

Post-school choices – students from low decile schools

This fact sheet looks at the transition of students from low decile schools to tertiary education. It supplements a recent Ministry of Education report on the post-school choices¹ of school leavers. That report focused on answering the question of how well academic achievement at secondary school predicts the tertiary education choices of school leavers. This study builds on the statistical model used in *Post-school choices* but narrows the focus to look at the post-school choices of students from low decile schools.

The main findings of *Post-school choices* included:

- Higher achievement in the National Certificate of Educational Achievement (NCEA) is associated with higher participation in tertiary education.
- Higher achievement in NCEA is strongly associated with participation in bachelors-level study but less so with industry training.
- The decile of the secondary school that school leavers last attended was associated with their post-school choice, although the magnitude of this difference was relatively small and occurred only in relation to some types of tertiary education.

Given the last of these findings, it is likely that the set of factors associated with the post-school choice of students from low decile schools will differ from those from higher decile schools.

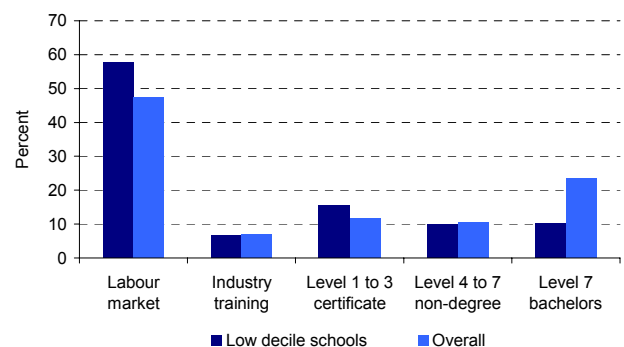
Figure 1 shows that the post-school choices of students from low decile schools differed from the overall cohort of school leavers. The proportion of students from low decile schools undertaking bachelors-level study was less than half the proportion of all school leavers. Students from low decile schools transitioned into industry training at a similar rate to that of all school leavers, while a significantly higher proportion went directly into the labour market. Of the students who left a low decile school in 2004, 10 percent participated in bachelors-

As in *Post-school choices* a statistical model using generalised multinomial logistic regression was used to analyse the association between participation in various types of tertiary education and the study variables. The study was based on the Ministry of Education/NZQA schools to tertiary longitudinal unit-record level dataset. The underlying assumptions of this study and the description of variables are similar to those discussed in *Post-school choices*.

The analytical approach used in this study was slightly different to that used in *Post-school choices*. The variable for the decile of a school leaver's last secondary school (DECILE) was removed from the model because that was the variable used to define the specific group analysed in this study. Consequently, the interaction variables including DECILE were also removed.

level study directly after leaving school in 2004, compared with 7 percent in industry training and 57 percent in the labour market.

Figure 1: Post-school choices of 2004 school leavers



The model used in this study explained about 38 percent of the variability in the dependent variable – post-school choice of students from low decile schools. This was less than the explanatory power of the model used in *Post-school choices* for the full cohort of school leavers (48 percent). Factors outside of the scope of this analysis were therefore more strongly associated with the post-school choices of students from low decile schools than the

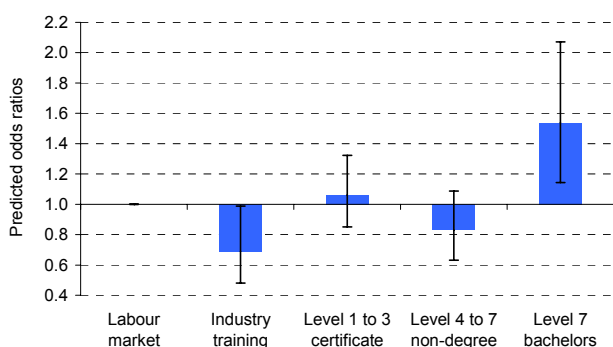
¹ Ussher, S. (2008) *Post-school choices: how well does academic achievement predict the tertiary education choices of school leavers?* Wellington: Ministry of Education.

overall cohort of school leavers. It is possible that family background² is more strongly associated with the post-school choices of students from low decile schools than it is for those from higher decile schools.

In contrast to the model of all school leavers presented in *Post-school choices*, the variables measuring whether a school leaver went to a state³ or private school, the roll size of the secondary school they attended and the regional unemployment rate were not significantly associated with the post-school choice of students from low decile schools. In addition, the interaction between ethnic group and highest school qualification was not significant for students from low decile schools.

Whether students from low decile schools went to a coed or single sex secondary school was significantly associated with their post-school choice. This is in contrast to the model of all school leavers presented in *Post-school choices*. Figure 2 shows that students from coed low decile schools were more likely than students from single sex low decile schools to participate in industry training rather than the labour market or bachelors-level study. Meanwhile, students from single sex low decile schools were more likely than students from coed low decile schools to participate in bachelors-level study rather than any other type of tertiary education.

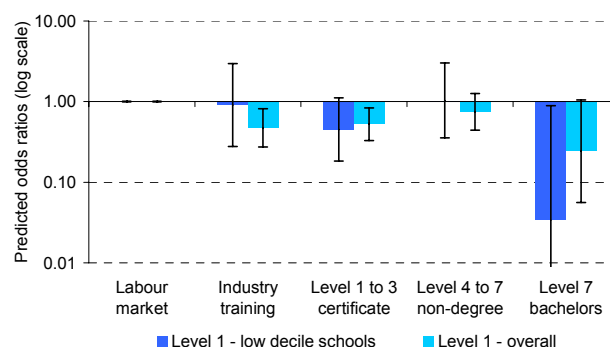
Figure 2: Predicted odds ratios⁴ of post-school choice for students from single sex low decile schools compared with students from coed low decile schools



Notes:
 1. The reference category for the dependent variable of post-school choice was the labour market.
 2. The reference category for school gender was coed schools.
 3. Error bars represent the 95% confidence interval of the predicted odds ratios. If an error bar does not overlap with a point estimate we are 95% confident that there was a difference in the predicted odds ratios.

The association between highest school qualification and the post-school choice of students from low decile schools differed slightly to that for all school leavers, presented in *Post-school choices*. Figure 3 shows that attaining a level 2 NCEA qualification over a level 1 NCEA qualification did not increase the likelihood of students from a low decile school participating in industry training rather than the labour market. This is in contrast to the results for all school leavers presented in *Post-school choices*. The results for students from low decile schools participating in level 1 to 3 certificates at a tertiary education provider were similar.

Figure 3: Predicted odds ratios of post-school choice for school leavers with a level 1 NCEA qualification compared with a level 2 NCEA qualification



Notes:
 1. The reference category for the dependent variable of post-school choice was the labour market.
 2. The reference category for highest school qualification was a level 2 NCEA qualification.
 3. Error bars represent the 95% confidence interval of the predicted odds ratios. If an error bar does not overlap with a point estimate we are 95% confident that there was a difference in the predicted odds ratios.

The results for students from low decile schools who attained a level 3 NCEA qualification were very similar to those for all school leavers presented in *Post-school choices*. That is, school leavers who attained a level 3 NCEA qualification were more likely than school leavers with lower-level NCEA qualifications to participate in bachelors-level study or level 4 to 7 non-degree study at a tertiary education provider rather than enter the labour market. But the likelihood of a school leaver participating in industry training or level 1 to 3 certificate study at a tertiary education provider rather than entering the labour market were not improved by attaining a level 3 NCEA qualification over a level 2 NCEA qualification.

These findings show that the *Post-school choices* finding that academic achievement is more strongly associated with bachelors-level study than other types of tertiary education is even more emphasised for students from low decile schools.

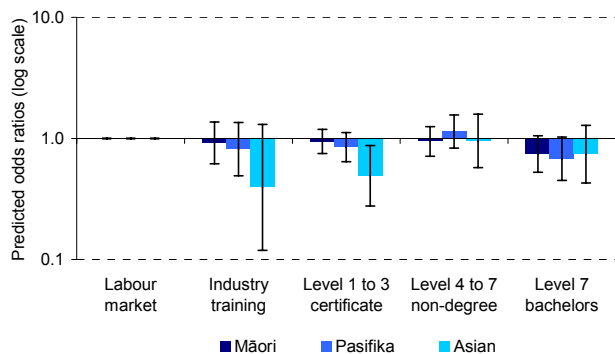
² This could include factors such as family income, parent's education or number of siblings.
³ State integrated schools are included in the 'state' category.
⁴ For a full explanation of predicted odds ratios refer to Ussher (2008).

The association between attaining better results in NCEA level 1 standards – as measured by the expected percentile – and the post-school choices of students from low decile schools was very similar to the results for all school leavers presented in *Post-school choices*. That is, it had a stronger positive association with participation in bachelors-level study than any other type of tertiary education.

The ethnic group of students from low decile schools was associated with their post-school choice, although, as in *Post-school choices*, the magnitude of this association was relatively small. There was a difference from the results for all school leavers presented in *Post-school choices*. Figure 4 shows that Pasifika and Asian students from low decile schools were not more likely than European students to participate in level 4 to 7 non-degree study at a tertiary education provider rather than the labour market.

Figure 4 shows that Asian students from low decile schools were less likely than other students from low decile schools to participate in level 1 to 3 certificate study at a tertiary education provider rather than the labour market. This remains the only significant association between ethnic group and the post-school choice of students from low decile schools.

Figure 4: Predicted odds ratios of post-school choice for Māori, Pasifika and Asian students from low decile schools compared with European students from low decile schools

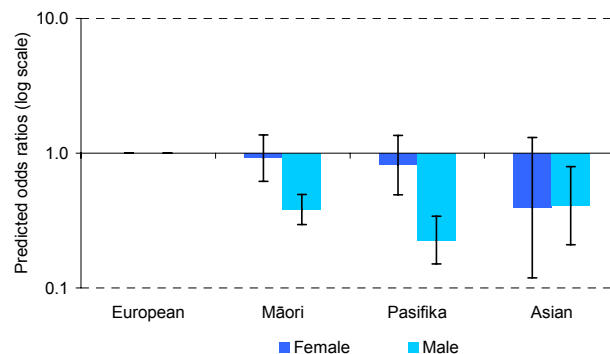


Notes:
 1. The reference category for the dependent variable of post-school choice was the labour market.
 2. The reference category for ethnic group was European.
 3. Ethnic group was measured using the prioritised method of reporting.
 4. Error bars represent the 95% confidence interval of the predicted odds ratios. If an error bar does not overlap with a point estimate we are 95% confident that there was a difference in the predicted odds ratios.

In addition, the interaction variable between ethnic group and gender is significant in this model, which means that ethnic group is associated with the post-school choice of female and male students from low decile schools differently. This is a similar result to that for all school leavers presented in *Post-school choices*.

Figure 5 shows that the likelihood of participating in industry training rather than the labour market was lower for Māori, Pasifika and Asian male students from low decile schools than for European male students from low decile schools. This is in contrast to female students from low decile schools for whom there is no significant difference between ethnic groups. This result is perhaps a reflection of European male students being more likely than any other students to participate in industry training.

Figure 5: Predicted odds ratios of choosing industry training rather than the labour market by gender and ethnic group



Notes:
 1. The reference category for the dependent variable of post-school choice was the labour market.
 2. The reference category for ethnic group was European.
 3. Ethnic group was measured using the prioritised method of reporting.
 4. Error bars represent the 95% confidence interval of the predicted odds ratios. If an error bar does not overlap with a point estimate we are 95% confident that there was a difference in the predicted odds ratios.

Other results from this study were very similar to those found in *Post-school choices*. Gender was strongly associated with the post-school choice of industry training for students from low decile schools.

The influence of peers' participation in tertiary education had a strong association with the post-school choices of students from low decile schools. As *Post-school choices* found, generally, the influence of peers was stronger for school leavers participating in bachelors-level study than it was for other types of tertiary education. In addition, *Post-school choices* found that the influence of peers was more strongly associated with the post-school choice of students from low decile schools than it was for students from high decile schools.

Students from low decile schools in areas remote from tertiary education provision were found not to be disadvantaged when it came to participating in tertiary education.

Table 1: Generalised multinomial logistic regression results⁷

		Post-school choices (reference = labour market)			
		Odds ratios (likelihood of participating in indicated type of tertiary education rather the labour market) ¹			
Explanatory variables	Categories	Industry training	Level 1 to 3 certificate	Level 4 to 7 non-degree	Level 7 bachelors
EXP ²		1.004	0.985**	1.019**	1.071**
HSQ ³	None	0.267*	0.354**	0.491	0.000**
	Level 1	0.906	0.452	1.033	0.034*
	Level 2		REFERENCE CATEGORY		
	Level 3	0.889	2.184	84.174**	113.990**
GENDER	Female		REFERENCE CATEGORY		
	Male	3.716**	0.807	0.857	0.884
ETHNIC	European		REFERENCE CATEGORY		
	Māori	0.919	0.942	0.945	0.743
	Pasifika	0.816	0.847	1.142	0.680
	Asian	0.395	0.491*	0.955	0.741
	Other	-	0.679	0.228*	0.303*
COED ⁴	Coed		REFERENCE CATEGORY		
	Single sex	0.690*	1.061	0.829	1.539**
PEER_INF ⁵		1.014*	1.025**	1.047**	1.061**
ACCESS ⁶		0.994*	1.001	1.006**	1.004
EXP x HSQ	EXP x None	1.005	1.024**	0.999	1.001
	EXP x Level 1	0.999	1.018*	1.000	0.983
	EXP x Level 3	0.980	0.962**	0.951**	0.970**
PEER_INF x HSQ	PEER_INF x None	1.019*	1.007	1.000	1.167**
	PEER_INF x Level 1	1.007	1.006	0.997	1.042
	PEER_INF x Level 3	1.015	1.004	0.960**	0.970**
GENDER x ETHNIC	Male x Māori	0.416**	0.796	0.845	0.633
	Male x Pasifika	0.278**	0.995	0.613*	0.933
	Male x Asian	1.034	1.457	1.469	1.473
	Male x Other	-	0.480	1.919	2.074
Log Likelihood	15,285				
Pseudo R ²	0.378				
N	7,362				

Notes:

1. *, ** represents significant at the 5 percent and 1 percent levels of significance, respectively.
2. The expected percentile was represented in the model by the variable EXP.
3. The highest school qualification that a school leaver has attained was represented in the model by the variable HSQ
4. Whether a school leaver went to a coed or single sex secondary school was represented in the model by the variable COED.
5. The proportion of school leavers from a student's school and year level that participated in tertiary education was represented in the model by the variable PEER_INF.
6. The relative geographic access a school leaver had to tertiary education provision from the secondary school they last attended was represented in the model by the variable ACCESS.
7. Refer to Ussher (2008) for the regression results of the model for all school leavers.