

The data used for this report are derived from the Longitudinal Surveys of Australian Youth (LSAY) program, specifically the 1998 Year 9 cohort (Marks & Rothman, 2003). The sample is representative of all Year 9 students at school in Australia in 1998. The initial sample comprised 14 117 students from all States/Territories and school sectors. In Year 9 the students undertook reading comprehension and numeracy tests and completed a questionnaire about themselves and their families. In 1999 the sample was surveyed by a mail questionnaire and in each subsequent year by telephone interviews. Appendix 1 provides details on the LSAY surveys, sampling and weighting to allow for differential sample attrition.

LSAY is particularly useful for analysing the demand for university study because it collects information from the same sample members over a long period of time. Longitudinal data provide information on the group's activities leading up to Year 12, and in subsequent years. Questions on intentions to go to university were asked in each year from 1998 to 2001. Furthermore, since LSAY has a large amount of data on respondents' social background and educational careers, and Year 12 Equivalent National Tertiary Entrance Rank (ENTER) score, it is possible to ascertain if the Year 12 students who applied for university but did not receive an offer differ substantially from other groups. Appendix 2 details the variables used in the report.

The major limitation of the data for this particular LSAY cohort is that students were only asked about their first preference course when applying for university. Although there is evidence that most university applicants tend to persist with the field of their first preference in their lower order preferences (Harvey-Beavis & Elsworth, 1998), this limitation means that this report is not able to compare their tertiary entrance performance in Year 12 with the cut-off scores for their second and later preferences.

Analytic approach

The report analyses the characteristics and activities of six groups of young people:

Group 1: In Year 12 in 2001 and applied to enter university, but not offered a place (the focus group). This group is referred to as the 'Applied, no offer' group.

Group 2: In Year 12 in 2001, received an offer of a university place, but did not enrol in university in either 2002 or 2003.

Group 3: In Year 12 in 2001, received an offer of a university place, and enrolled in 2003 after a 'gap' year in 2002.

Group 4: In Year 12 in 2001 and entered university in 2002.

Group 5: In Year 12 in 2001, but did not apply for a university course.

Group 6: Other (residual group). Not in Year 12 in 2001 and/or no information on university participation in 2002.

Chapter 2 analyses the characteristics of the focus group – those who apply for university but are not offered a place – by comparing them with the members of the other five groups. It documents the relative size of the six groups, and pays particular attention to differences in educational performance and intentions among these young people. Multivariate analyses are used to identify the effect of particular variables on the likelihood of being in the 'Applied, no offer' group, other factors equal.

Chapter 3 follows the cohort through until 2003, which is two years after Year 12 for most of them. It compares the educational and labour market activities of the 'Applied, no offer' group with those of the young people in the other five groups. The particular focus of Chapter 3 is on how the group fares after missing out on getting into university. The main conclusions are discussed in Chapter 4.

2. CHARACTERISTICS OF UNIVERSITY APPLICANT AND PARTICIPANT GROUPS

This chapter focuses on the characteristics of the group that enrolled in Year 12 in 2001, and applied to go to university but were not offered a place. For comparability and comprehensiveness, the characteristics of the other five groups are also presented.

The chapter begins by documenting the relative size of the six different groups of young people categorised in terms of whether they applied to enter university, and subsequently took up a place. The next part of the chapter examines the relationship between the groups and demographic, social background and educational factors. The final part of the chapter presents the results from multivariate analyses on the influences on belonging to the 'Applied, no offer' group. The analyses are intended to identify the similarities and differences between the 'unmet demand' group of university applicants, and other groups of young people.

Relative sizes of the groups

In 2001 the active LSAY sample comprised 7762 young people who were first sampled in 1998 when they were in Year 9. By 2001 most of the sample members (72 per cent) were enrolled in Year 12. Table 1 shows the relative sizes of the six groups of young people analysed in this report.

Approximately 5 per cent of the sample members were classified as in Group 1: they were enrolled in Year 12 in 2001, applied to go to university, but were not offered a place. This is equivalent to about 7 per cent of all those who were in Year 12 in 2001, and about 10 per cent of those Year 12 students who applied to go to university. Although measured differently, the latter estimate is broadly similar to the AVCC estimate (after discounting) of 5 to 8 per cent for unmet demand by eligible applicants in 2002 (AVCC, 2002: 17).[1]

Table 1 indicates that 5 per cent of the LSAY sample were enrolled in Year 12 in 2001 and were offered a university place, but did not enrol in university in either 2002 or 2003 (Group 2). A slightly smaller proportion (3 per cent) deferred their enrolment in university until 2003 following a 'gap' year in 2002 (Group 3).

The largest group, comprising 38 per cent of the LSAY sample, were those who were enrolled in Year 12 in 2001 and entered university direct from school in 2002 (Group 4). This was equivalent to 75 per cent of those Year 12 students who applied to go to university.

Table 1 indicates that a sizeable proportion (22 per cent) of the LSAY cohort had enrolled in Year 12 in 2001 but had not actually applied for university (Group 5). This represents about 30 per cent of those who had been in Year 12.

The remaining group shown in Table 1 were those who were not in Year 12 in 2001, mostly because they had already left school (Group 6). This group represents around 28 per cent of the LSAY sample.

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[1] There are many ways in which 'unmet demand' can be measured. The estimate of 5 to 8 per cent is at the lower end of AVCC estimates.

Table 1 Sizes of the university applicant and participant groups

Group	Description	N	Weighted %
1	In Year 12 in 2001, applied to university, but not offered a place	352	5
2	In Year 12 in 2001, offered a university place, but did not go to university in 2002 or 2003	378	5
3	In Year 12 in 2001, received an offer, and enrolled in university in 2003 after a 'gap' year in 2002	250	3
4	In Year 12 in 2001, and entered university in 2002	3188	38
5	In Year 12 in 2001 but did not apply for university	1626	22
6	Other (Not in Year 12 in 2001 or no information for 2002, 2003)	1968	28
	Total (in 2001)	7762	100

Notes: The percentages in the final column differ slightly from the relative numbers in the previous column since the percentages are weighted to compensate for differential sample attrition. Appendix 1 details the weighting procedure. The percentages may not sum to 100 due to rounding.

Intentions to enrol in university

One way of characterising the 'Applied, no offer' group is to analyse their intentions to enrol in university. Such data were collected annually from 1998 when all cohort members were enrolled in Year 9, up until 2001 when most were in Year 12.

Table 2 shows the percentage of each of the six groups that indicated an intention to go to university after leaving school. In 2001, 76 per cent of the 'Applied, no offer' group (Group 1) indicated that they intended to go to university; this proportion had grown slightly since they were in Year 9 in 1998 (69 per cent). These data suggest that, although they may have been unsuccessful in entering university direct from Year 12, some of this group may seek to enter university at a later stage in their lives.

The 'Applied, no offer' group showed a slightly higher level of intention to go to university than the group that was offered a university place but did not enrol in either 2002 or 2003 (Group 2). In 2001, 70 per cent of this group indicated that they intended to go to university. The fact that they had not enrolled within two years of finishing Year 12 suggests that for some group members their intentions had changed, while others may still be anticipating university studies at a later stage.

Not surprisingly, the strongest intentions to enter university were expressed by the group that entered university direct from Year 12 (Group 4). In 2001, 93 per cent of this group indicated that they intended to enter university, and this proportion had increased steadily since they were in Year 9 three years earlier (83 per cent). A high proportion (77 per cent) of the 'gap year' group (Group 3) also intended to go to university.

It is noteworthy that in 2001 about 20 per cent of the groups that either did not apply for university from Year 12 (Group 5) or which had already largely left school before Year 12 (Group 6) indicated that they intended to enter university. This suggests that reasonably large numbers of young people may seek to enter university in future years.

Table 2 Intentions to enrol in university, 1998-2001 (% of each university applicant and participant group)

	In Year 12 in 2001						
	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	
	Applied for university, but no offer	Received an offer, but did not enrol in 2002 or 2003	Received an offer and enrolled in 2003	Received an offer and enrolled in 2002	Did not apply for university	Other	All
1998 (Year 9)	69	67	77	83	43	32	59
2000	72	69	77	88	33	29	64
2001	76	70	73	93	19	22	63

Note*:* The question that these percentages were based on was not asked in the 1999 survey.

Relationship with demographic and social background factors

Table 3 presents the distribution of the six groups of young people according to their demographic and social background characteristics. These are expressed as 'row percentages' and show, for example, the percentage distribution of males among the groups. Table A1 in Appendix 3 presents the column percentages or the demographic and social composition of each group. For example, the percentage of the 'Applied, no offer' group who are male and female, and the percentage who are from non-English speaking backgrounds.

Table 3 shows little difference by gender or region in the proportion belonging to the 'Applied, no offer' group. Those from non-English speaking backgrounds were slightly more likely to belong to this group, 8 per cent as compared to 5 per cent of those from English-speaking backgrounds. Those from middle-level occupational or educational backgrounds were also more likely to belong to this group, although the differences were small. Generally there were only small differences on demographic and social background factors in belonging to the 'Applied, no offer' group.

Relationship with educational factors

Table 4 presents the distributions among the six groups of young people according to their educational background and ENTER score achieved in Year 12. The column percentages are presented in Table A2 in Appendix 3.

Table 4 shows little difference by type of school attended in the proportions belonging to the 'Applied, no offer' group. School sector differences are more evident for Group 3 and Group 4.

The 'Applied, no offer' group had lower achievement scores in literacy and numeracy in Year 9. Only 3 per cent of those with scores in the top quartile were in the 'Applied, no offer' group compared to 7 per cent of the second lowest quartile (Table 4). Table A2 shows only 17 per cent of this group were in the highest quartile of achievement, compared to over 40 per cent of those who enrolled in university (Groups 3 and 4).

Table 3 University applicant and participant groups by demographic and social background (row percentages)

		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	
		Applied for university, but no offer	Received an offer but did not enrol in 2002 or 2003	Received an offer, enrolled in 2003 after a gap year	Received an offer, enrolled in 2002	In Year 12 in 2001 but did not apply for university	Other	Total
Gender	Male	5	4	3	35	24	30	100
	Female	5	5	3	43	19	24	100
Region	Metropolitan	6	4	3	45	21	22	100
	Non-metropolitan	5	5	3	34	22	31	100
Indigenous status	Indigenous	5	2	2	20	25	47	100
	Non-Indigenous	5	5	3	40	21	26	100
Country of birth	Australia	5	5	3	37	22	29	100
	Other English speaking	4	4	4	37	23	29	100
	Non-English speaking	8	3	2	48	20	19	100
Language background	Language other than English	7	3	1	46	23	20	100
	English	5	5	3	39	21	27	100
Parental occupation	Professional	5	5	4	59	16	13	100
	Managerial	5	5	5	46	20	20	100
	Non-manual	7	4	4	39	22	25	100
	Manual	5	5	2	30	25	33	100
Parental education	Not Year 12	5	4	2	29	25	35	100
	Year 12	6	5	4	38	24	24	100
	Post-secondary	4	4	4	63	12	12	100
ALL		5	5	3	38	22	28	100

Table 4 University applicant and participant groups by educational factors (row percentages)

		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	
		Applied for university, but no offer	Received an offer but did not enrol in 2002 or 2003	Received an offer, enrolled in 2003 after a gap year	Received an offer, enrolled in 2002	In Year 12 in 2001 but did not apply for university	Other	Total
School sector	Government	5	4	2	32	23	34	100
	Catholic	6	5	3	50	22	14	100
	Independent	5	5	6	60	14	11	100
Achievement in literacy & numeracy	Lowest quartile	5	3	1	12	30	49	100
	Second lowest quartile	7	5	2	30	25	31	100
	Third quartile	5	6	4	46	20	19	100
	Highest quartile	3	5	5	68	11	9	100
ENTER score band	90-100	0	2	6	90	1	0	100
	80-89	1	6	6	82	4	1	100
	70-79	4	8	5	70	12	0	100
	60-69	11	11	3	48	26	1	100
	50-59	22	10	4	28	36	1	100
	<50	17	7	1	21	53	2	100
	No score but participated in Year 12	4	3	1	12	48	33	100
ALL		5	5	3	38	22	28	100

An even stronger relationship is apparent between group membership and average ENTER score achieved in Year 12. Very few Year 12 students with ENTER scores above 80 were in the 'Applied, no offer' group, and only 4 per cent of those with ENTER scores between 70 and 79 were in this group. Twenty-two per cent of students with ENTER scores between 50 and 59 applied but did not receive an offer. Table A2 shows only 13 per cent of the 'Applied, no offer' group (Group 1) achieved an ENTER score of at least 70. By contrast, 42 per cent of those who received an offer of a university place but did not enrol (Group 2) received an ENTER of at least 70, as did 75 per cent of those who entered university within two years of finishing Year 12 (Groups 3 and 4). These data show that the 'unmet demand' group has relatively low levels of academic performance.

Table 5 draws together some of the social and educational characteristics by comparing the six groups' mean scores on continuous measures of socioeconomic background, achievement in literacy and numeracy, and ENTER score. The first two measures have been standardized to a mean of zero and a standard deviation of one.

The 'Applied, no offer' group (Group 1) had a mean score for socioeconomic background of –0.11 compared to –0.36 for the 'Not in Year 12 group' (Group 6), and 0.31 for the group that received an offer of a university place and enrolled in 2002 (Group 4). In general, the 'Applied, no offer' group came from lower socioeconomic backgrounds than the other Year 12 students who applied for university.

Larger differences in mean scores between the groups were found for test scores in Year 9 literacy and numeracy. The groups that were offered university places and enrolled in either 2002 or 2003 (Groups 4 and 3, respectively) had mean scores of 0.58 compared to –0.09 for the 'Applied, no offer' group (Group 1) and –0.51 for the 'Not in Year 12' group (Group 6).

Table 5 also shows large differences in mean ENTER scores. The average ENTER score of the 'Applied, no offer' group was 54 compared to 80 for the groups that enrolled in university in 2002 or 2003. The mean ENTER score of the 'Applied, no offer' group was only slightly greater than that for the group that was in Year 12 in 2001 but did not apply for university (Group 5), which had a mean ENTER score of 52.

The relationship between ENTER score and university enrolment is explored further in Table 6. It clearly shows that the 'Applied, no offer' group had much lower scores than those who received offers of a university place. The 90th percentile for Group 1 was at an ENTER score of 73, which means that 90 per cent of the group had an ENTER score of less than 73. By contrast, the 90th percentile ENTER scores for the other three groups of university applicants were 88 (Group 2) and 97 (Groups 3 and 4) respectively. The 3rd quartile and median ENTER scores also show that the 'Applied, no offer' group had considerably lower scores than those who enrolled in university (Groups 3 and 4), as well as the group who received an offer of a university place but did not enrol (Group 2). Indeed, the distribution of ENTER scores among the 'Applied, no offer' group was most similar to the group of Year 12 students who did not apply for university (Group 5).

Table 5 Means for socioeconomic background, literacy and numeracy score, and ENTER score, by university applicant and participant group

Group	Socio-economic background	Literacy & numeracy in Year 9	ENTER score
1. Applied for university, but no offer	-0.11	-0.09	54
2. Received an offer but did not enrol in 2002 or 2003	-0.03	0.28	67
3. Received an offer, enrolled in 2003 after a gap year	0.20	0.58	80
4. Received an offer, enrolled in 2002	0.31	0.58	80
5. In Year 12 in 2001 but did not apply for university	-0.26	-0.26	52
6. Other	-0.36	-0.51	-
Total Sample	-0.03	0.05	72

Note: Socioeconomic background, and literacy and numeracy, are standardised on the initial sample with a mean of 0 and a standard deviation of 1. ENTER scores range from 30 to 99.95

Table 6 ENTER scores for the university applicant and participant groups

Group	90th Percentile	3rd Quartile	Median
1. Applied for university, but no offer	73	64	53
2. Received an offer but did not enrol in 2002 or 2003	88	81	69
3. Received an offer, enrolled in 2003 after a gap year	97	91	84
4. Received an offer, enrolled in 2002	97	92	84
5. In Year 12 in 2001 but did not apply for university	74	63	50
Total All with ENTER Score	96	88	76

Note: ENTER scores range from 30 to 99.95

Preferences for a university place

As noted earlier, the LSAY data allow only a limited analysis of the relationship between students' ranking on the ENTER score, their preferences for study in different university courses, and whether or not they received and took up an offer of a place. In the LSAY survey university applicants were only asked for information on their first preference. Therefore, it is not possible to compare students' ENTER score with the cut-off scores for other courses that they applied to enter. Nevertheless, the data on students' first preferences are illuminating.

Table 7 Year 12 students who applied for university but were not offered a place: ENTER score achieved and cut-off ENTER score for first preference course

Mean ENTER score achieved	55
Mean cut-off ENTER score of 1st preference course	76
Difference between ENTER achieved and ENTER in 1st preference course	22
Standard deviation of the difference	16

Note: Includes only cases with a non-missing ENTER score for 1st preference course, which is why the mean ENTER achieved differs slightly from Table 5. ENTER scores range from 30 to 99.95.

Table 7 examines the first course preferences of the 'Applied, no offer' group (Group 1). It compares the ENTER scores they obtained and the cut-off ENTER score needed to enter their first preference course.[2] On average, the cut-off ENTER score in their first preference course was 76, or over 20 points higher than their actual ENTER. The standard deviation of this difference was 16 ENTER points, indicating that 65 per cent of the group obtained ENTER scores between 5 and 38 points below the cut-off for their first preference course.

Such results suggest that the 'Applied, no offer' group had somewhat unrealistic expectations in terms of securing a place at university, at least for their first preference course. However, without information on their second and subsequent course preferences, it is not possible to be definitive about whether this group had unrealistic expectations for university study as a whole.

Multivariate analyses

The previous sections examined the associations between social and educational characteristics and membership of different groups of university applicants, especially the 'Applied, no offer' group. In this section, multivariate techniques are used to identify the influence of various factors on belonging to the different groups. The reason for using multivariate techniques is that there is no single determinant of young people being in one group rather than another. Instead, there is a range of inter-related influences on group membership. Multivariate analyses provide an assessment of the net effect of each factor by controlling for the effects of other factors. The techniques also provide an insight into the process through which factors influence group membership by examining what happens to initial relationships when other variables are added to the analysis. Appendix 2 outlines the technique used (multinominal logit analysis) and its interpretation.

The detailed results of the multivariate analyses are presented in Table A3 in Appendix 3. The three columns of coefficients reflect the results from three different models. The first model comprises only demographic and social background factors. For the second model, school sector and early school achievement (measured by literacy and numeracy in Year 9) are added, and for the third model the ENTER score achieved in Year 12 has been added.

The reference group used in these analyses is the largest of the six groups, namely, those who were offered a university place and enrolled in 2002 (Group 4). Thus, there are five sets of comparisons made (one each for Groups 1-3 and 5-6) relative to Group 4. The coefficients shown in Table A3 are log-odds of belonging to the group concerned relative to Group 4. For example, the coefficient of 0.53 for 'Gender: Male vs. Female' in Model 1 means that the odds of males belonging to Group 5 rather than Group 4 was 1.69 times the

[2] This information is available from the author.

odds for females (1.69 is the exponent of 0.53). This effect is net of other factors in the model. Since this effect is statistically significant at the 0.001 level, it indicates that males in Year 12 were more likely than females not to apply to enter university, other factors equal.

The multivariate analyses of the first model indicate that there were few statistically significant differences between the 'Applied, no offer' group (Group 1) and those who entered university in 2002 (Group 4). There were no differences for gender, region, Indigenous status or home language, other factors equal. The exception was parental occupational background. The odds of those whose parents had a manual background of belonging to Group 1 rather than Group 4 was 2.2 times the odds of those from a professional background and 1.7 times the odds of those from a managerial background. This suggests that those from lower occupational backgrounds were more likely to be in the 'Applied, no offer' group than those from higher status backgrounds, other factors equal.

Model 2 in Table A3 adds statistical controls for school sector and achievement in Year 9 literacy and numeracy to the social and demographic background factors. After controlling for performance in Year 9 literacy and numeracy tests, the effects of occupational backgrounds on group membership were weaker. The odds ratio for a Year 12 student from a manual compared to a professional background on belonging to the 'Applied, no offer' group (Group 1) rather than Group 4 had declined to 1.6. When controlling for early school achievement there was no significant effect for the comparisons between a professional or managerial background and a manual background.

There were no significant school sector differences for membership of the 'Applied, no offer' group. Compared to attendance at a government school, attendance at a Catholic or independent school did not decrease (or increase) the odds of belonging to Group 1 rather than Group 4, other factors equal.

In contrast, there were significant differences for achievement in Year 9 literacy and numeracy. Table A3 indicates that a one standard deviation increase in achievement score decreased the odds of being in the 'Applied, no offer' group rather than Group 4 by 2.4 times. A two standard deviation increase in achievement decreased the odds by 5.7 times (not shown in the table). These effects are net of occupational background and the other factors in Model 2. These results indicate that Year 12 students with relatively low levels of achievement in literacy and numeracy were more likely to be in the 'Applied, no offer' group, other factors equal.

Model 3 adds ENTER score to the multivariate model. The results presented in the third column of Table A3 indicate that ENTER score had the strongest relationship with being in the 'Applied, no offer' group (the score bands are presented in Table 4). An increase of one band level in the ENTER score reduced of the odds of being in the 'Applied, no offer' group (Group 1) rather than the group that enrolled in university in 2002 (Group 4) by 1.8 times, other factors equal. An increase of two bands reduced the odds by 3.3 times.

The multivariate analyses confirm that a relatively low ENTER score was the major factor associated with not being offered a university place. Gender, region, ethnicity and occupational background had no impact on being in the 'Applied, no offer' group (Group 1) rather than being in the group that entered university directly (Group 4) when taking into account ENTER score.

3. EDUCATION AND LABOUR MARKET ACTIVITIES

This chapter provides another perspective on the 'Applied, no offer' group by analysing their education and labour market activities after leaving Year 12. These activities are compared with those of the other groups of university applicants and participants. The analyses focus on 2003, which was two years after most of the sample members were enrolled in Year 12.

The main questions addressed in the chapter are:

- What proportion of the 'Applied, no offer' group were in full-time study two years after they applied to go university?
- What proportion of the 'Applied, no offer' group were fully engaged in 2003, that is, were in full-time study or full-time work? How does this proportion compare with that for the other groups?
- Are the 'Applied, no offer' group more likely to be unemployed than other groups? What proportions are in part-time work or engaged in some other activity?
- In terms of further study, what proportions of the 'Applied, no offer' group were enrolled in different forms of education and training?

The chapter focuses on respondents' 'main activity' at the time of the annual LSAY interview, which was usually conducted between September and November. Appendix 2 details the classifications that were used.

Main activity in 2003

Table 8 presents data on the main activity in 2003 for the six groups of university applicants. Of the 'Applied, no offer' group (Group 1), approximately 27 per cent were in full-time study and 37 per cent in full-time work. In all, about 65 per cent of this group were 'fully engaged' in these terms. This percentage is lower than the proportions who were fully engaged in the other groups. The corresponding proportions among the groups that did not go to university were 75 per cent (Group 2), 72 per cent (Group 5), and 71 per cent (Group 6). The main reason for this difference is the relatively high proportion of the 'Applied, no offer' group—25 per cent—whose main activity in 2003 was part-time work.

On the other hand, the 'Applied, no offer' group do not appear particularly disadvantaged in terms of unemployment. In 2003 about 4 per cent of the group were unemployed, which was lower than 'Did not apply' (7 per cent) and 'Not in Year 12 in 2001' (8 per cent) groups. Similarly, the 'Applied, no offer' group reported lower levels of participation than these two groups in 'other' activities in 2003, namely activities that did not involve either education or work.

Table 8 Main activity in 2003, by university applicant and participant group (% of each group)

Main activity	Group 1 Applied for university, but no offer	Group 2 Received an offer but did not enrol in 2002 or 2003	Group 3 Received an offer and enrolled in 2003 after a gap year	Group 4 Received an offer, enrolled in 2002	Group 5 In Year 12 in 2001 but did not apply for university	Group 6 Other	Total
Full-time study	27	17	94	82	15	8	42
Full-time work	37	58	1	7	57	63	36
Part-time study	2	1	4	<1	1	1	1
Part-time work	25	15	<1	7	13	12	10
Unemployed	4	3	_	1	7	8	5
Other activity	6	6	_	3	8	9	6
Total	100	100	100	100	100	100	100

Post-secondary education and training

Table 9 examines the different types of post-secondary education and training in which the various groups were engaged in 2003. Not surprisingly, none of the 'Applied, no offer' group (Group 1) was enrolled in a Bachelor degree course in 2003. However, 45 per cent of the group were enrolled in other forms of education and training. A substantial proportion of this group—24 per cent—were enrolled in a TAFE diploma course. A further 6 per cent were enrolled in a TAFE certificate course, while 11 per cent were in a traineeship and 5 per cent in an apprenticeship.

Overall, Group 1 exhibited higher levels of participation in education and training than either the 'Did not apply for university' group (43 per cent) or the 'Not in Year 12 in 2001' group (40 per cent), although the mix of activities was somewhat different. The latter two groups had higher participation in apprenticeships and traineeships than Group 1, but lower participation in TAFE diploma courses.

The fact that two years after Year 12 around 45 per cent of the 'Applied, no offer' group were engaged in some form of education and training indicates their continuing interest in learning. As was seen in Table 2, some 76 per cent of the group had indicated in Year 12 that they intended to go to university although their ENTER scores were not high enough to obtain an offer. However, should their interests in university remain strong, credit transfer arrangements may assist them to enter university at a later stage when they may be better placed to succeed than if they entered from Year 12 directly.

Table 9 Participation in post-secondary education and training in 2003, by university applicant and participant group (% of each group)

	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	
	Applied for university but no offer	Received an offer but did not enrol in 2002 or 2003	Received an offer and enrolled in 2003 after a gap year	Received an offer, enrolled in 2002	In Year 12 in 2001 but did not apply for university	Other	Total
Apprentice-ship	5	7	0	<1	13	22	9
Traineeship	11	20	0	<1	13	9	7
Degree	0	0	97	80	0	2	35
Certificate	6	6	0	<1	6	5	3
Diploma	24	13	2	2	11	3	6
No Study	55	53	1	17	57	60	40
Total	100	100	100	100	100	100	100

4. CONCLUSIONS

This report has examined the characteristics and subsequent activities of the 2001 Year 12 students who applied to enter university but were not offered a place. Although membership of this group varies across demographic and social groups and to some extent by school sector, most of these differences are small. The exception was parental occupational background where those from professional, and to a lesser extent, managerial backgrounds were significantly less likely than those from a manual occupational background to belong to the 'Applied, no offer' group. However, the effects were not large and disappeared when controlling for ENTER score.

The main reason why the 'Applied, no offer' group did not gain a place at university was their low tertiary entrance score. Their mean ENTER score was 54, compared to 70 for the sample as a whole, and 80 for those who did enter university in either 2002 or 2003. Although many in this group intended to go to university, either their aspirations were unrealistic at that time, or their tertiary entrance performance was much worse than they had expected.

There are indications that the first-preference intentions of those in the 'Applied, no offer' group were often unrealistic since the cut-off ENTER score for their first preference course was, on average, 20 points higher than their ENTER score. There were also cases where the difference between the actual and required ENTER scores was much smaller. However, without data on the second and subsequent university course preferences of sample members it is not possible to assess how realistic were their intentions for university study as a whole. Furthermore, although this group of Year 12 students may intend to go university, it does not necessary follow that they *expect* to go. Incorporation of questions on expectations as well as intentions in future waves of LSAY may enable the question of unrealistic expectations to be better addressed.

Overall, about 5 per cent of the LSAY Year 9 class of 1998 applied to go to university after Year 12 in 2001, but were not offered a place. This is equivalent to about 10 per cent of all the Year 12 students who applied for a university place. The analysis suggests that the 'unmet demand' group is substantially less academically able than those who are offered a university place and subsequently enrol. In addition to lower ENTER scores, this group also showed substantially lower mean scores in Year 9 literacy and numeracy achievement.

The report indicates that about 45 per cent of the 'Applied, no offer' group were engaged in some form of education or training two years after Year 12. Their most common type of study was for a TAFE diploma (24 per cent) followed by an apprenticeship or traineeship (16 per cent). These relatively high levels of participation suggest that credit transfer arrangements may enable a number to enter university at a later stage of their lives, if their interests are still in that direction.

Of some concern is that a relatively high proportion of the 'Applied, no offer' group report that part-time work was their main activity two years after Year 12 (25 per cent). On the other hand, relatively small proportions were unemployed (4 per cent) or engaged in 'other' activities (6 per cent). At this relatively early stage it is not possible to conclude if the group is experiencing particular difficulties in the transition from school to work. Subsequent waves of LSAY data will allow a fuller examination of their labour market and other outcomes.

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APPENDIX 1: LSAY DATA, SAMPLING AND WEIGHTS

The LSAY data

The data for this report are drawn from the Longitudinal Surveys of Australian Youth (LSAY) project, which follows the experiences of young people as they move from school into post-secondary education, training and work. The data for this report focus on the cohort of students who were in Year 9 in 1998, and follow their experiences up until late 2003. The students were initially surveyed in school in 1998, where they completed a questionnaire about themselves and their families, and undertook reading comprehension and numeracy tests. Further data have been collected from this cohort on an annual basis using computer-assisted telephone interviewing. Over time the LSAY data collections from each cohort build up a comprehensive picture of the social and educational backgrounds of young people, their participation in various forms of education, training and work, and their attitudes to education, work and life more generally.

The 1998 Year 9 sample

The cohort is a nationally representative sample of Year 9 students in 1998. The initial sample comprised 14 117 students from all States and Territories and school sectors, with approximately equal numbers of males and females. It is a stratified random sample. The major stratum is State or Territory of schooling. Students from smaller States were over-sampled in order to give large enough samples for estimates at State level. Selection of students within States was proportional by school sector. Three sectors were used as strata: government schools; Catholic schools; and independent schools. The population data for the strata were taken from the ABS *Schools Australia* series.

The sample involved a two-stage clustered design. Schools were first sampled with a probability proportional to the size of their Year 9 enrolments, and then intact classes of Year 9 students were sampled from within each school. When a school declined to take part in the study, a replacement school of the same type (government, Catholic or independent) in a nearby locality was selected. Each school was asked for a list of the students enrolled in each Year 9 class. Two classes were randomly selected and if that did not yield 45 students, a third class was selected. In small schools all Year 9 students formed the sample. In total, about 6 per cent of all Year 9 students in Australia were selected in the sample, and around 12 per cent of schools with Year 9 students. The two-stage clustered design means that the confidence limits for population estimates are larger than for a simple random sample of the same size. For further details see Long and Fleming (2002).

Weighting procedures

All analyses are weighted to adjust for differences between the sample and the population the sample was drawn from, and for attrition over the years of the study. The weights comprise two components. The first component (the stratification weights) accounts for differences in the distribution of respondents by State, school sector and gender in the original Year 9 sample and these distributions for the Year 9 population in 1998 as reported in the ABS publication *Schools Australia*. These weights are necessary to account for the sample design whereby the smaller States and Territories were over-sampled. In addition, there are small differences between the sample and 1998 population distributions of school sector by gender within the States and Territories that are corrected by this component.

The second component of the weights adjusts for sample attrition. Longitudinal samples are subject to attrition as contact is lost with some sample members and others decline to continue with the survey. Typically, the annual response in LSAY has exceeded 90 per cent. However, the impact of sample attrition is cumulative. Sample attrition is generally non-randomly distributed among the original sample members. The common pattern is for attrition to be greatest among young people from more disadvantaged backgrounds. LSAY uses weighting based on Year 9 achievement and gender to reduce bias in the estimates. Further details on the calculation of weights for this sample are provided by Long and Fleming (2002).

APPENDIX 2: VARIABLES AND MULTIVARIATE ANALYSES

Variables used in the report

Social and Demographic Variables

Gender: Information on the sex of the respondents was obtained from responses to the initial questionnaire and confirmed in subsequent telephone interviews.

Language background was measured by asking students in the initial questionnaire 'What language does your family mostly speak at home?' A distinction was drawn between households where the main language spoken at home was English, and households where English was not the main language spoken.

Region was measured by two categories (metropolitan and non-metropolitan) based on the number of people in the locality of the student's place of residence when the student was in Year 9. Metropolitan centres were defined as centres with populations of 100 000 persons or more.

Indigenous status was based on students' self-identification of Aboriginal or Torres Strait Islander status in the Year 9 survey.

Country of birth is a measure of ethnicity using information on the country of birth of the respondent's father.

Parental occupation: Sample members were asked in the initial questionnaire to report the occupations of their father (or male guardian) and mother (or female guardian), and to describe their work. If a parent was not employed at the time of the interview, respondents were asked to describe that parent's last job. Respondents were asked to provide information on both parents, even if their mother or father was not living with them. The information provided by respondents was coded to the four-digit level of the Australian Standard Classification of Occupations (ASCO). To simplify presentation and to make best use of the available information, the occupation of the male parent was taken as the basis for the occupational measure. When this was not available, the occupation of the female parent was used.

Parental education: In the initial survey in 1998 sample members were asked to report the highest level of education completed by each parent. The mother's education level was used in the analyses, or the father's if this was unavailable.

Education Variables

School sector: This measure refers to the school attended at the time of sample selection in Year 9 in 1998, and the data for this measure were obtained from the sample design. Three categories are used – government schools, Catholic non-government schools, and non-Catholic non-government (independent) schools.

Achievement measures were based on students' performance in ACER administered tests of literacy and numeracy conducted when the students were in Year 9. Each test comprised 20 short answer or multiple answer tests. The tests included many items used in previous national studies of literacy and numeracy. The measure of achievement was developed from student's test scores.

Intentions to go to university: Questions on intention to go to university were asked in each wave of the survey from 1998 to 2001. This information was coded to distinguish between

those who intended to go to university and those who did not. The question was asked in a different way in 1999 and therefore the 1999 data are not included in the report.

ENTER scores: The Equivalent National Tertiary Entrance Rank (ENTER) scores were obtained from respondents' reports of their tertiary entrance score achieved in Year 12. They were obtained from the telephone interviews in 2002. The tertiary entrance scores in all states except Queensland are understood as equivalent. For Queensland students who obtained an overall position (OP score), their position was converted to an ENTER score according to the updated equivalence scales. Further details on the analysis of tertiary entrance scores can be found in Marks, McMillan, & Hillman (2001).

Main Activity

In each annual interview, respondents are asked to indicate their current activity, such as employment, looking for work, and participation in education and training. Considerable detail is collected on each activity in which they are currently engaged, or have been engaged since the time of the last interview.

The 'main activity' was assessed by the respondent's major activity at the time of interview, usually conducted between September and November. Main activity was categorised into six groups: full-time study; full-time work; part-time study; part-time work; looking for work (unemployed); and 'other'. Full-time study includes degree, diploma or certificate courses at a university, TAFE or private institution. Apprentices are classified as full-time workers. Full-time work is defined as working 30 or more hours per week, and part-time work less than 30 hours. Full-time and part-time study is a judgement made by the respondent. Unemployed is defined by looking for work during the last four weeks and not presently engaged in full-time study or either full- or part-time work. 'Other' is defined residually comprising those not allocated to any of the other five categories. The main activities of this group include 'ill unable to work', 'travel and holidays' and 'home duties'. Respondents were allocated hierarchically according to this ordering of activities. For example, the main activity of those working full-time and studying part-time was categorised as working full-time. Similarly, respondents working part-time but looking for work were defined as working part-time.

Multivariate techniques

The multinominal logit model is used in Chapter 2 of the report. This model is used to analyse nominal or categorical dependent variables. Multinominal logit analysis is an extension of logistic regression which is used to analyse dichotomous dependent variables. The generalised logits model is another form of the general linear model. A major advantage of this technique is that it provides greater understanding of where the effects lie. Like logistic regression, the multinominal logit procedure controls for changes in the marginals. In other words, it controls for differences in the distributions of variables.

The regression coefficients provide an indication of the direction and magnitude of an influence on the dependent variable (in this case, membership of one of the university applicant groups). The sign of the coefficient indicates if the factor has a positive or negative influence, that is, whether it increases or decreases the likelihood of group membership.

The exponents of the logits are odds ratios. Odds ratios are used to provide an indication of the net influence of a variable by providing, for example, the ratio of the odds of a female

Year 12 student applying for university but not receiving an offer to the odds of a male being in that situation. The ratio of these two ratios is called the odds ratio. Odds ratios are always positive. An odds ratio equal to 1 signifies no effect of the variable concerned on group membership. Odds ratios above 1 indicate an increased likelihood of participation and odds ratios below 1 indicate a decreased likelihood. The further an odds ratio is from 1, the stronger the effect of the variable.

APPENDIX 3: SUPPLEMENTARY TABLES

Table A1 University applicant and participant groups by demographic and social background (column percentages)

		Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	
		Applied for university, but no offer	Received an offer but did not enrol in 2002 or 2003	Received an offer, enrolled in 2003	Received an offer, enrolled in 2002	In Year 12 in 2001 but did not apply for university	Not in Year 12 in 2001	Total
Gender	Male	47	40	45	44	54	55	49
	Female	53	60	55	56	46	45	51
Region	Metropolitan	60	48	50	62	53	46	55
	Non-metropolitan	40	52	50	39	47	54	45
Indigenous status	Indigenous	2	1	1	1	2	3	2
	Non-Indigenous	98	99	99	99	98	97	98
Country of birth	Australia	62	77	75	67	71	75	70
	Other English-speaking	9	10	13	10	12	12	11
	Non-English speaking	29	13	12	23	17	13	19
Language background	Non-English	13	5	5	11	10	7	9
	English	87	95	96	89	90	93	91
Parental occupation	Professional	22	25	28	36	18	13	25
	Managerial	16	18	25	19	16	14	17
	Non-manual	19	11	15	12	14	13	13
	Manual	44	45	32	32	52	60	44
Parental education	Not Year 12	50	48	35	36	56	64	49
	Year 12	32	31	35	28	32	26	29
	Post-secondary	18	20	30	35	13	10	22

Note: For each Group in the table each demographic and social background variable sums to 100%; e.g. the gender composition of Group 1 is 47% male and 53% female (after rounding).

Table A2 University applicant and participant groups by educational factors (column percentages)

		Group 1 Applied for university, but no offer	Group 2 Received an offer but did not enrol in 2002 or 2003	Group 3 Received an offer, enrolled in 2003	Group 4 Received an offer, enrolled in 2002	Group 5 In Year 12 in 2001 but did not apply for university	Group 6 Not in Year 12 in 2001	Total
School sector	Government	64	62	54	55	72	84	67
	Catholic	24	23	21	26	20	11	20
	Independent	13	15	25	20	8	5	13
Achievement in literacy & numeracy in Year 9	Lowest quartile	23	16	9	8	34	45	25
	Second lowest quartile	34	26	19	19	29	29	25
	Third quartile	27	32	30	29	24	18	25
	Highest quartile	17	26	41	44	13	8	25
ENTER Score band	90-100	1	6	26	28	<1	0	12
	80-89	4	18	31	29	2	<1	14
	70-79	8	18	18	18	6	0	10
	60-69	17	19	9	9	9	<1	8
	50-59	26	13	8	4	10	<1	6
	<50	31	14	3	5	23	1	9
	No score but in Year 12	16	13	5	7	49	27	22
	Other	0	0	0	0	0	71	19

Note: For each Group in the table each educational factor sums to 100% e.g. the school sector composition of Group 1 is 64% government, 24% Catholic and 13% independent (after rounding).

Table A3 Effects on university applicant and participant groups: multivariate analyses

Comparison	Model 1 (social & demographic variables)	Model 2 (Model 1 + educational background)	Model 3 (Model 2 + ENTER score)
Intercept			
Group 1 vs. Group 4	-1.87***	-1.62***	-1.72***
Group 2 vs. Group 4	-2.02***	-1.79***	-1.72***
Group 3 vs. Group 4	-2.82***	-2.86***	-2.88***
Group 5 vs. Group 4	-0.35***	-0.04	-4.90***
Group 6 vs. Group 4	-0.54***	-0.24**	-0.71***
Gender: Male vs. Female			
Group 1 vs. Group 4	0.17	0.29*	0.13
Group 2 vs. Group 4	-0.12	-0.05	-0.12
Group 3 vs. Group 4	0.16	0.16	0.18
Group 5 vs. Group 4	0.53***	0.69***	0.28*
Group 6 vs. Group 4	0.46***	0.60***	0.42***
Region: Non-metropolitan vs. Metropolitan			
Group 1 vs. Group 4	0.04	-0.07	-0.20
Group 2 vs. Group 4	0.48***	0.41**	0.34*
Group 3 vs. Group 4	0.31*	0.34*	0.34*
Group 5 vs. Group 4	0.49***	0.28***	-0.11
Group 6 vs. Group 4	0.29***	0.16*	-0.01
Indigenous status: Indigenous vs. Non-Indigenous			
Group 1 vs. Group 4	0.74	0.46	-0.02
Group 2 vs. Group 4	-0.24	-0.39	-0.63
Group 3 vs. Group 4	0.24	0.37	0.40
Group 5 vs. Group 4	0.99***	0.49	-0.52
Group 6 vs. Group 4	0.78**	0.42	-0.14

Comparison	Model 1 (social & demographic variables)	Model 2 (Model 1 + educational background)	Model 3 (Model 2 + ENTER score)
Home language: Non-English vs. English			
Group 1 vs. Group 4	0.07	-0.40*	-0.36
Group 2 vs. Group 4	-0.73**	-1.03***	-0.97***
Group 3 vs. Group 4	-0.85*	-0.82*	-0.84*
Group 5 vs. Group 4	-0.54***	-1.42***	-1.47***
Group 6 vs. group 4	-0.21	-0.88***	-0.87***
Parental occupation: Professional vs. Manual			
Group 1 vs. Group 4	-0.80***	-0.47**	-0.28
Group 2 vs. Group 4	-0.57***	-0.36*	-0.25
Group 3 vs. Group 4	-0.20	-0.22	-0.24
Group 5 vs. Group 4	-1.67***	-1.01***	-0.78***
Group 6 vs. Group 4	-1.15***	-0.70***	-0.49***
Parental occupation: Managerial vs. Manual			
Group 1 vs. Group 4	-0.55**	-0.31	-0.13
Group 2 vs. Group 4	-0.38*	-0.23	-0.13
Group 3 vs. Group 4	0.31	0.36	0.35
Group 5 vs. Group 4	-1.03***	-0.63***	-0.22
Group 6 vs. Group 4	-0.70***	-0.40***	-0.17
Parental occupation: Non-manual vs. Manual			
Group 1 vs. Group 4	0.11	0.25	0.31
Group 2 vs. Group 4	-0.35	-0.28	-0.25
Group 3 vs. Group 4	0.28	0.34	0.31
Group 5 vs. Group 4	-0.60***	-0.36**	-0.16
Group 6 vs. Group 4	-0.37***	-0.19	-0.12
School sector: Catholic vs. Government			
Group 1 vs. Group 4	.	-0.26	-0.18
Group 2 vs. Group 4	.	-0.13	-0.09
Group 3 vs. Group 4	.	-0.14	-0.13
Group 5 vs. Group 4	.	-1.18***	-1.95***
Group 6 vs. Group 4	.	-0.44***	-0.34*
School sector: Independent vs. Government			
Group 1 vs. Group 4	.	-0.30	-0.11
Group 2 vs. Group 4	.	-0.20	-0.10
Group 3 vs. Group 4	.	0.31	0.30
Group 5 vs. Group 4	.	-1.33***	-2.78***
Group 6 vs. Group 4	.	-0.84***	-0.61***
Achievement in Year 9: 1 standard deviation difference			
Group 1 vs. Group 4	.	-0.87***	-0.35***
Group 2 vs. Group 4	.	-0.56***	-0.26**
Group 3 vs. Group 4	.	-0.08	-0.10
Group 5 vs. Group 4	.	-1.39***	-0.45***
Group 6 vs. Group 4	.	-1.08***	-0.44***
ENTER score band: 7 levels			
Group 1 vs. Group 4	.	.	-0.59***
Group 2 vs. Group 4	.	.	-0.32***
Group 3 vs. Group 4	.	.	0.02
Group 5 vs. Group 4	.	.	-2.24***
Group 6 vs. Group 4	.	.	-0.84***

Statistical significance: *** P<0.001, ** 0.001<P<0.01, * 0.01<P<0.05

Group 1: In Year 12 in 2001 and applied to enter university, but not offered a place

Group 2: In Year 12 in 2001, received an offer of a university place, but did not enrol in university in either 2002 or 2003

Group 3: In Year 12 in 2001, received an offer of a university place, and enrolled in 2003 after a 'gap' year in 2002

Group 4: In Year 12 in 2001, and entered university in 2002

Group 5: In Year 12 in 2001, but did not apply for a university course

Group 6: Not in Year 12 in 2001 (mostly left school before Year 12)