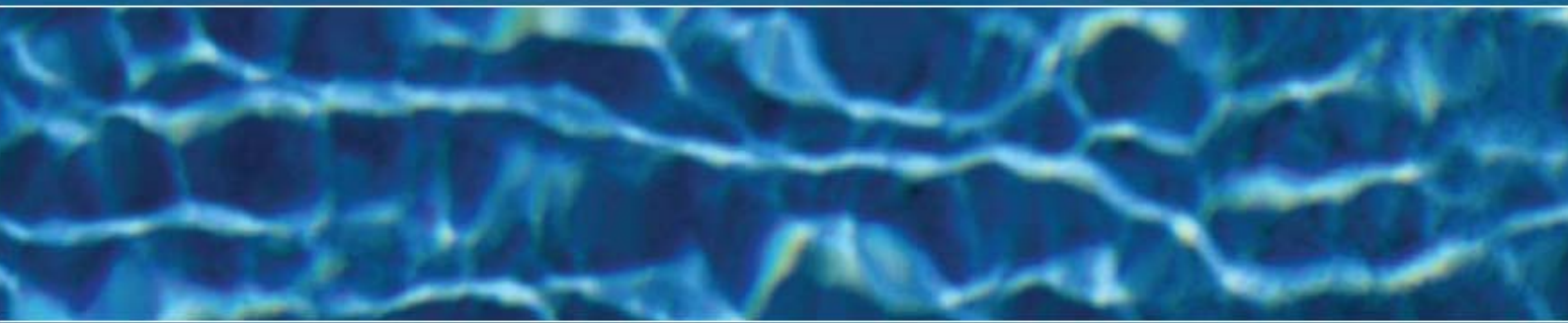




MINISTRY OF EDUCATION

*Te Tāhuhu o te Mātauranga*

# Tertiary education choices of school leavers



This report forms part of a series called *Learners in tertiary education*. Other topics covered by the series are access, pathways, support, participation, retention and qualification completions.

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# Tertiary education choices of school leavers

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# 1 Summary

Participation in tertiary education is a natural progression for many school leavers, whether it is to study for a degree at university or to undertake training as part of the Modern Apprenticeships programme. There are very real benefits to society as well as to the individual in participating in and completing tertiary qualifications (Smart, 2006). Students who enrol in tertiary education directly from school are more likely to complete a qualification than students who enter from the workforce or unemployment (Ussher, 2006a). Given the benefits of tertiary education and the greater success of students who engage in tertiary education soon after leaving school, effective and appropriate transitions between school and tertiary education are an important part of a well-functioning education system.

The purpose of this study is to build an understanding of how school leavers are transitioning into tertiary education. This study examines the transitions of school leavers into tertiary education by a variety of personal, schooling and tertiary education characteristics and seeks to show where differences exist. The study also provides a set of baseline measures that can be used for comparison in future years.

Of the 53,000 domestic students who left school during 2004 after having gained some credits on the National Qualifications Framework (NQF), 65 percent had transitioned into some form of tertiary education by the end of 2006. This included 52 percent of the school leavers who made a direct transition and 13 percent who made an indirect transition; that is, they had taken a year off between school and tertiary education.

The most popular type of tertiary education among school leavers was bachelors-level study at tertiary education providers. Of the 2004 school leavers, 29 percent transitioned into this type of tertiary education, including 23 percent who transitioned directly. In addition, a fifth of 2004 school leavers transitioned into level 1 to 3 certificate study at a tertiary education provider. This is the same level of study that is undertaken at senior secondary school.

Around 8 percent of 2004 school leavers transitioned directly into industry training and 5 percent made an indirect transition. This includes 4 percent of 2004 school leavers who transitioned into the Modern Apprenticeships programme.

## Transition rates of 2004 school leavers by type and level of tertiary study

	Formal, provider-based		Industry training		Targeted training		Total tertiary	
	Direct	Indirect	Direct	Indirect	Direct	Indirect	Direct	Indirect
Level 1-3 certificate	14%	6%	5%	3%	2%	1%	20%	8%
Level 4 certificate	6%	3%	5%	3%	0%	0%	11%	6%
Level 5-7 non-degree	6%	3%	0%	0%	0%	0%	6%	3%
Level 7 bachelors	23%	6%	0%	0%	0%	0%	23%	6%
Total	45%	12%	8%	5%	2%	1%	52%	13%

Note: Refer to the Data and definitions section for further technical explanation of the data and definitions used in this table.

The proportion of school leavers who transitioned into tertiary education increased with higher-level secondary school qualifications. Of those students who left school in 2004 with between one and 39 credits on the NQF, just 38 percent transitioned into tertiary education, compared with 88 percent of students who left school in 2004 with a level 3 qualification. There was a large increase in almost every step up in highest school qualification level, so while 38 percent of school leavers with between one and 39 credits transitioned into tertiary education, a step up to 40 or more credits without a qualification meant an increase to 48 percent of school leavers.

School leavers with a mid-level school qualification were more likely to transition indirectly into tertiary education. It appears that while there is an association between academic achievement at secondary school and direct transition into tertiary education, different motivators may exist for indirect transitions.

There were very different trends between different types and levels of tertiary study. The proportion of school leavers who transitioned into targeted training programmes decreased with higher-level school qualifications. This is not surprising given that these programmes are targeted at people with no or low-level school qualifications.

Having a higher-level school qualification did not necessarily improve the transition rates of school leavers into industry training. The proportion of school leavers transitioning into industry training reached a peak for students with a level 1 qualification and then decreased for those school leavers with higher-level school qualifications. School leavers with a level 3 qualification transitioned into industry training at a similar rate to those who left school with between one and 39 credits.

Three-quarters of 2004 school leavers who had achieved a level 3 school qualification transitioned into bachelors-level study. Indeed, 81 percent of those 2004 school leavers who had achieved the university entrance standard transitioned into bachelors-level study, compared with just 9 percent of school leavers who did not achieve a university entrance standard. This is not surprising given that most degree programmes require the university entrance standard as a minimum for entrance.

Overall, European school leavers transitioned into tertiary education at a higher rate than other ethnic groups. Of the 2004 school leavers, 71 percent of Europeans transitioned into tertiary education, compared with 68 percent of Asians, 52 percent of Pasifika and 51 percent of Māori. Māori and Pasifika school leavers were more likely to transition into targeted training programmes or level 1 to 3 certificate study than other ethnic groups but less likely to transition into bachelors-level study. European school leavers were more likely to transition into industry training than other ethnic groups and Asian school leavers were more likely to transition into bachelors-level study than other ethnic groups.

The differences in transition rates between ethnic groups, specifically the lower rates for Māori and Pasifika, were reduced once the effects of highest school qualification were taken into account. The differences in transition rates into bachelors-level study between ethnic groups were also reduced but still remain to some extent. Māori and Pasifika students who left school with a university entrance standard were less likely to transition into bachelors-level study than European or Asian school leavers.

Females and males transitioned into tertiary education at similar rates. Of those females who left school in 2004, 66 percent transitioned into tertiary education compared with 65 percent of males. Males were three times more likely to transition into industry training than females, while females were more likely to transition into bachelors-level study than males.

School leavers from high-decile schools were more likely to transition into tertiary education than school leavers from low-decile schools. Almost three-quarters of students who left decile 9 and 10 secondary schools in 2004 transitioned into tertiary education, compared with 52 percent of school leavers who left decile 1 and 2 secondary schools.

Again, quite different patterns existed for transitions into different types and levels of tertiary study. School leavers from low-decile schools were more likely to transition into targeted training programmes than school leavers from other schools. School leavers from decile 3 to decile 8 secondary schools transitioned into industry training at the same rate of 14 percent. The rate for transition into industry training for school leavers from decile 1, 2, 9 and 10 secondary schools was slightly lower at 11 percent. This is an indication that the differences that exist in transition rates into

tertiary education associated with ethnic group, academic achievement, and socio-economic status may not exist for transition into industry training.

There was a large disparity among school leavers from different decile schools when transitioning into bachelors-level study. School leavers from decile 9 and 10 secondary schools were over four times more likely to transition into bachelors-level study than school leavers from decile 1 and 2 secondary schools. Around 45 percent of 2004 school leavers from decile 9 and 10 secondary schools transitioned into bachelors-level study compared with 11 percent of school leavers from decile 1 and 2 secondary schools.

Once again, the effect of highest school qualification reduces the differences among school leavers from different decile schools. When school leavers from low-decile schools achieved school qualifications of the same level as school leavers from high-decile schools, they transitioned into tertiary education at very similar rates.

Generally, the better geographic access a school leaver had to tertiary education provision throughout New Zealand the more likely they were to transition into tertiary education. In particular, school leavers from the large cities with the biggest tertiary education providers (such as Auckland City, Wellington City and Christchurch) were more likely to transition into tertiary education. Of the 2004 school leavers from these large cities, 66 percent transitioned into tertiary education, compared with 52 percent of school leavers from areas of New Zealand with the lowest geographic access to tertiary education provision.

## 2 Introduction

Participation in tertiary education is a natural progression for many school leavers, whether it is to study a degree at university or to undertake training as part of the Modern Apprenticeships programme. There are very real benefits to society as well as to the individual in participating in and completing tertiary qualifications. Tertiary qualifications improve people's labour force participation and they lead to higher incomes. In addition, tertiary education is associated with increased labour productivity and improved health and life satisfaction (Smart, 2006).

Students who enrol in tertiary education directly from school are more likely to complete a qualification than students who enter from the workforce or unemployment (Ussher, 2006a). Given the benefits of tertiary education and the greater success of students who engage in tertiary education soon after leaving school, effective and appropriate transitions between school and tertiary education are an important part of a well-functioning education system.

The purpose of this study is to build an understanding of how school leavers are transitioning into tertiary education. The study examines the transitions of school leavers into tertiary education by a variety of personal, schooling and tertiary education characteristics and seeks to show where differences exist. The study also provides a set of baseline measures that can be used for comparison in future years.

This study is based on a longitudinal unit-record level dataset which follows a student through their accumulation of National Qualifications Framework (NQF) credits in senior secondary school and into tertiary education. This dataset was made possible with the introduction of the national student number in 2002, enabling the linking of senior secondary school and tertiary education data. This is the first of a series of analyses of the dataset. Subsequent analyses will look at the more complex interactions of groups of characteristics.

Two limitations currently exist with this longitudinal unit-record level dataset. Firstly, because the senior secondary school data comes from the NQF the dataset is missing those students who gained no credits on the NQF, including those who exclusively undertook alternative qualifications such as the International Baccalaureate. Secondly, the current time-series is short, with students who left school in 2004 the earliest cohort available to analyse. As such, it is this cohort that is reported on throughout this study.

The transition rates published in this report differ from those previously published by the Ministry of Education which have been based on aggregated data. The aggregated data contains the population of school leavers, while the longitudinal unit-record level dataset, because of its limitations, contains a 95 percent sample of this population. Given this, transition rates calculated using the aggregated data will continue to be the Ministry of Education's official statistics. For the latest transition rates calculated using aggregated data refer to Loader & Dalgety (2007).

For more detailed information on the data and definitions used in this report, refer to the Data and definitions section at the end of the report. A set of downloadable statistical tables that supplement this report is available at [www.educationcounts.govt.nz](http://www.educationcounts.govt.nz). These tables contain fuller and additional breakdowns on school leavers' transitions into tertiary education.



### 3 School to tertiary transitions

Of the roughly 53,000 domestic students who left school during 2004 after having gained some credits on the NQF, 65 percent had enrolled in some form of tertiary education by the end of 2006. This included 52 percent of the school leavers who made a direct transition and 13 percent who made an indirect transition; that is, they had taken a year off between school and tertiary education. This compared with the 56 percent of 2005 school leavers who transitioned directly into tertiary education. It should be noted that a number of other school leavers may engage in tertiary education through, for example, short courses and Adult Community Education.

#### 3.1 What sort of tertiary education do school leavers transition into?

##### Key points

The most popular type of tertiary education among school leavers was bachelors-level study at tertiary education providers.

Around 13 percent of school leavers transitioned into industry training, including 4 percent into the Modern Apprenticeships programme.

A fifth of school leavers transitioned into level 1 to 3 certificate study at a tertiary education provider, which is the same level of study that is undertaken at senior secondary school.

Fields of study that were popular with school leavers when compared with the general student population were science, creative arts, and food, hospitality and personal services.

The largest proportion of school leavers transitioned into formal, provider-based courses (excluding targeted training programmes<sup>1</sup>). Around 45 percent of 2004 school leavers transitioned directly into formal, provider-based courses, while 12 percent made an indirect transition. Just over 8 percent of 2004 school leavers transitioned directly into industry training and 5 percent made an indirect transition. This includes 4 percent of 2004 school leavers who transitioned into the Modern Apprenticeships programme. Just 2 percent of 2004 school leavers transitioned directly into targeted training programmes and 1 percent made an indirect transition into these programmes.<sup>2</sup>

**Table 1: Transition rates of 2004 school leavers by type and level of tertiary study**

	Formal, provider-based		Industry training		Targeted training		Total tertiary	
	Direct	Indirect	Direct	Indirect	Direct	Indirect	Direct	Indirect
Level 1-3 certificate	14%	6%	5%	3%	2%	1%	20%	8%
Level 4 certificate	6%	3%	5%	3%	0%	0%	11%	6%
Level 5 -7 non-degree	6%	3%	0%	0%	0%	0%	6%	3%
Level 7 bachelors	23%	6%	0%	0%	0%	0%	23%	6%
<b>Total</b>	<b>45%</b>	<b>12%</b>	<b>8%</b>	<b>5%</b>	<b>2%</b>	<b>1%</b>	<b>52%</b>	<b>13%</b>

Note: Refer to the Data and definitions section for further technical explanation of the data and definitions used in this table.

<sup>1</sup> While targeted training programmes (Youth Training, Training Opportunities and Skill Enhancement) are formal, provider-based programmes, they have been treated separately in this report because of their different characteristics.

<sup>2</sup> Given that not all students enrolled in targeted training are included in this study, the transition into targeted training may be under-estimated. For further information refer to the Data and Definitions section.

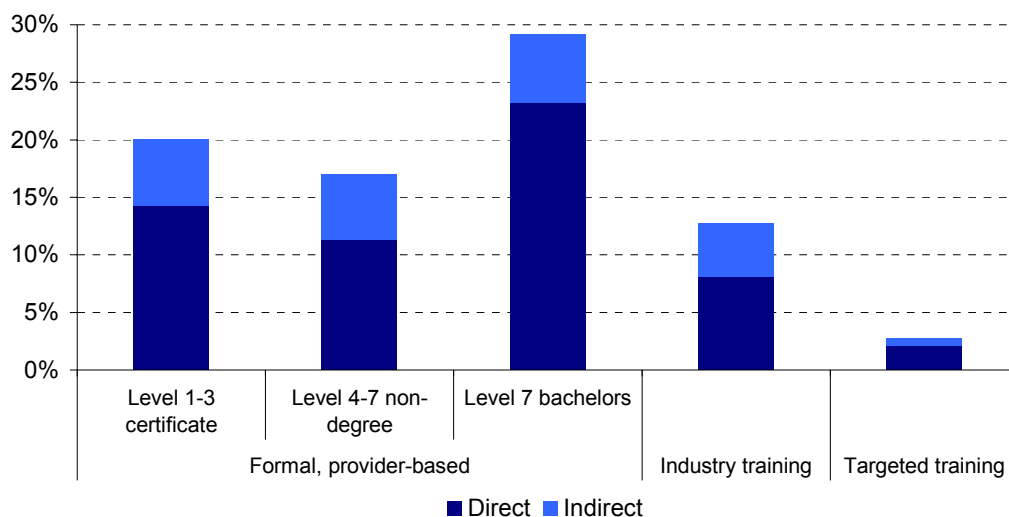
It is possible for school leavers to transition into more than one type of tertiary study, resulting in some overlap among the three types of tertiary education. In fact, 16 percent of 2004 school leavers had transitioned into more than one type of tertiary study by the end of 2006. It is also possible for a school leaver to have made an indirect transition into one type of tertiary study after having made a direct transition into another type of tertiary study. These interactions with different types and levels of tertiary study could be further explored in a pathways analysis.

School leavers who transitioned into industry training were more likely to make an indirect transition than students who transitioned into other types of tertiary study. Of those 2004 school leavers who transitioned into industry training, 36 percent made an indirect transition, compared with 21 percent of students who transitioned indirectly into formal, provider-based courses. This could be due to school leavers who go directly into the labour force delaying formal learning, whether through personal or employer choice. In the case of industry training (as compared with Modern Apprenticeships), it might take the employer some time to size up school leavers' suitability for further training.

Almost all school leavers who transitioned into industry training did so into level 1 to 4 study and around 95 percent of school leavers who transitioned into targeted training did so into level 1 to 3 certificate studies. Meanwhile, those school leavers who transitioned into formal, provider-based tertiary education did so across the full range of undergraduate levels of study.

Despite the diversification of the tertiary education sector in recent years, bachelors-level study remains the most popular level of study for school leavers. As shown in figure 1 around 29 percent of 2004 school leavers transitioned into bachelors-level study at a tertiary education provider, compared with 17 percent into level 4 to 7 non-degree study at a tertiary education provider. In addition, a fifth of 2004 school leavers transitioned into level 1 to 3 certificate study at a tertiary education provider. Given that this is the same level of study that is undertaken at senior secondary school, it would be interesting to undertake further research focused on the school leavers who transition into this level of tertiary study.

**Figure 1: Transition rates of 2004 school leavers by level and type of tertiary study**



Note: Refer to the Data and definitions section for further technical explanation of the data and definitions used in this figure.

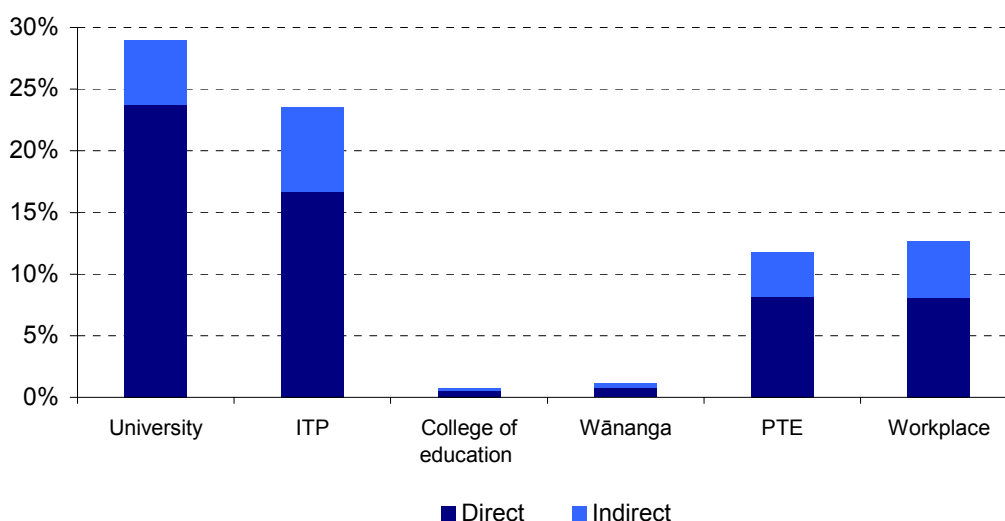
School leavers were more likely to make an indirect transition into level 1 to 3 certificate study than they were to any other level of study, with 8 percent of 2004 school leavers transitioning indirectly into this level of study. This compared with 6 percent for both level 4 certificates and bachelors-level study.

### Sub-sector

School leavers were more likely to transition into a university, with 24 percent of 2004 school leavers transitioning directly to a university and 5 percent transitioning indirectly. Not surprisingly, 89 percent of these students transition to study at bachelors level. Institutes of technology and polytechnics (ITPs) attract the next largest number of school leavers, with 24 percent of 2004 school leavers transitioning to ITPs, including 7 percent indirectly. School leavers were more likely to transition indirectly into ITPs than to universities, consistent with the high proportion of level 1 to 3 certificate study undertaken in ITPs.

Industry training includes a mixture of on-job and off-job training. On-job training is undertaken in the workplace, while off-job training is undertaken in tertiary education providers, particularly ITPs and private training establishments (PTEs). Due to data limitations there is currently no way of accurately determining what proportion of workplace learners were also studying off-job in tertiary education providers.

**Figure 2: Transition rates of 2004 school leavers by sub-sector**



Note: Refer to the Data and definitions section for further technical explanation of the data and definitions used in this figure.

Lower numbers of school leavers transitioned into colleges of education and wānanga than other sub-sectors. For colleges of education this was mainly due to mergers with universities reducing the number of providers in this sub-sector, but other possible reasons are discussed in the Field of study section below.

### Field of study

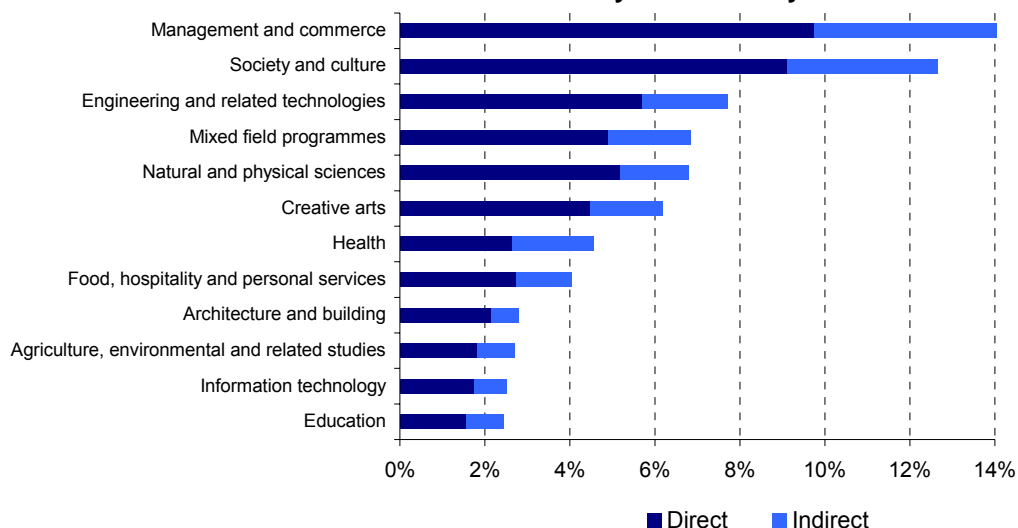
School leavers who transitioned into formal, provider-based tertiary education (including targeted training) were more likely to study management and commerce, or society and culture, than other fields of study. This fits with overall participation trends, where these were the most common fields of tertiary study. Fields of study that were popular with 2004 school leavers when compared with the overall tertiary student population were science, creative arts, and food, hospitality and personal services. Education and agriculture were less popular among 2004 school leavers than among the overall student population.

There are two possible reasons for the field of education being less popular among school leavers. Firstly, much of the tertiary study in the field of education is done via graduate diplomas after a first degree in another field of study is completed. Secondly, there has been a drive to get more mature

people with life experience into teaching and therefore there is a higher proportion of mature students in the education field of study than in other fields of study.

School leavers who transition into health or education were more likely to transition into these fields of study indirectly than other students. Of the 2004 school leavers who transitioned into health, 42 percent did so indirectly, compared with 37 percent for education. The reason for a large proportion of school leavers transitioning indirectly into health is likely to be that many health students, particularly those in medicine, undertake a general science programme in their first year of tertiary study before studying a health subject in their second year.

**Figure 3: Transition rates of 2004 school leavers by field of study**



Notes:

1. Transition rates in this figure refer to only those school leavers who transition into formal, provider-based study, including targeted training. Comparable data for industry training learners was not available.
2. Refer to the Data and definitions section for further technical explanation of the data and definitions used in this figure.

### Study load

School leavers were more likely to be studying full-time than the overall tertiary student population. This is important given that Scott & Smart (2005) found that study load was a highly influential factor in a student's likelihood of completing a qualification within six years. The larger a student's workload was the higher was their likelihood of completing.

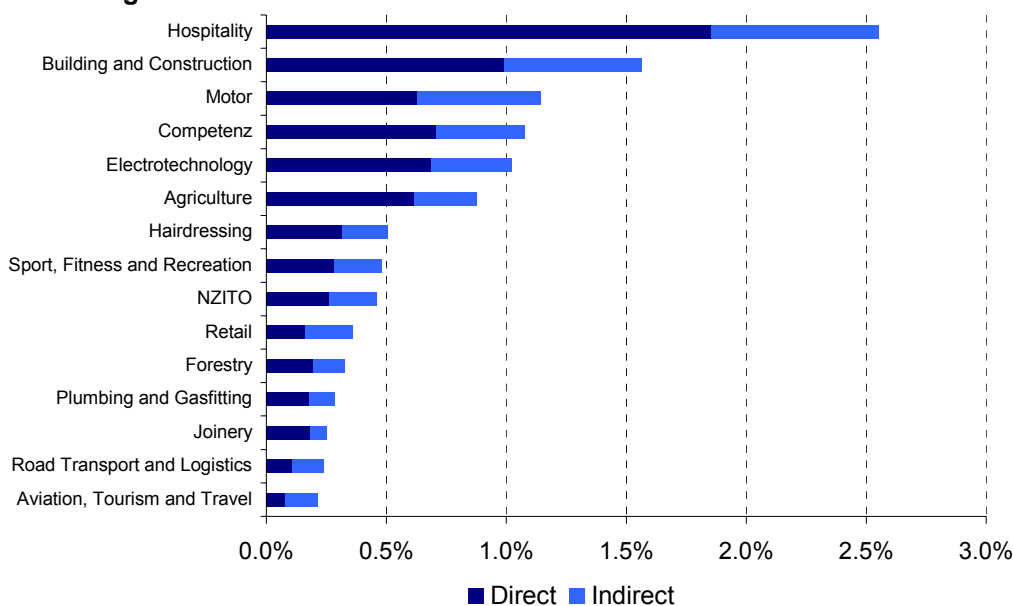
Of the 2004 school leavers who transitioned into formal, provider-based tertiary education (including targeted training), 74 percent studied full-time for a full year, compared with 16 percent who studied full-time on a part-year basis, 5 percent part-time on a full-year basis and 5 percent who studied part-time on a part-year basis. Those school leavers who transitioned into part-time study for a part year were more likely to have transitioned indirectly than other school leavers. The structure of industry training makes any analysis of this type for school leavers who transitioned into industry training less practical.

### Industry training organisations

2004 school leavers participated in 35 of the 41 industry training organisations in the two years after they had left school. School leavers who transitioned into industry training were more likely to be working in the hospitality, and building and construction industries than other industries. While these were not the two largest industry training organisations overall, they were still popular with all

workplace learners. Industry training organisations that were less popular among school leavers when compared with all industry training learners were forestry, and community support services.

**Figure 4: Transition rates of 2004 school leavers by selected industry training organisations**



Notes:

1. Transition rates in this figure refer to only those school leavers who transition into industry training.
2. Refer to the Data and definitions section for further technical explanation of the data and definitions used in this figure.
3. Competenz covers the food and beverage, baking, maritime, manufacturing and engineering industries.

School leavers who transition into the aviation, tourism and travel industries were more likely than other students to take a break before starting industry training. Of the 2004 school leavers who transitioned into the aviation, tourism and travel industry, 63 percent did so indirectly.

### 3.2 What difference does achievement at school make?

#### Key points

Many studies have shown that the academic achievement of a student at secondary school is one of the best predictors of whether a school leaver will transition into tertiary education.

While there is an association between academic achievement at secondary school and direct transition into tertiary education, different motivators may exist for indirect transitions.

While the proportion of school leavers who transitioned into provider-based learning increased with higher-level secondary school qualifications, there did not appear to be a similar trend with transitions into industry training.

Generally, the longer a student stayed at school the more likely they were to transition into tertiary education once they left school.

### Highest school qualification

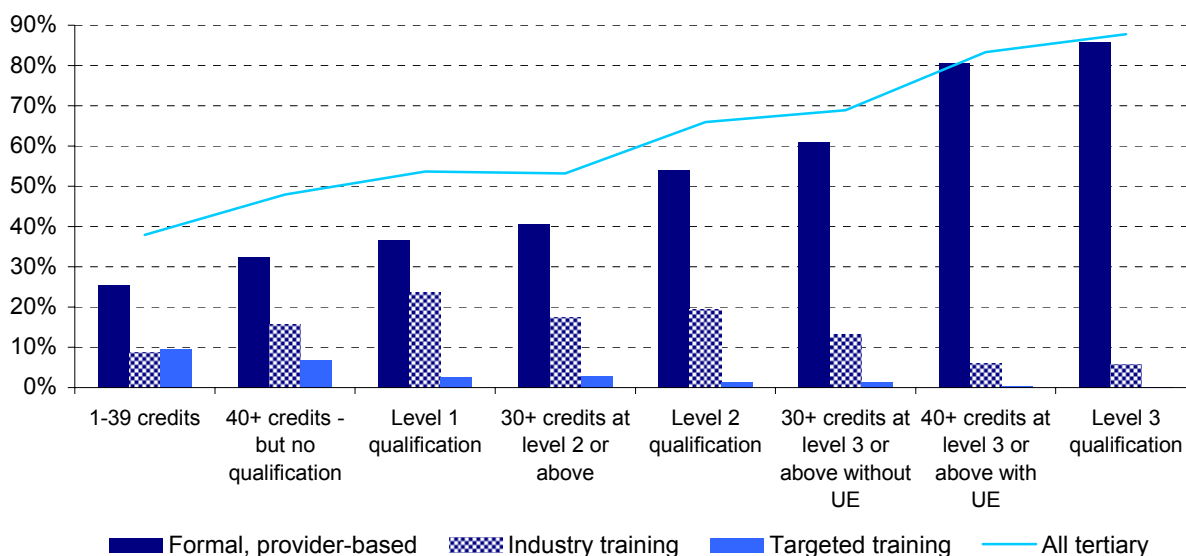
Leach & Zepke (2005) found that many studies have shown that the academic achievement of a student at secondary school is one of the best predictors of whether a school leaver will transition into tertiary education. Maani (2006) found that academic performance at secondary school, as measured by average School Certificate grade, was a better predictor of participation in tertiary education than other factors such as parental income, parents' qualifications, gender and ethnic group.

The proportion of school leavers who transitioned into tertiary education increased with higher-level secondary school qualifications. Figure 5 shows that of those students who left school in 2004 with between one and 39 credits on the NQF, just 38 percent transitioned into tertiary education, compared with 88 percent of students who left school in 2004 with a level 3 qualification. There was a large increase in almost every step up in highest school qualification level, so while 38 percent of school leavers with between one and 40 credits transitioned into tertiary education, a step up to 40 or more credits without a qualification meant an increase to 48 percent of school leavers. The only exception to this was that school leavers who gained 30 or more credits at level 2 transitioned into tertiary education at a lower rate than those who had achieved a level 1 qualification.

Students more likely to transition indirectly into tertiary education were those with a mid-level school qualification, that is those school leavers with anywhere from a level 1 qualification up to 40 or more credits at level 3 or above. There is a clear association between achievement at secondary school and direct transition into tertiary education, while indirect transitions into tertiary education appear to have different motivators. Further research could be carried out to explore this.

While transition rates into formal, provider-based tertiary education by highest school qualification followed the same trend as the overall trend, there were very different trends for both targeted training and industry training. The proportion of school leavers who transitioned into targeted training programmes actually decreased with higher-level school qualifications. This is not surprising given that these programmes are targeted at people with no or low-level school qualifications and offer them training towards employment or further tertiary education.

**Figure 5: Transition rates of 2004 school leavers by highest school qualification and type of tertiary study**



Note: Refer to the Data and definitions section for further technical explanation of the data and definitions used in this figure.

Having a higher-level school qualification did not necessarily improve the transition rates into industry training for students in the two years after leaving school. The proportion of school leavers

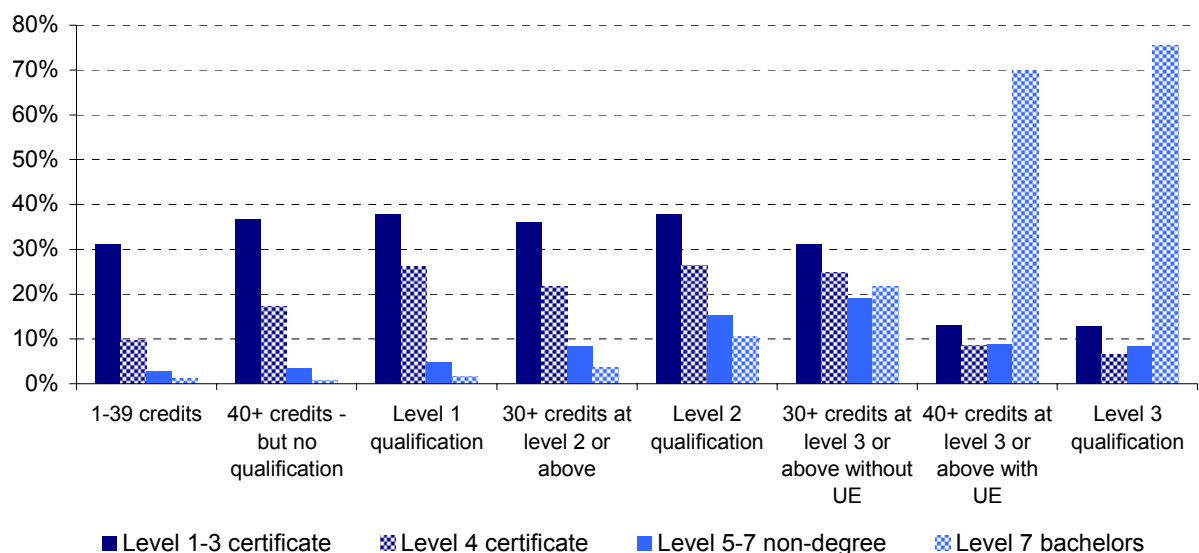
transitioning into industry training reached a peak for students with a level 1 qualification and then decreased for those school leavers with higher-level school qualifications. School leavers with a level 3 qualification transitioned into industry training at a similar rate to those who left school with between one and 39 credits.

Most research that has been done on the influence of academic achievement at secondary school on participation in tertiary education has looked at provider-based learning and particularly university study. It would be of interest then to look further at the effect of school qualifications on participation in industry training. These initial results suggest that the effect would not be as great as it is for provider-based learning. However, this is perhaps to be expected given that most school leavers enter industry training between levels 1 and 4 with very different prerequisite entry levels from those that higher-level provider-based qualifications require. Further research could be carried out to look at the quality of the school qualification students have achieved, in terms of merits and excellences, to determine whether high-performing school leavers are choosing to enter industry training.

As shown in figure 6, transition rates by highest school qualification also varied significantly for the different levels of tertiary education study. Three-quarters of 2004 school leavers who had achieved a level 3 qualification transitioned into bachelors-level study. Indeed, 81 percent of those 2004 school leavers who had achieved the university entrance standard transitioned into bachelors-level study, compared with just 9 percent of school leavers who did not achieve a university entrance standard. This is not surprising given that most degree programmes require the university entrance standard as a minimum for entrance. It should be noted that bachelors level also includes graduate certificates and diplomas, and certificates of proficiency.

The trends for level 4 certificate study and level 5 to 7 non-degree study were very similar. School leavers with a level 2 qualification were more likely to transition into these two levels of study than school leavers with other levels of school qualification. Of those 2004 school leavers with a level 2 qualification, 26 percent transitioned into level 4 certificate study and 15 percent transitioned into level 5 to 7 non-degree study.

**Figure 6: Transition rates of 2004 school leavers by highest school qualification and level of tertiary study**



Note: Refer to the Data and definitions section for further technical explanation of the data and definitions used in this figure.

Those school leavers who had achieved any secondary school qualification up to a level 2 qualification transitioned into level 1 to 3 certificate tertiary study at similar rates. These transition

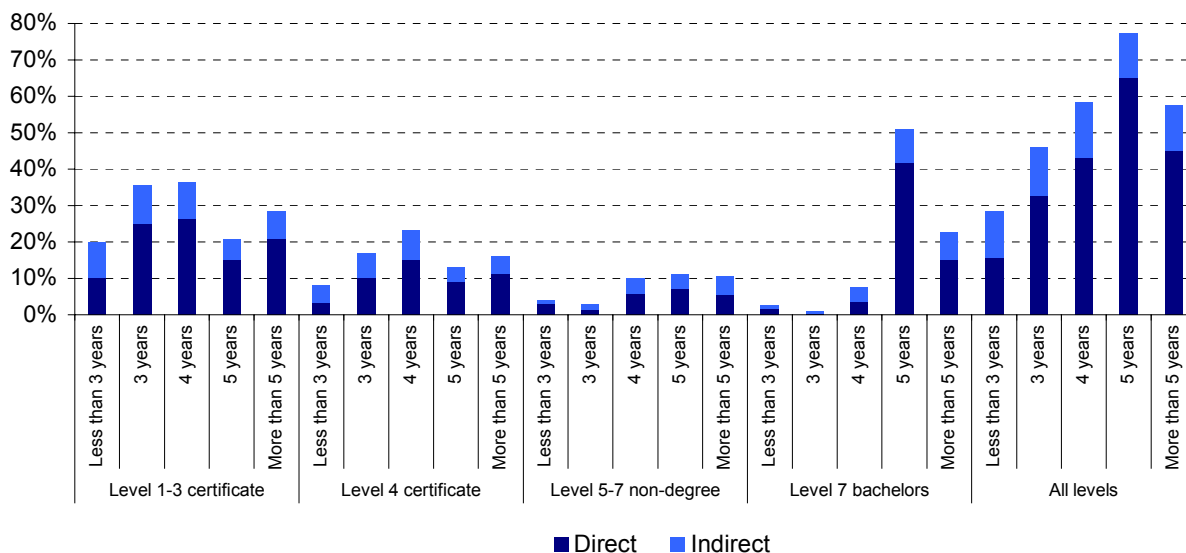
rates varied from 31 percent for 2004 school leavers with between one and 39 credits up to 38 percent for those with a level 1 qualification. There were still 13 percent of 2004 school leavers with a level 3 qualification who transitioned into level 1 to 3 certificate study, which was the same level of study they had already completed at school. However, almost 80 percent of these school leavers also studied at a higher level, including over half who studied at bachelors level.

### Years at secondary school

Generally, the longer a student stayed at secondary school the more likely they were to transition into tertiary education once they left school. The exception to this is that those students who stayed at secondary school longer than five years were less likely to transition into tertiary education than a student who stayed for five years. Staying at secondary school longer than five years is not the norm and the students who do so are likely to have some unique characteristics. It is also of note that those students who stayed longer than five years were less likely to have achieved a level 3 school qualification than those who stayed for five years.

School leavers who had spent three or four years at secondary school were more likely to transition into industry training than school leavers who had spent five years at secondary school. Around 18 percent of 2004 school leavers who had spent four years at secondary school transitioned into industry training, compared with 16 percent of those who had spent three years and 9 percent of those who had spent five years. School leavers who had spent two or three years at secondary school were more likely to transition into targeted training programmes than school leavers who had spent more than three years at secondary school. This is not altogether surprising given that targeted training programmes are mainly at levels 1 to 3, the same levels as they would have been studying in their third and fourth years at secondary school. Thus they appear to have decided to undertake this study at tertiary education providers as an alternative to secondary school.

**Figure 7: Transition rates of 2004 school leavers by years at secondary school and level of tertiary study**



Note: Refer to the Data and definitions section for further technical explanation of the data and definitions used in this figure.

Over half of 2004 school leavers who had spent five years at secondary school transitioned into bachelors-level study, while the transition rates for school leavers who spent less than five years at secondary school were below 10 percent. This is not surprising given that the academic requirements for entrance into degree study are usually met in the fifth year at secondary school. While it may be less so than in the past, it also emphasises the perception that year 13 at secondary school is a



preparation year for university. At certificate level the highest transition rates were for those school leavers who had spent four years at secondary school.

School leavers who had spent four years at secondary school were more likely to transition indirectly into tertiary education than other students, while those who had spent five years at secondary school were the least likely to transition indirectly into tertiary education. However, of those 2004 school leavers who transitioned into tertiary education after having spent less than three years at secondary school, 45 percent made the transition indirectly. This was a higher proportion than for school leavers who had spent longer at secondary school.

### 3.3 Ethnic, age and gender differences

#### Key points

European and Asian school leavers were more likely to transition into tertiary education than Māori and Pasifika school leavers.

When students left school with similar levels of qualifications the transition rate was very similar between ethnic groups. Therefore the lower rates at which Māori and Pasifika transitioned into tertiary education were reduced once the effects of highest school qualification were taken into account.

The differences in transition rates into bachelors-level study between ethnic groups were also reduced but still remained to some extent.

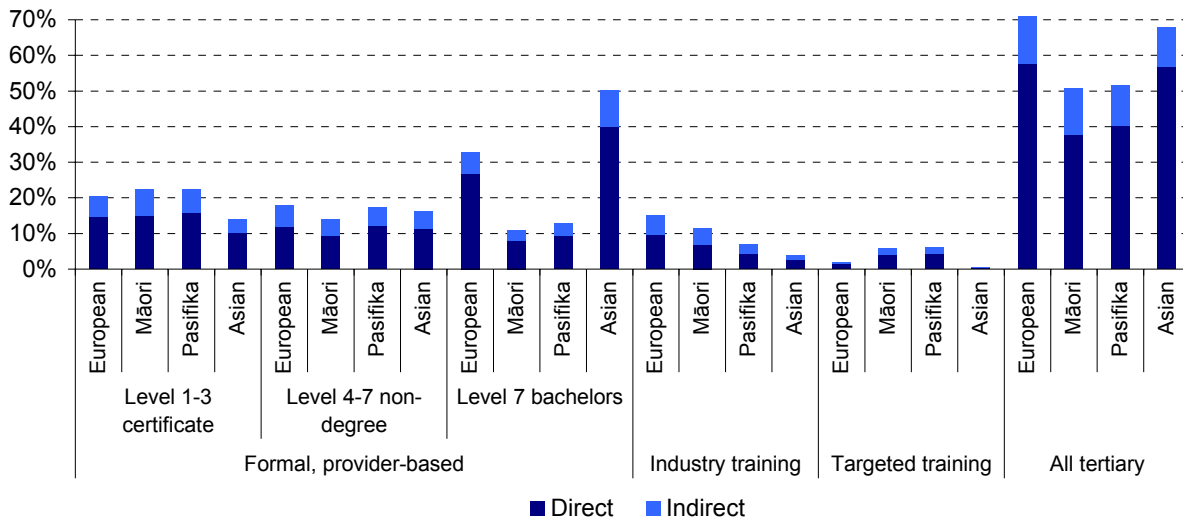
Overall, females and males transitioned into tertiary education at similar rates. Females were more likely to transition into bachelors-level study, while males were more likely to transition into industry training.

#### *Ethnic group*

Overall, European school leavers transitioned into tertiary education at a higher rate than other ethnic groups. Of the 2004 school leavers, 71 percent of Europeans transitioned into tertiary education, compared with 68 percent of Asians, 52 percent of Pasifika and 51 percent of Māori. There were differences between the types of tertiary education that school leavers transitioned into. Māori and Pasifika were more likely to transition into targeted training programmes than other ethnic groups but less likely to transition into formal, provider-based courses. Asian school leavers were less likely to transition into either targeted training or industry training than other ethnic groups but more likely to transition into formal, provider-based courses.

Asian school leavers were more likely to transition into bachelors-level study than other ethnic groups. Of the 2004 school leavers, 50 percent of Asians transitioned into bachelors-level study, compared with 33 percent of Europeans, 13 percent of Pasifika and 11 percent of Māori. In contrast, Asian school leavers were less likely to transition into level 1 to 3 certificate study than other ethnic groups, while Māori were the most likely to transition into this level. European and Asian school leavers were more likely to transition into bachelors-level study than any other level of study. Almost three-quarters of Asian school leavers who transitioned into tertiary education did so into bachelors-level study. Māori and Pasifika, however, were more likely to transition into level 1 to 3 certificate study than any other level of study. Around 71 percent of Māori school leavers who transitioned into tertiary education did so into level 1 to 3 certificate study.

**Figure 8: Transition rates of 2004 school leavers by ethnic group, and level and type of tertiary study**

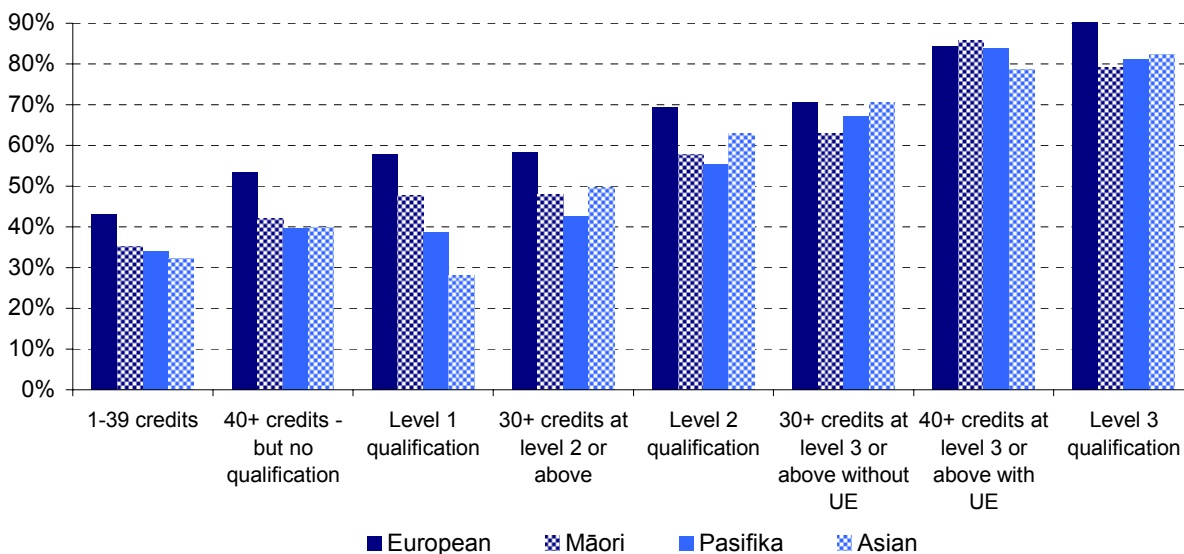


Note: Refer to the Data and definitions section for further technical explanation of the data and definitions used in this figure.

A high proportion of Māori school leavers who transitioned into tertiary education did so after taking a break from study for a year. A quarter of 2004 Māori school leavers transitioned indirectly into tertiary education, compared with 22 percent of Pasifika school leavers, 19 percent of Europeans and 16 percent of Asians. The Māori school leavers who transitioned indirectly were still more likely to be transitioning into level 1 to 3 certificate study than any other level of study.

Figure 9 shows that the differences in transition rates between ethnic groups, specifically the lower rates for Māori and Pasifika, were reduced once the effects of highest school qualification were taken into account. When students left school with any school qualification higher than a level 2 qualification the transition rates were very similar between ethnic groups. While this trend generally held true across all school qualifications, there were some exceptions, notably that European school leavers with lower school qualifications were more likely to transition into tertiary education than other ethnic groups.

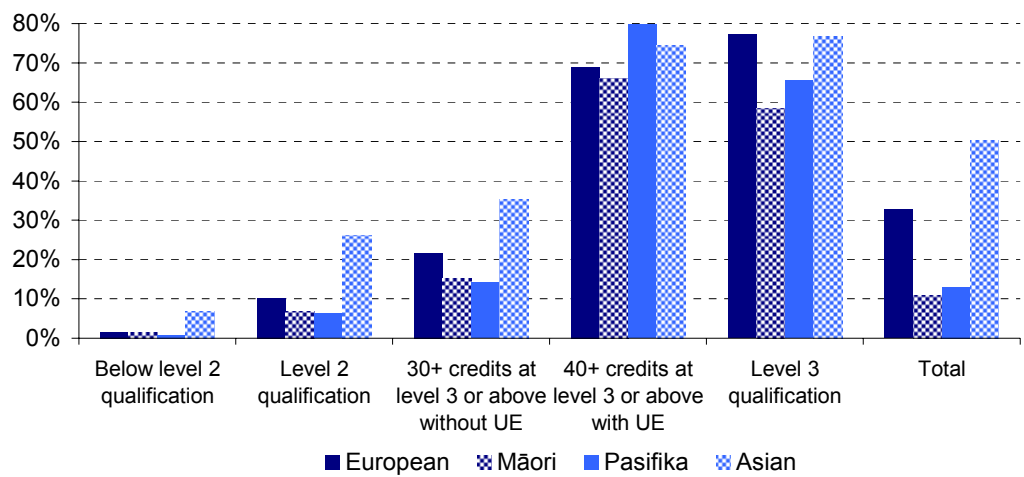
**Figure 9: Transition rates of 2004 school leavers by highest school qualification and ethnic group**



Note: Refer to the Data and definitions section for further technical explanation of the data and definitions used in this figure.

As shown in figure 10, the differences in transition rates into bachelors-level study between ethnic groups were also reduced but still remained to some extent. Māori and Pasifika students who left school with a level 3 qualification were less likely to transition into bachelors-level study than European or Asian school leavers. Interestingly, Māori and Pasifika students who left school with a university entrance standard but without a level 3 qualification were more likely to transition into bachelors-level study than those who gained a level 3 qualification, which was in contrast to European and Asian school leavers. Of those students who left school in 2004 with a university entrance standard, 82 percent of European students transitioned into bachelors-level study, compared with 81 percent of Asian students, 77 percent of Pasifika students and 70 percent of Māori students.

**Figure 10: Transition rates into bachelors-level study of 2004 school leavers by highest school qualification and ethnic group**



Note: Refer to the Data and definitions section for further technical explanation of the data and definitions used in this figure.

While more Māori students leave school with no or low-level qualifications than other ethnic groups (Ministry of Education, 2006), when Māori students did achieve at secondary school their transition rate into tertiary education was as high as that of other ethnic groups. As Earle (2007) points out, in order for more Māori to participate and achieve in tertiary education, particularly at higher levels of study, the most important change that can be made is to increase the number of Māori secondary school students achieving university entrance or better.

### Age

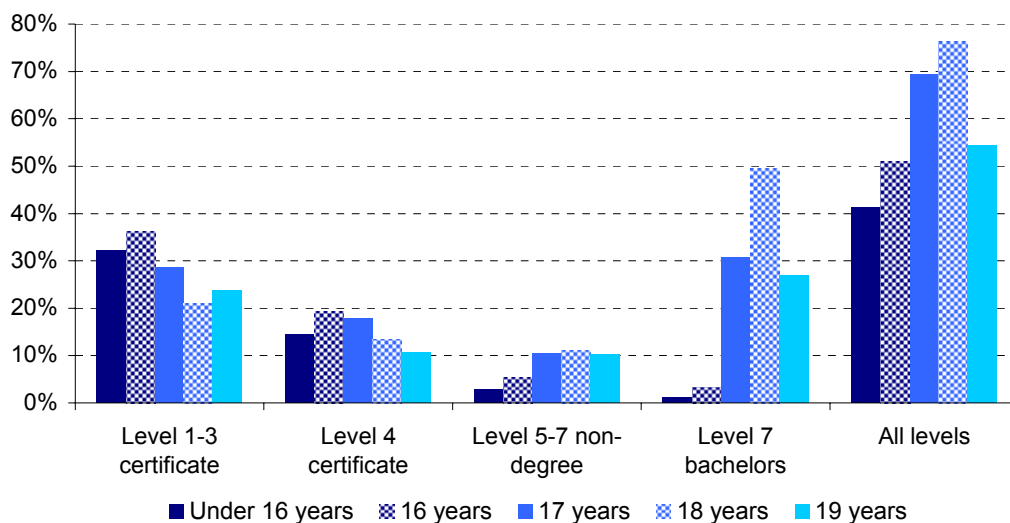
There was a high association between age and both years at secondary school and highest school qualification; that is, the older a student was the more years they will have spent at secondary school and the more qualified they were likely to be. Therefore the patterns of transition into tertiary education by age were very similar to those of years at secondary school.

Generally the older students were when they left school the more likely they were to transition into tertiary education. The exception to this was that the small numbers of students who left school at the age of 19 years were less likely to transition into tertiary education than 17 and 18 year olds.

There were differences, however, when transitions into different levels of tertiary study were considered. Predictably, younger school leavers were more likely to transition into certificate-level study than older school leavers. Of the 2004 school leavers, 36 percent aged 16 years transitioned into level 1 to 3 certificate study, compared with 21 percent of school leavers aged 18 years. The general trend held true at levels 5 to 7 of both non-degree and bachelors-level study. 2004 school leavers aged 18 years were 15 times more likely to transition into bachelors-level study than school leavers aged 16 years and 1.6 times more likely than those aged 17 years. It was in bachelors-level

study that the biggest disparities were seen in transition rates between ages. This reflects the general requirement that students complete a level 3 secondary school qualification before entering a degree.

**Figure 11: Transition rates of 2004 school leavers by level of tertiary study and age**

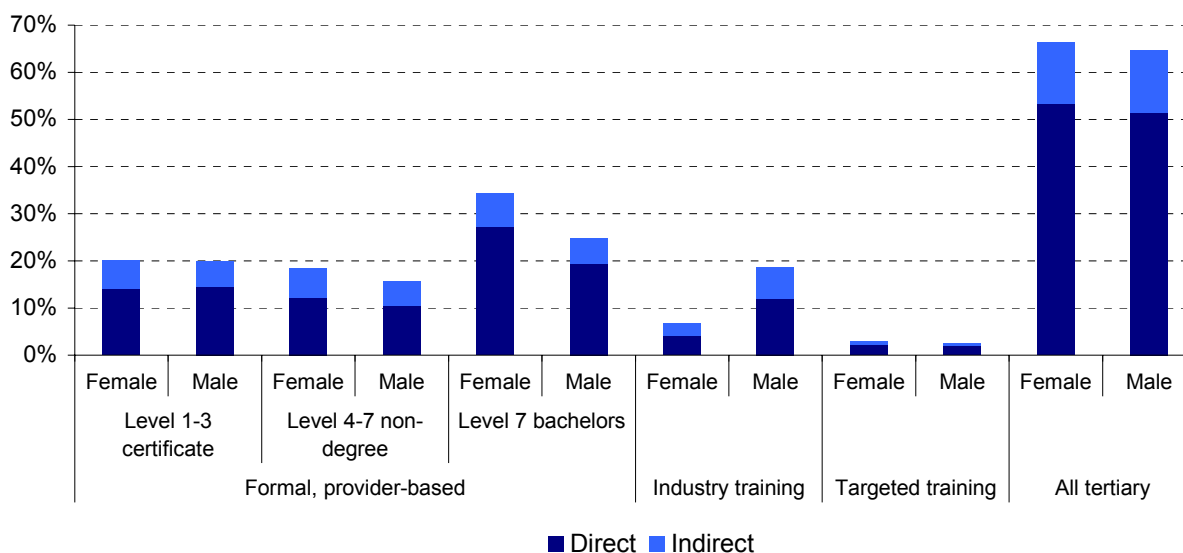


Note: Refer to the Data and definitions section for further technical explanation of the data and definitions used in this figure.

### Gender

Females and males transitioned into tertiary education at similar rates. Of those females who left school in 2004, 66 percent transitioned into tertiary education, compared with 65 percent for males. Females and males transitioned indirectly into tertiary education at similar rates. Males were three times more likely to transition into industry training than females and transitioned into targeted training programmes at similar rates as females.

**Figure 12: Transition rates of 2004 school leavers by gender, and level and type of tertiary study**



Note: Refer to the Data and definitions section for further technical explanation of the data and definitions used in this figure.

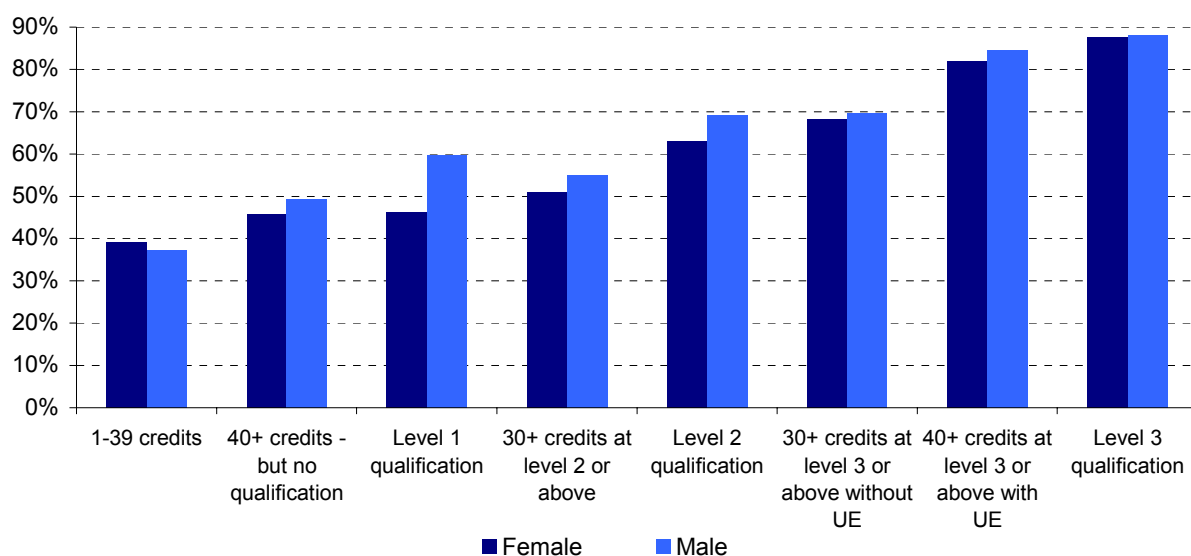
Males were more likely than females to transition into lower-level study such as certificates. Almost 30 percent of male 2004 school leavers transitioned into level 1 to 3 certificate study, compared with a

quarter of females. However, females were more likely to transition into bachelors-level study, with 34 percent of female 2004 school leavers transitioning into this level, compared with a quarter of males. Further to this, females were more likely to transition into bachelors-level study than level 1 to 3 certificate study, whereas males were more likely to transition into level 1 to 3 certificate study. This was partly due to the higher number of males who transitioned into industry training, which is heavily weighted to study below bachelors level.

Figure 13 shows that generally, of those students who left school with similar qualifications, males were more likely to transition into tertiary education than females. However, the transition rates were very similar for the highest levels of school qualifications, such as a level 3 qualification. Around 88 percent of both females and males who left school in 2004 with a level 3 qualification transitioned into tertiary education.

The biggest difference between female and male school leavers transitioning into tertiary education occurred for those students who left school with a level 1 qualification. Of those students who left school in 2004 with a level 1 qualification, 60 percent of males transitioned into tertiary education, compared with 46 percent of females. This was due to the high number of male school leavers who transitioned into industry training with a level 1 qualification. The only level of school qualification where female school leavers transitioned into tertiary education at a higher rate than males was for those students who left school with between one and 39 credits.

**Figure 13: Transition rates of 2004 school leavers by highest school qualification and gender**



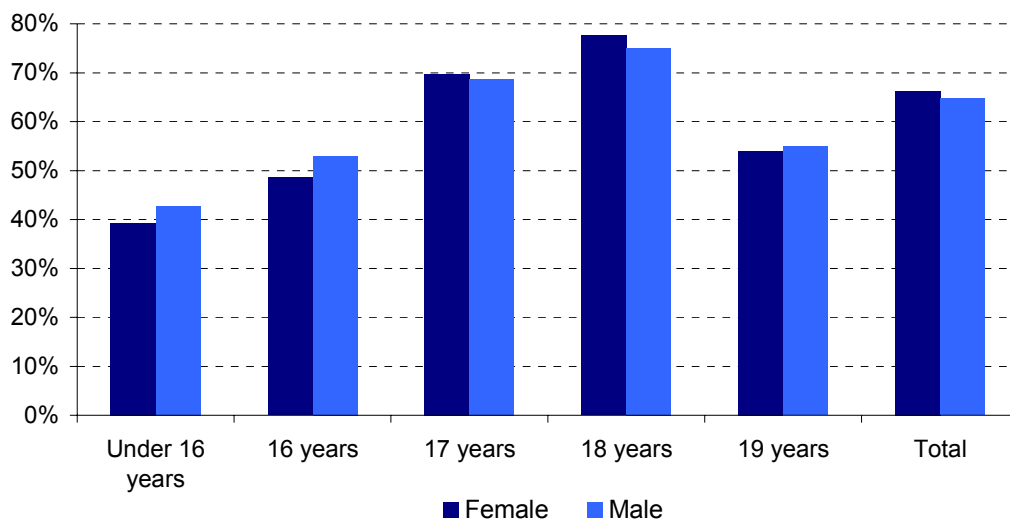
Note: Refer to the Data and definitions section for further technical explanation of the data and definitions used in this figure.

There were also some subtle gender differences among ethnic groups as shown in figure 14. While female and male European school leavers transitioned into tertiary education at very similar rates, among Māori, Pasifika and Asian school leavers females were more likely to transition into tertiary education. Of 2004 Māori school leavers, 53 percent of females transitioned into tertiary education, compared with 48 percent of males. For Pasifika school leavers, the corresponding rates were 58 percent for females and 45 percent for males.

Males who left school at an early age were more likely to transition into tertiary education than females who left at an early age. Around 53 percent of males who left school in 2004 aged 16 years transitioned into tertiary education compared with 49 percent of females. This is due to the higher number of males who transitioned into industry training after leaving school before turning 17 years of

age. Of those students who left school at 17 or 18 years, females were more likely to transition into tertiary education than males. Around 78 percent of 2004 female school leavers aged 18 years transitioned into tertiary education compared with 75 percent of males.

**Figure 14: Transition rates of 2004 school leavers by age and gender**



Note: Refer to the Data and definitions section for further technical explanation of the data and definitions used in this figure.

### 3.4 School characteristic differences

#### Key points

The differences that exist in transition rates into tertiary education associated with school decile do not appear to exist for transitions into industry training. This is a similar trend to differences associated with highest school qualification and ethnic group.

Many of the differences in transition rates that exist for different school characteristics, including school decile, were reduced once the effect of highest school qualification was accounted for.

Generally, the better geographic access a school leaver had to tertiary education provision the more likely they were to transition into tertiary education. This particularly held true for school leavers transitioning into bachelors-level study.

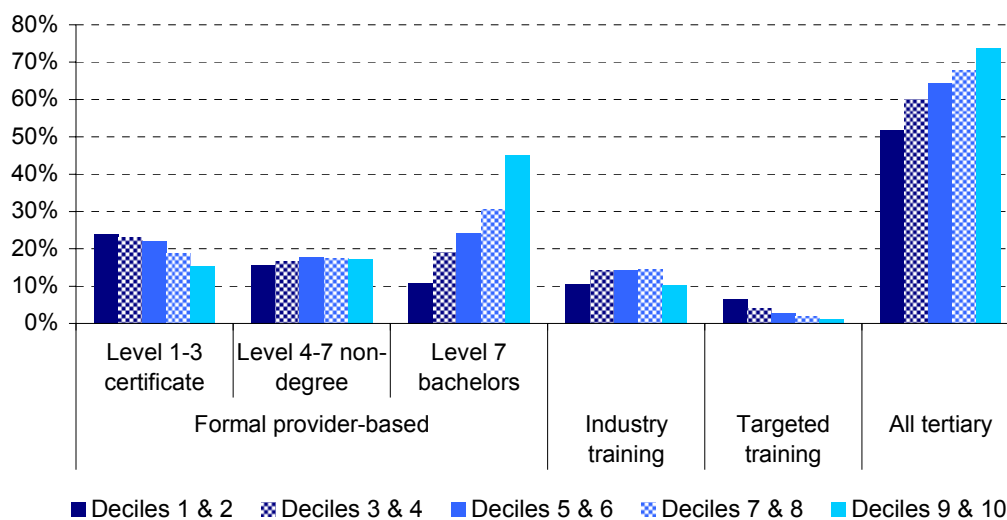
#### School decile

School leavers from high-decile schools were more likely to transition into tertiary education than school leavers from low-decile schools. Almost three-quarters of students who left decile 9 and 10 secondary schools in 2004 transitioned into tertiary education, compared with 52 percent of school leavers who left decile 1 and 2 schools.

While the transition rate into formal, provider-based tertiary education followed a similar pattern to the overall trend, targeted training and industry training followed quite different patterns. School leavers from low-decile schools were more likely to transition into targeted training than school leavers from other schools. Around 7 percent of students who left decile 1 and 2 secondary schools in 2004

transitioned into targeted training programmes, compared with 1 percent of those who left decile 9 and 10 schools.

**Figure 15: Transition rates of 2004 school leavers by level and type of tertiary study, and school decile**



Note: Refer to the Data and definitions section for further technical explanation of the data and definitions used in this figure.

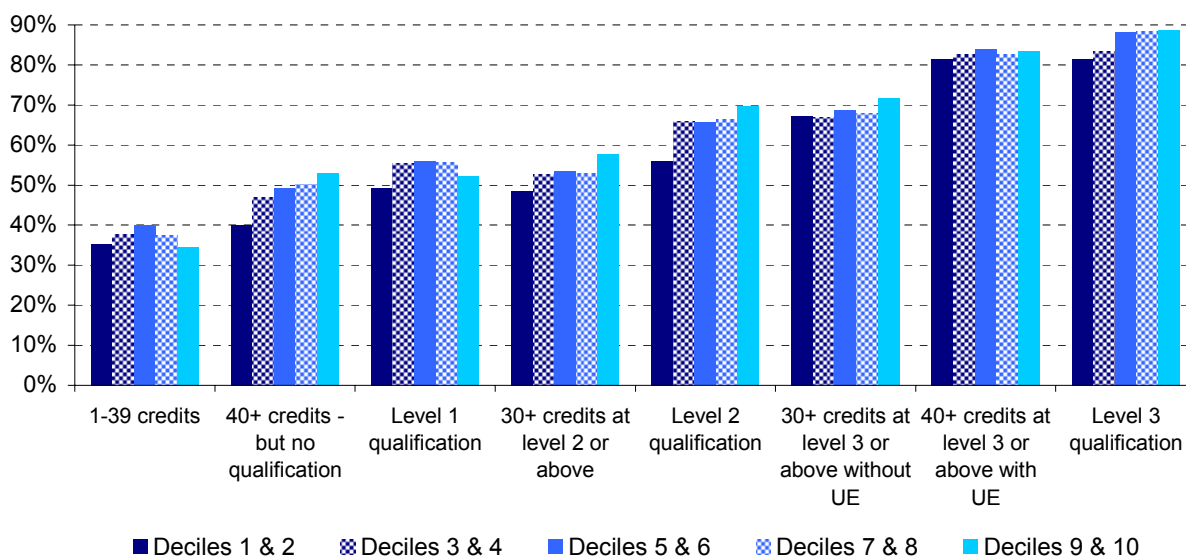
The disparities that exist between school leavers from different decile schools for transition into formal, provider-based tertiary education were not so obvious for transition into industry training. This was particularly so across school leavers from decile 3 to decile 8 schools, where 2004 school leavers transitioned into industry training at a rate of 14 percent. The rate for transition into industry training for school leavers from decile 1 and 2 schools and decile 9 and 10 schools was slightly lower at 11 percent. This is again an indication that the disparities that exist in transition rates into tertiary education associated with ethnic group, academic achievement, and socio-economic status may not exist for transition into industry training.

There was a large disparity among school leavers from different decile schools when transitioning into bachelors-level study. School leavers from decile 9 and 10 schools were over four times more likely to transition into bachelors-level study than school leavers from decile 1 and 2 schools. Around 45 percent of 2004 school leavers from decile 9 and 10 schools transitioned into bachelors-level study, compared with 11 percent of school leavers from decile 1 and 2 schools.

School leavers from low-decile schools were more likely to transition into level 1 to 3 certificate study than school leavers from high-decile schools. However, the transition rates into level 4 certificate study and level five to seven non-degree study were very similar for school leavers across all decile schools. School leavers from decile 1 to decile 6 schools were more likely to transition into level one to three certificate study than any other level, while school leavers from decile 7 to decile 10 schools were more likely to transition into bachelors-level study than any other level.

Figure 16 shows that once again the effect of highest school qualification reduced the disparities between school leavers from schools of different deciles. When school leavers from low-decile schools achieved the same school qualifications as school leavers from high-decile schools, they transitioned into tertiary education at very similar rates.

**Figure 16: Transition rates of 2004 school leavers by highest school qualification and school decile**

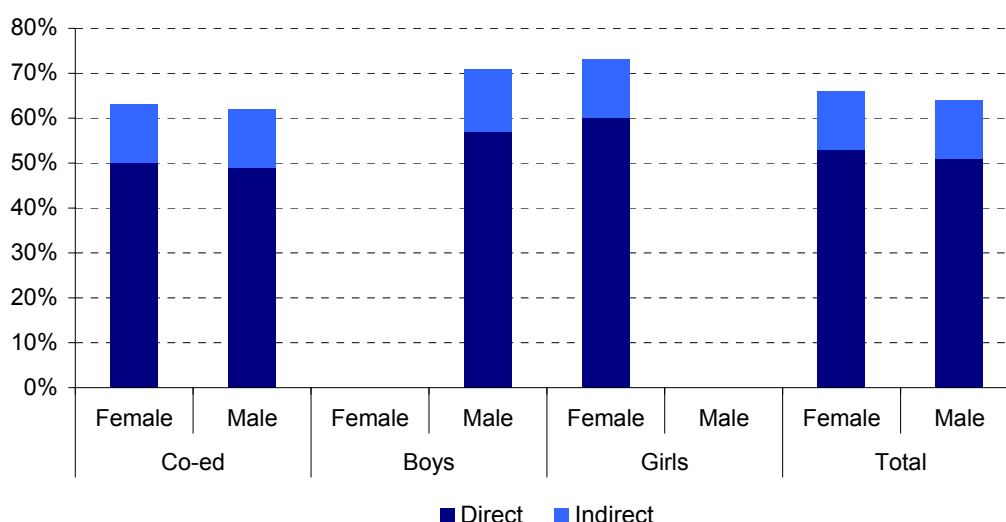


Note: Refer to the Data and definitions section for further technical explanation of the data and definitions used in this figure.

### Single gender versus co-ed

School leavers from single gender schools were more likely to transition into tertiary education than school leavers from co-ed schools. In fact, male school leavers from boys' schools were more likely to transition into tertiary education than females from co-ed schools. It should be noted that school gender has a high association with school decile; a higher proportion of single gender schools are high decile compared with co-ed schools. These disparities in transition rates were reduced by looking at school gender by school decile and eliminated when looking at school gender by highest school qualification achieved.

**Figure 17: Transition rates of 2004 school leavers by gender and school gender**



Note: Refer to the Data and definitions section for further technical explanation of the data and definitions used in this figure.

### School authority

School leavers from state-integrated and private schools were more likely to transition into tertiary education than school leavers from state schools. Around three-quarters of 2004 school leavers from

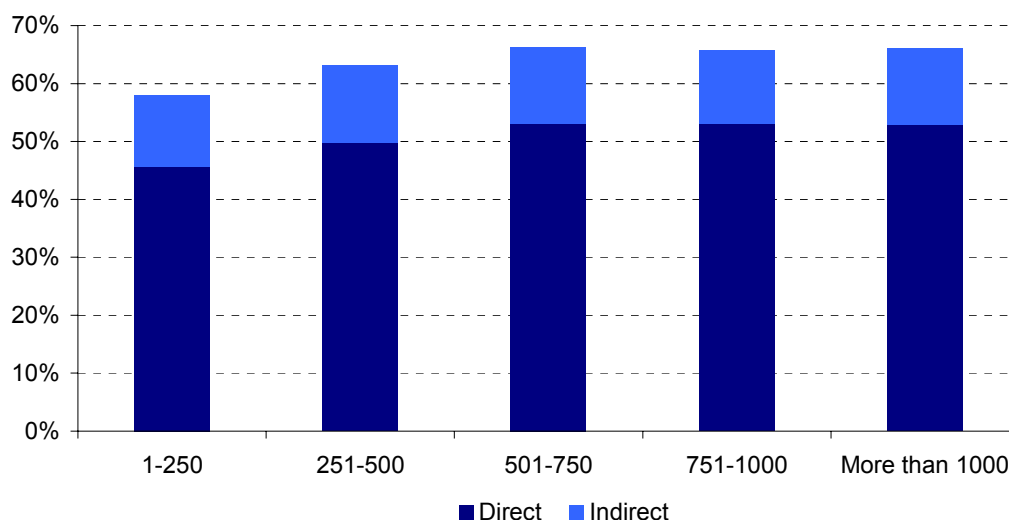


state-integrated and private schools transitioned into tertiary education, compared with 64 percent of school leavers from state schools. School leavers from state schools were, however, more likely to transition into industry training than school leavers from state-integrated or private schools. These differences were eliminated once highest school qualification was taken into account.

### School roll size

There was a slight trend for school leavers from larger schools to be more likely to transition into tertiary education than school leavers from small schools. However, the trend was not a consistent one, with 2004 school leavers from schools with a 2004 roll of 501 or more students equally likely to transition into tertiary education.

**Figure 18: Transition rates of 2004 school leavers by school roll size**

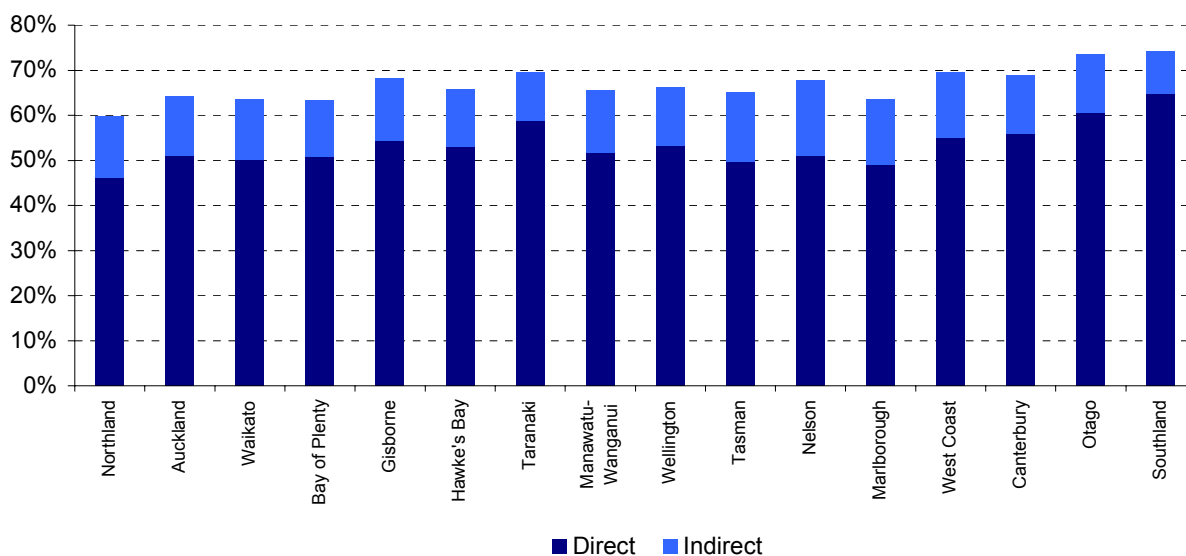


Note: Refer to the Data and definitions section for further technical explanation of the data and definitions used in this figure.

### School region

The regions with the highest proportions of school leavers transitioning into tertiary education were Otago and Southland. It is likely that these high proportions were in part due to the zero fees policy of the Southern Institute of Technology that were in place at this time. Just below these regions were Taranaki, the West Coast and Canterbury. The region that had the lowest proportion of school leavers transitioning into tertiary education was Northland. This is likely to be an ethnic group effect, with Northland having a high proportion of Māori in its population, compared with other regions. The isolation of the Northland region could also be a factor in the low transition rate. Half of the students who left The Correspondence School in 2004 transitioned into tertiary education, perhaps reflecting its role as a second chance provider to school students.

**Figure 19: Transition rates of 2004 school leavers by region of school**



Note: Refer to the Data and definitions section for further technical explanation of the data and definitions used in this figure.

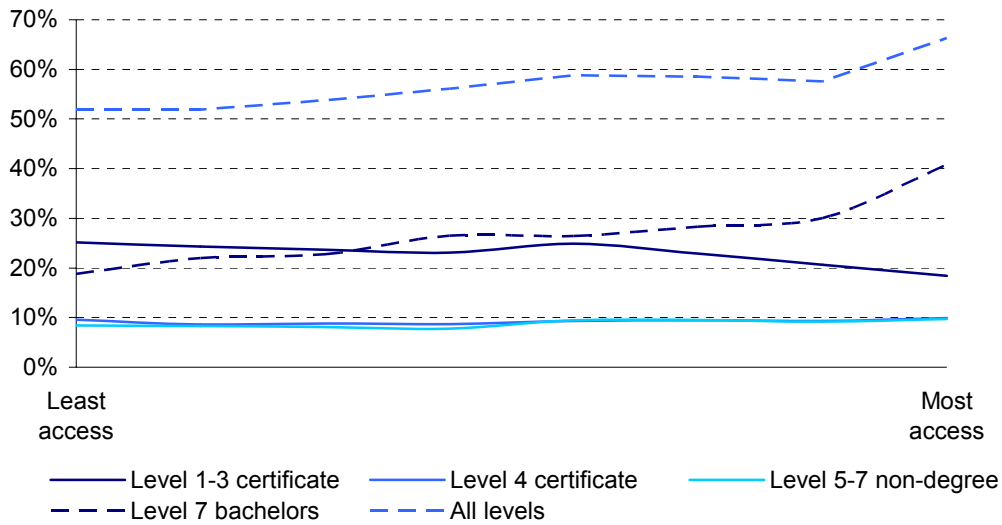
### *Geographic access to tertiary education*

Generally, the better geographic access a school leaver had to tertiary education provision the more likely they were to transition into tertiary education. In particular, school leavers from the large cities with the biggest tertiary education providers (such as Auckland City, Wellington City and Christchurch) were more likely to transition into tertiary education. Of those 2004 school leavers from these large cities, 66 percent transitioned into tertiary education, compared with 52 percent of school leavers from areas of New Zealand with the lowest geographic access to tertiary education provision.

Ussher (2006b) introduced a variable that is designed to measure a student's relative geographic access to tertiary provision throughout New Zealand from their last secondary school. Given the workplace-based nature of industry training, it does not make sense to look at this variable for learners in industry training.

Figure 20 shows that the trends by level of study are interesting, with better geographic access to tertiary education provision significantly increasing the rate at which school leavers transitioned into bachelors-level study. However the trend for transition into level 1 to 3 certificate study was reversed, although not as pronounced. School leavers with lower geographic access to tertiary education provision were more likely to transition into level 1 to 3 certificate study than school leavers with high geographic access. It is possible that there were other characteristics causing these trends. Secondary schools with low geographic access to tertiary education provision are also more likely to be small in size and be low decile and it could be these characteristics that were causing this trend.

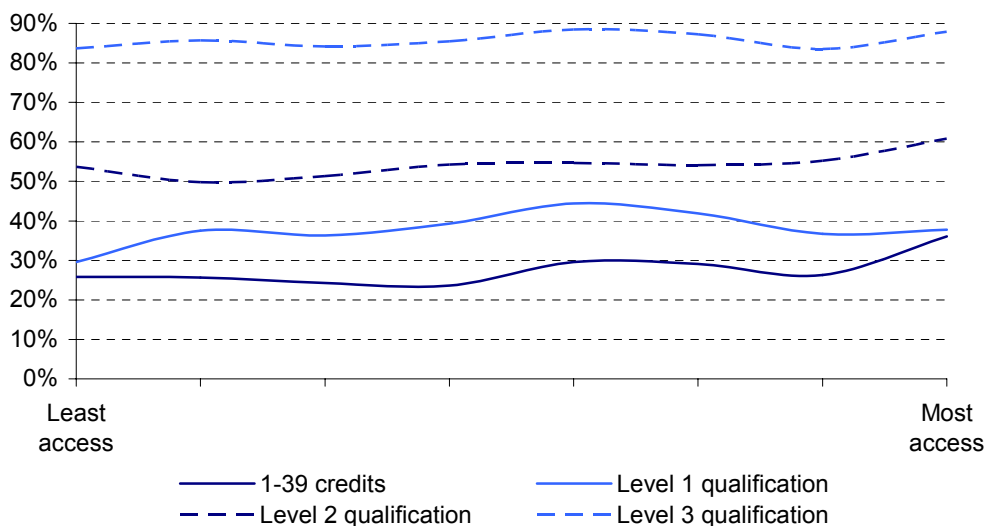
**Figure 20: Transition rates of 2004 school leavers by access to tertiary education and level of tertiary study**



Note: Refer to the Data and definitions section for further technical explanation of the data and definitions used in this figure.

Figure 21 shows that once again, the effects of highest school qualification appeared to reduce many of the differences in the transition rates by geographic access to tertiary education provision, particularly for school leavers who had a level 3 school qualification. Some differences still remained for school leavers who had gained low-level school qualifications. Of those 2004 school leavers who had a high level of geographic access to tertiary education provision and gained between one and 39 credits, 36 percent transitioned into formal, provider-based tertiary education, compared with 26 percent of those school leavers with low geographic access.

**Figure 21: Transition rates of 2004 school leavers by access to tertiary education and selected highest school qualifications**



Note: Refer to the Data and definitions section for further technical explanation of the data and definitions used in this figure.

## 4 Conclusion

The results of this study are consistent with previous research that has shown that academic achievement while at secondary school is a strong predictor of whether a school leaver will transition into tertiary education. However, results for different types and levels of tertiary education vary markedly. While the association between academic achievement at secondary school and transition into bachelors-level study is clear, it is not clear for transitions into other parts of the tertiary education sector. In particular, industry training and level 4 to 7 non-degree study at tertiary education providers, which are important parts of the tertiary education sector, are not strongly associated with academic achievement at secondary school and hence appear to have a different set of influences.

It also appears that while there is a strong association between direct transitions into tertiary education and academic achievement at secondary school, this association is not as strong for indirect transitions. It is possible that school leavers who choose to have a break before enrolling in tertiary education have a different set of influences from those who choose to transition straight out of school.

Further research using the longitudinal unit-record level dataset could be carried out to explore the association between academic achievement at secondary school and transitions into industry training and level 4 to 7 non-degree study, as well as indirect transitions. This research could also include different ways of looking at academic achievement at secondary school other than highest qualification attained. There is the potential to look at the quality of a secondary qualification, in terms of merit and excellence results achieved.

Given the diversification of the tertiary education sector over recent years, it is interesting to note that bachelors-level study is still the most popular level of study among school leavers. However, one-fifth of school leavers transitioned into level 1 to 3 certificate study, which is the same level of study that is undertaken at senior secondary school. More research could be carried out to look further at the school leavers who are entering this level of tertiary study and what they are studying. This is important given the Tertiary Education Strategy priority of more people achieving qualifications at level 4 and above by age 25 (Ministry of Education, 2007).

## 5 Data and definitions

### 5.1 Scope of data

This study is based on a newly created longitudinal unit-record level dataset which follows a student through their achievement at senior levels of secondary school and into enrolment in tertiary education. The introduction of the national student number (NSN) in 2002 in senior secondary and tertiary education allowed the linking of unit-record level datasets on secondary and tertiary education. Four separate datasets were used to create this longitudinal unit-record level dataset:

- The NQF dataset is provided by the New Zealand Qualifications Authority (NZQA) annually. It includes achievement data on all secondary school students who achieve at least one standard on the NQF during the year. This study limits its analysis to those students who were under the age of 19 years in the January of their last year at school and who were not foreign fee-paying.
- The Single Data Return survey of tertiary providers is conducted three times a year. The survey covers all students enrolled in tertiary education providers that receive tuition subsidies from the government or have courses that are eligible for student loans or allowances. This study limits its analysis to those enrolments in formal programmes of study of more than a week's equivalent full-time duration.
- Unit-record level data for learners in industry training (including Modern Apprenticeships) is collected quarterly by the Tertiary Education Commission (TEC) and NZQA. As the government funding agency, TEC holds demographic, participation and aggregated achievement, while NZQA holds demographic and disaggregated achievement data.
- The Ministry of Education's Education Management Information System (EDUMIS) contains information on schools in New Zealand.

The linking of these datasets through NSN is considered very robust; however, it should be noted that some NSN error does exist, particularly with the industry training dataset, in which the NSN is not validated. This opens up the potential for 'slave' NSNs to be reported, which will differ from the 'master' NSN that is reported in the NQF dataset. A master-slave register holds all known cases of 'slave' NSNs and the corresponding correct 'master' NSN. All tertiary data in this study has been updated using this master-slave register. This update affected less than 1 percent of all school leavers. It should be further noted that there is still the potential for unknown 'slave' NSNs to exist in the tertiary data, which would result in an under-estimation of transition rates.

There are some secondary school students who leave school without having gained any credits on the NQF and therefore will not appear in the NQF dataset. It is believed that this accounts for around 4 percent of school leavers in a year. As such, it presents a bias in the school leaver cohort used in this study given that all these students have attained no school qualification and this group was unable to be analysed. It should also be noted that some of these school leavers may be students who undertook alternative qualifications, such as Cambridge International Examinations, throughout secondary school.

School leavers whose last secondary school was The Correspondence School have some missing information, such as region, area type, school roll and decile, as this information is just not appropriate for these school leavers. The Correspondence School provided the largest number of school leavers in 2004, making up around 2 percent of all school leavers.

## 5.2 Definitions

### *Leaving year and age*

There is no way of determining the exact date that a student left secondary school in 2004. Therefore students are identified as having left school if they are not in the subsequent year's NQF dataset. The leaving year is identified based on the following rules:

- The last year the student was in the NQF dataset is considered to be the leaving year.
- Students who are 18 years old at the start of the year are identified as a school leaver automatically as the next year they will be defined as an adult student.
- Students who are under the age of 15 years at the end of the year are not identified as having left school as they are too young.

Given this method of determining when a student left school, each student is given a proxy leaving date of 31 December of the year in which they left. While not all students leave school at the end of the year, a fair majority do, so this is the best approximation of a leaving date. The ages of students used throughout this study are based on this leaving date and are thus the age of a student at the point they leave school.

### *Direct transition*

Conceptually, the idea of a direct transition means a student enrolls in tertiary education immediately after leaving school, allowing for summer holidays and the like. Technically, the data used in this study does not allow such an easy concept, due to the lack of an exact school leaving date. For the purposes of this study a direct transition is when a student enrolls in tertiary education any time up to the end of the year after they left school.

There are two ways a school leaver could transition directly into tertiary education. Firstly, they could leave school at the end of the school year and enrol in tertiary education during the next year. Secondly, they could leave school during the school year and enrol in tertiary education in that same year. It is this second type of school leavers that is hard to classify as transitioning into tertiary education, given the data used in this study. For school leavers who have enrolled in tertiary education in the same year as they left school there is no sure way of determining whether they have left school or are enrolled in both school and tertiary education, which has become more common in recent years.

For the purposes of this study this problem is dealt with in the following way. Those students who enrolled in industry training or targeted training programmes have by the definition of those programmes left school, so they are all dealt with as school leavers. Those students who enrolled in formal, provider-based tertiary education full-time were also more than likely to have left school, so they are also dealt with as school leavers. All those remaining students, who were enrolled in formal, provider-based tertiary education part-time, are deemed not to be school leavers and indeed were deemed to have concurrent enrolments in both secondary school and tertiary education.

### *Indirect transition*

An indirect transition into tertiary education is made when a school leaver has a year off between leaving school and enrolling in tertiary education. It should be noted that an indirect transition into a type of tertiary education or a level of study could occur even after that school leaver had been studying in a different type of tertiary education or level of study. For example a school leaver may transition into formal, provider-based study directly after leaving school and then enrol in industry

training in the year after that. The enrolment into industry training will count as an indirect transition into industry training but not in the total count of indirect transitions.

### *Transition rate*

The transition rate is the percentage of school leavers who transition, directly or indirectly, into tertiary education. For the purposes of this study that means the percentage of students who left school during 2004 and transitioned into tertiary education any time up until the end of 2006.

### *Type of tertiary study*

There are three types of tertiary education used in this study. Formal, provider-based tertiary education includes all formal enrolments in tertiary education providers<sup>3</sup> that are longer than one week in duration, but excludes all those industry training and targeted training courses that are undertaken at tertiary education providers. Targeted training includes all those enrolments in Training Opportunities, Youth Training and Skill Enhancement programmes at tertiary education providers that are required to supply a return to the Single Data Return. This means that there are a number of enrolments in targeted training programmes that are missed by this study - that is, those targeted training enrolments in private training establishments that are not required to submit a return to the Single Data Return. Therefore this study may under-estimate the transition rates into targeted training. Industry training includes two types of enrolments – firstly, those enrolments with an industry training organisation that relate to the workplace component of industry training and secondly those enrolments with tertiary education providers when a learner is undertaking a 'block course'.

School leavers may have made a transition into more than one type of tertiary study and are counted in each type they were enrolled in, but only once in the totals. Because of this the sum of the different types of tertiary study may not add up to the total.

### *Level of tertiary study*

Most of the rates used in this study are aggregated into four groups. Level 1 to 3 certificate study includes all enrolments undertaken as part of certificate qualifications at levels 1 to 3 on the New Zealand Register of Quality Assured Qualifications (the Register). Level 4 certificate study includes all enrolments undertaken as part of certificate qualifications at level 4 of the Register. Level 5 to 7 non-degree study includes all enrolments undertaken as part of certificate and diploma qualifications at levels 5 to 7 of the Register. Bachelors-level study includes all bachelors-degree enrolments, as well as all graduate certificates and diplomas and certificates of proficiency at level 7 of the Register. A small number of school leavers transitioned into postgraduate study, but these students have been excluded from the analysis.

It should be noted that many industry training learners are undertaking limited credit programmes or supplementary credit programmes. Limited credit programmes are short, flexible, stand-alone programmes of study that do not in themselves result in a national qualification and supplementary credit programmes are intended to be an adjunct to national certificates. So while not all industry training is intended to culminate in a certificate or a diploma, for convenience sake, learners undertaking these programmes of learning have been classified under the levels of tertiary study outlined in the paragraph above.

School leavers may have made a transition into more than one level of study and are counted at each level they were enrolled in, but only once in the totals. Because of this the sum of the different levels of study may not add up to the total.

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<sup>3</sup> Excludes those private training establishments which neither received tuition subsidies nor were approved for student loans or allowances.

### *Highest school qualification*

The highest school qualification for school leavers is determined using the NQF dataset and therefore includes only NQF qualifications that school leavers have gained.

A number of New Zealand secondary schools offer alternative qualifications to those offered on the NQF. These qualifications include the Cambridge International Examinations and the International Baccalaureate. A high proportion of school leavers from these schools report that their highest school qualification was an alternative to NQF qualifications. If the highest NQF qualification these students had achieved was used, it would be likely to be under-reporting their school qualifications. As a result, all students who attended a secondary school with a significant proportion of school leavers reporting a highest school qualification that was an alternative to an NQF qualification had their highest school qualification recoded to unknown. These students made up around 2 percent of all school leavers in 2004.

### *Ethnic group*

A school leaver's ethnic groups are captured from the NQF dataset and are therefore the ethnicities they associated with while at secondary school. This may be different from the ethnicities the same student associates with later in life, including while in tertiary education.

A school leaver is counted in each ethnic group they affiliated with, but only once in the total. School leavers whose ethnicity is unknown or who belong to a group other than European, Māori, Pasifika or Asian are not listed separately, but are included in the totals.

### *Study type*

Study type is a measure of a student's full-time/part-time status. This measure is based on all of a student's formal, provider-based enrolments in all providers for a single calendar year. Therefore study type is only available for those school leavers who transition into formal, provider-based tertiary education and targeted training programmes. Study type has four values:

- studying full-time for the full year
- studying full-time for part of the year
- studying part-time for the full year
- studying part-time for part of the year.

A full year is treated as 32 or more weeks in a calendar year, while full-time and part-time are based on the Loan Entry threshold method for determining full-time/part-time.

### *Sub-sector*

A university, institute of technology or polytechnic (ITP), college of education, wānanga, or private training establishment (PTE). Other tertiary education providers (OTEPs) are included with PTEs. Providers that have merged or become part of other providers have been treated according to the type of provider they were for each year in question.

### *School decile*

In New Zealand, schools are assigned a decile status which is an indicator of the socio-economic status of the area from which schools draw their students and is used for funding purposes. The decile measure ranges from 1 to 10, with 10 representing schools that are located in areas of highest relative advantage. Care is needed when generalising about the trends of socio-economic status from



school decile. Secondary schools, in particular, draw their students from such wide areas that the socio-economic conditions of people living within these wide areas will vary significantly.

Private schools in New Zealand, in the main, do not get assigned a decile, as they are not funded under the same system as state schools. In addition, The Correspondence School, which contributes the largest number of school leavers, does not get assigned a decile.

### *Geographic access to tertiary education*

The access variable is designed to measure a student's relative geographic access to tertiary provision throughout New Zealand from their last secondary school. It is assumed that the range of study options offered at a tertiary education campus is linked to the size of the campus. Thus, access to tertiary provision for a student will increase with the size of the campus and decrease with the distance to a campus. Therefore, access is calculated as a function of both the distance to all tertiary education campuses in New Zealand and the size of those tertiary education campuses. The access to tertiary provision for a student depends on the size of all campuses (positively) and distance to all campuses (negatively).

A low access value will indicate that a student has low access to tertiary provision. For example, a student who attends secondary school in Tolaga Bay has an access value of 0.29. As the comparative access to tertiary provision increases, the access value also increases. A student from central Auckland has an access value of over 1000. For the full methodology used in calculating the access variable refer to Ussher (2006b).

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**MINISTRY OF EDUCATION**

*Te Tihaku e te Mātauranga*