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Te Tāhuhu o te Mātauranga

From school, work or unemployment: A comparison of pathways in tertiary education

Report

From school, work or unemployment: A comparison of pathways in tertiary education.

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Summary

Over the latter part of the 1990s and the early 2000s, there has been an increase in the number of students beginning tertiary study later in life, rather than following the traditional pathway of entering tertiary education directly from secondary school. In 1998, 43 percent of first-time domestic students came directly from secondary school, 32 percent from the workforce, 16 percent were non-employed or beneficiaries in the previous year, 3.5 percent were family workers or retired and 3.3 percent were overseas. By 2004, 26 percent came directly from secondary school, 53 percent from the workforce, 12 percent were non-employed or beneficiaries in the previous year, 5.9 percent were family workers or retired and 3.5 percent were overseas.

This trend has raised interest in the impact that students' activity before tertiary education has on their pattern of movement between level of qualification, completion of qualifications, type of provider and duration of study. It is the aim of this report to look at how pathways through tertiary study followed by New Zealanders differ depending on what the student was doing before starting study.

This report describes the pathways taken by a cohort of 54,400 domestic students who first studied in 1998 at TEIs and follows their interactions with the tertiary sector in the seven years until the end of 2004. This includes a comparison of the pathways followed by six particular groups of students, which are as follows:

- Group 1 – School leavers who enrol in bachelors-level study at universities in the following year.
- Group 2 – Workers who enrol in bachelors-level study at universities in the following year.
- Group 3 – Workers who enrol in level 1 to 3 certificate study at ITPs in the following year.
- Group 4 – School leavers who enrol in level 1 to 3 certificate study at ITPs in the following year.
- Group 5 – Non-employed or beneficiaries who enrol in level 1 to 3 certificate study at ITPs in the following year.
- Group 6 – Workers who enrol in diploma study at ITPs in the following year.

Characteristics of the six groups

	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
Proportion of students	22%	5%	15%	11%	10%	4%
Average age (years)	18.2	30.0	32.1	17.8	30.5	31.8
% women	55%	52%	42%	45%	62%	51%
% Māori	7%	16%	18%	18%	38%	16%
% Pasifika	3%	4%	5%	6%	9%	4%
% NCEA level 2 plus	99%	69%	35%	60%	19%	53%
% full-time	83%	38%	14%	49%	26%	17%
% extramural	1%	31%	33%	6%	17%	45%

There were significant changes to the characteristics of the first-time domestic student cohort between 1998 and 2004 due, in the main, to the increase in the number of older students enrolling part-time in certificate-level qualifications at ITPs and wānanga. Given this, it should be recognised that pathways followed by students starting in 1998 may be different from those taken by students starting in 2004 and later.

Some of the main findings of this study are:

- Students who came to tertiary education directly from secondary school were more likely to complete a qualification over the seven years analysed in this study than other first-time students.

Seven-year completion rates by prior activity and qualification level started in 1998

Level started	School	Workforce	Non-employed or beneficiary	Family worker or retired	Overseas	Total
Level 1-3 Certificate	52%	28%	41%	37%	42%	38%
Level 4 Certificate	27%	16%	22%	40%	9%	22%
Level 5-6 Diploma	29%	19%	21%	29%	26%	24%
Level 7 Bachelors	64%	34%	28%	31%	54%	53%
Total	56%	27%	37%	35%	45%	41%

- School leavers who enrolled in bachelors-level study at universities were more than twice as likely to complete a bachelors-level degree as students who were in the workforce in the previous year. However, these school leavers were also more likely to be studying on a full-time basis and intramurally, factors that have been found to be strongly associated with the successful completion of a qualification.
- School leavers who enrolled in level 1 to 3 certificate study at ITPs were more likely to complete a level 1 to 3 certificate between 1998 and 2004 than first-time students from the workforce or who were non-employed or beneficiaries in the previous year, who also enrolled in level 1 to 3 certificate study at ITPs.
- Although first-time students from the workforce who enrolled in level 1 to 3 certificate study at ITPs gained higher secondary school qualifications than first-time students who were non-employed or beneficiaries, they have a lower seven-year completion rate. This may in part reflect the fact that first-time students from the workforce are more likely to be combining study with work, or have course specific goals rather than qualification goals.

Outcomes of the six groups after seven years

	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
Average time enrolled	4.4	3.0	2.1	2.5	2.1	2.6
First-year attrition	12%	40%	45%	36%	44%	43%
Seven-year attrition	23%	52%	66%	38%	51%	65%
Seven-year completion	64%	30%	27%	52%	41%	18%
Average time to complete	4.1	3.8	1.8	1.5	1.7	2.7
Higher-level articulation	19%	7%	5%	11%	5%	4%

- First-time students who came to tertiary education directly from secondary school were more likely to progress to and complete higher-level qualifications instead of, or in addition to, the level they started in 1998. First-time students who were employed, non-employed, a beneficiary, a family worker, or retired in the year before starting study were less likely to progress to higher-level qualifications.
- The most common pathway followed by all five prior activity groups was enrolment in level 1 to 3 certificate study at an ITP for one year without completing. First-time students who were non-employed or beneficiaries in the previous year were more likely to follow this pathway than other students.

1 Introduction

This report further develops the 2004 report *Pathways in tertiary education 1998-2002*,¹ which analysed and discussed some of the more common pathways through tertiary study followed by New Zealanders. It is the aim of this report to look at how these pathways differ depending on what the student was doing before starting study.

Over the latter part of the 1990s and the early 2000s, there has been an increase in the number of students beginning tertiary study later in life rather than following the traditional pathway of entering tertiary education directly from secondary school. The proportion of first-time domestic students who come directly from secondary school has fallen from 43 percent in 1998 to 26 percent in 2004. This trend has raised interest in the impact that activity before study has on a student's pattern of movement between levels of qualification, completion of qualifications, type of provider and duration of study.

This report describes the pathways taken by a cohort of 54,400 domestic students who first studied in 1998 in formally assessed qualifications at tertiary education institutions (TEIs).² This report follows their interactions with the tertiary sector in the seven years until the end of 2004.

Prior activity refers to a student's main activity or occupation on 1 October of the year before they first enrolled as a student in tertiary education. There are five main groups analysed, these are first-time students who were:

- at secondary school
- in the workforce
- non-employed or a beneficiary
- a family worker³ or retired
- overseas

Care is needed in interpreting trends, as many students' predominant activity in the previous year may be different from what they were doing at 1 October. In 1998, 6,810 first-time domestic students did not declare what their prior activity was in the previous year. These students, who make up 12 percent of the 1998 cohort, cannot be included in the analysis of prior activity.

Despite these limitations and despite the recognition that pathways used by students starting in 1998 may be different from those taken by students starting in 2004,⁴ this report does provide some new information on the study pathways of and the outcomes for tertiary students in New Zealand that has not been analysed previously.

¹ Scott, David, (2004), *Pathways in Tertiary Education 1998-2002*, Ministry of Education, Wellington. www.educationcounts.edcentre.govt.nz

² Like the previous study, current data limitations prevent us from including on-job workplace training.

³ A person who manages their own household as their main occupation.

⁴ This is particularly so for wānanga, which have undergone significant change since 2000.

2 Characteristics of first-time domestic students

First-time domestic students in 1998

During 1998, there were 54,400 first-time domestic students enrolled in TEIs. Just under half (49 percent) of these students were participating in level 1 to 3 certificate⁵ study, compared with 34 percent studying at bachelors-level, 11 percent at diploma level and 5.2 percent participating in level 4 certificate study. A further 1.6 percent were studying at postgraduate level.⁶ The majority (58 percent) of first-time domestic students in 1998 were enrolled in institutes of technology and polytechnics (ITPs), compared with 39 percent at universities, 2.2 percent at colleges of education (CoEs) and 1.0 percent at wānanga. The average study load of first-time domestic students in 1998 was 0.61 equivalent full-time student (EFTS) units. During 1998, 19 percent of first-time domestic students were studying extramurally.

European students were the largest ethnic group among 1998 first-time domestic students, making up 65 percent of all first-time domestic students with a declared ethnic group.⁷ This compares with 17 percent Māori, 9.0 percent Asian, and 5.1 percent Pasifika. The average age of first-time domestic students in 1998 was 26.2 years. First-time domestic students aged 18 to 24 years made up 48 percent of all first-time domestic students in 1998, compared with 27 percent aged 25 to 39 years, 14 percent aged 40 years and over and 11 percent aged under 18 years. In 1998, 53 percent of first-time domestic students were women.

During 1998, first-time domestic students were more likely to have been at secondary school in the previous year, with 43 percent of all first-time domestic students at secondary school in October 1997. One in three students were in the workforce in the previous year, 16 percent were non-employed or beneficiaries, 3.5 percent were family workers or retired and 3.3 percent were overseas. One in three first-time domestic students had a highest secondary school qualification of NCEA level 3 or equivalent, compared with 28 percent with NCEA level 2 or equivalent and 19 percent with NCEA level 1 or equivalent. A further 15 percent had no secondary school qualifications and 4.9 percent had overseas qualifications.

Changes between 1998 and 2004

During 2004, there were 94,700 first-time domestic students enrolled in TEIs, an increase of 40,310 students (or 74 percent) over 1998. There were significant changes to the characteristics of the first-time domestic student cohort between 1998 and 2004 due, in the main, to the increase in older students enrolling in part-time⁸ certificate-level qualifications at ITPs and wānanga.

In 2004, first-time domestic students, on average, were an older cohort than 1998 first-time domestic students, with the average age increasing from 26.2 years in 1998 to 31.9 years in 2004. The number of first-time domestic students aged 40 years and over increased by over 270 percent between 1998 and 2004, and they made up 31

⁵ These are certificates at levels 1 to 3 of the New Zealand Register of Quality Assured Qualifications and are equivalent to senior secondary school level.

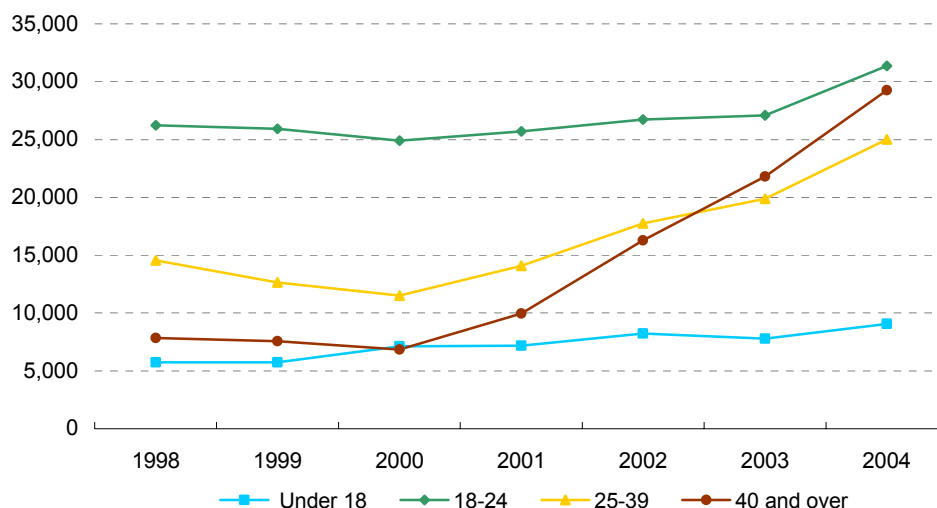
⁶ The majority of these students are likely to have studied at a tertiary level overseas or have gained ad eundem entrance graduate status on the basis of professional experience.

⁷ In 1998, 2,800 first-time domestic students did not declare an ethnic group.

⁸ For the purposes of this report part-time study is defined as less than 0.8 EFTS a year and full-time study is 0.8 EFTS or more a year.

percent of all first-time domestic students in 2004. The number of Pasifika and Māori students grew at a faster rate between 1998 and 2004 when compared with European students; as a result the proportion of European students has decreased.

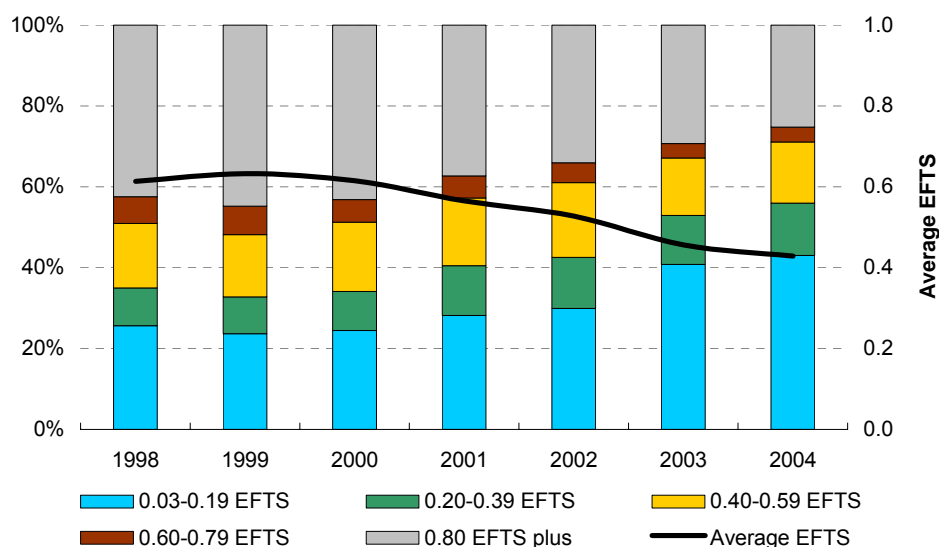
Figure 1: First-time domestic students by age group 1998-2004



Note: See technical notes on page 29 for full notes and definitions.

There was an increase in first-time domestic students studying qualifications at a lower level between 1998 and 2004. The number of first-time domestic students enrolled in level 1 to 3 certificate qualifications increased by 126 percent and first-time domestic students in level 4 certificate qualifications increased by 203 percent. First-time domestic students enrolled in these qualifications made up 72 percent of all first-time domestic students in 2004. There was also a trend towards more first-time domestic students enrolling with lower study loads in 2004, with 43 percent of first-time domestic students enrolled with a study load of less than 0.2 EFTS and the average study load of first-time domestic students decreasing from 0.61 EFTS in 1998 to 0.43 EFTS in 2004.

Figure 2: Proportion of first-time domestic students by study load 1998-2004



Note: See technical notes on page 29 for full notes and definitions.

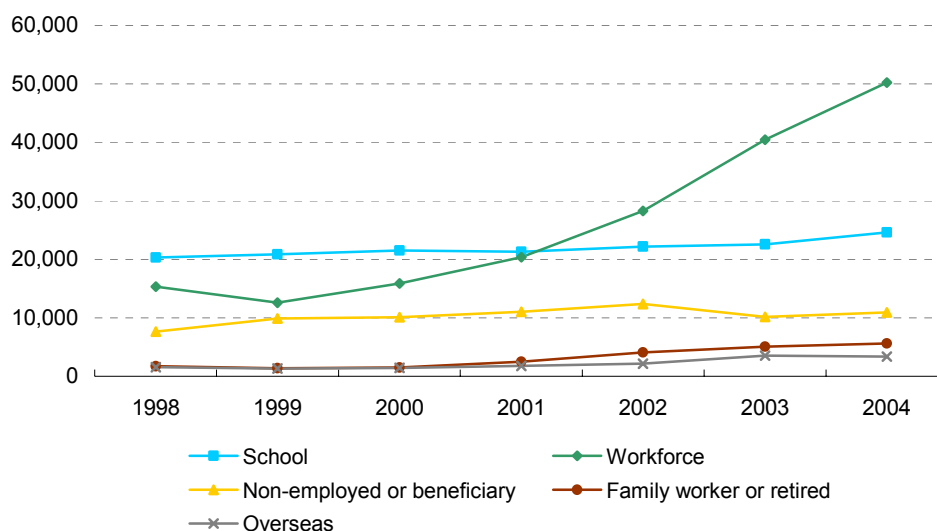
The significant growth that occurred at wānanga between 2000 and 2003 resulted in the number of first-time domestic students enrolled in wānanga increasing by over 14,000 students between 1998 and 2004. In terms of headcount, wānanga first-time domestic students made up 15 percent of all domestic first-time students enrolled in 2004 up from 1.0 percent in 1998. In contrast, the number of first-time domestic students enrolled at universities decreased by 2.5 percent between 1998 and 2004.

Between 1998 and 2004 there were an increasing number of domestic students entering tertiary education at TEIs for the first-time with no secondary school qualifications. During 2004, there were 31,260 first-time domestic students with no secondary school qualifications, making up 34 percent of all first-time domestic students, compared with 6,231 students and 15 percent in 1998. During 2004, first-time domestic students with no secondary school qualifications were more likely to be enrolled in level 1 to 3 certificate study at ITPs or wānanga.

Prior activity of first-time domestic students

Between 1998 and 2004, there was an increase in the number of first-time domestic students who came to tertiary education from the workforce and overseas in the previous year. During 2004, there were 50,200 first-time domestic students who were in the workforce prior to tertiary study, up 227 percent over 1998, and there were 3,330 first-time domestic students who were overseas, up 114 percent over 1998. In contrast, the proportion of first-time domestic students who came to tertiary education directly from secondary school has decreased from 43 percent (20,330 students) in 1998 to 26 percent (24,580) in 2004. However, the proportion of secondary school leavers who come directly to tertiary education has stayed relatively unchanged between 1998 and 2003.⁹

Figure 3: First-time domestic students by prior activity 1998-2004



Note: See technical notes on page 29 for full notes and definitions.

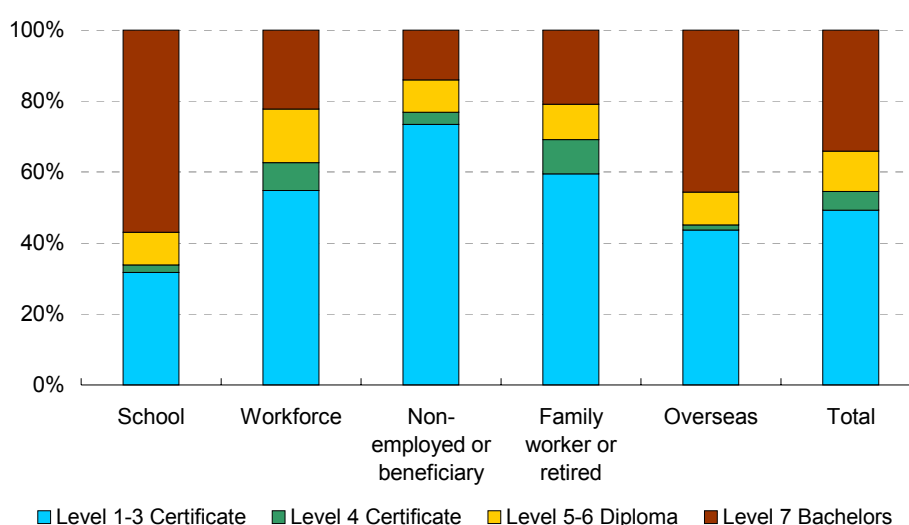
First-time domestic students who came directly from secondary school were more likely to study at university than other first-time domestic students. First-time

⁹ Refer to Ministry of Education, (2005), *New Zealand's Tertiary Education Sector Profile & Trends 2004*, Ministry of Education, page 81. www.educationcounts.edcentre.govt.nz

domestic students who came directly from secondary school had, on average, the highest study load of any first-time domestic students, while first-time domestic students from the workforce had, on average, the lowest study load.

During 1998, first-time domestic students who came directly from secondary school were more likely than other first-time domestic students to study at bachelors level, while first-time domestic students who were non-employed or beneficiaries were more likely than other first-time domestic students to study level 1 to 3 certificates. First-time domestic students who were in the workforce in the previous year were more likely to study a diploma or a level 4 certificate than other first-time domestic students.

Figure 4: Distribution of first-time domestic students by prior activity and qualification level 1998

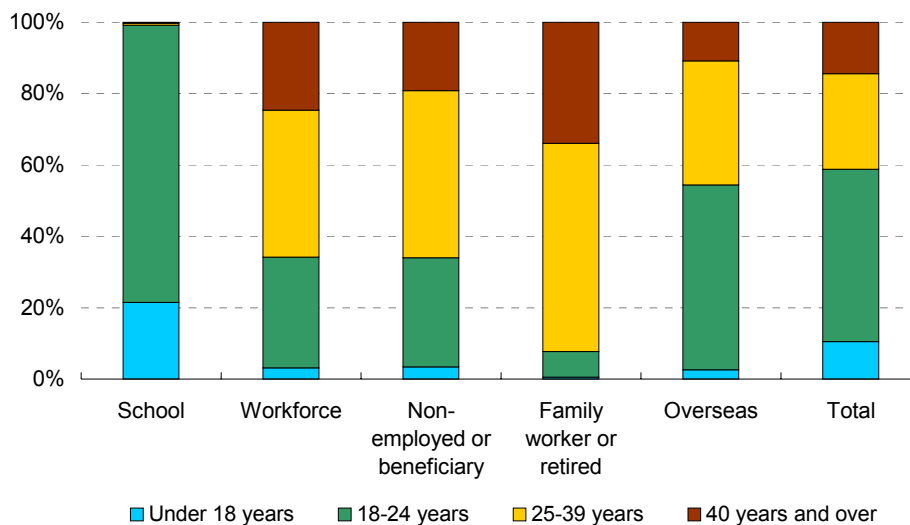


Notes:

1. Total also includes those students whose prior activity is unknown.
2. See technical notes on page 29 for full notes and definitions.

Not surprisingly, first-time domestic students who came directly from secondary school were, on average, the youngest. First-time domestic students who were family workers or retired in the previous year were, on average, the oldest students. First-time domestic students who were in the workforce in the previous year were the only group where there were a greater proportion of men than women. The highest proportion of women was in the group of first-time domestic students who were family workers or retired in the previous year.

Figure 5: Distribution of first-time domestic students by prior activity and age group 1998



Notes:

1. Total also includes those students whose prior activity is unknown.
2. See technical notes on page 29 for full notes and definitions.

In 1998, a greater proportion of first-time domestic students who came directly from secondary school had year 12 or 13 secondary school qualifications. At the same time a greater proportion of first-time students who were non-employed or beneficiaries in the previous year had no secondary school qualifications than any other group of first-time domestic students.

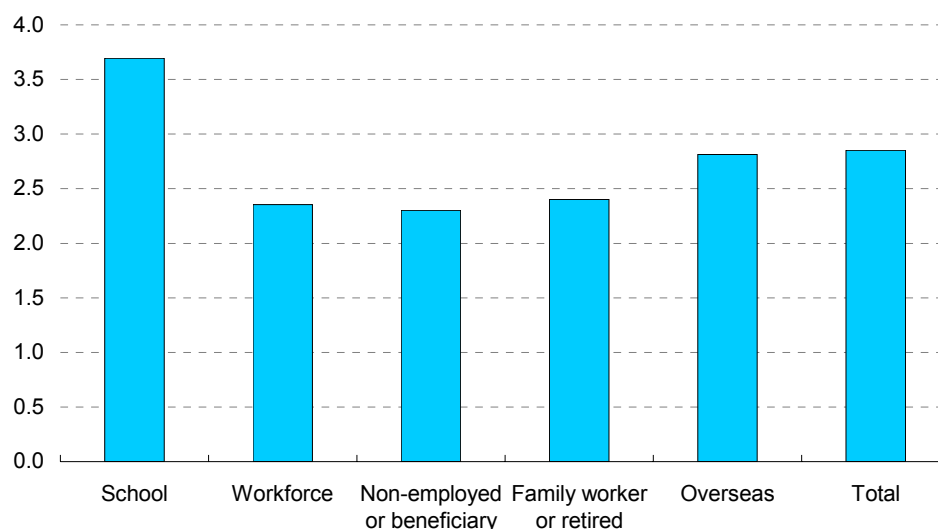
The characteristics of all the prior activity groups have changed to some extent between 1998 and 2004. The changes have been similar to the overall trend of first-time domestic students, that is, an increase in the number of older students (mostly with no or low secondary school qualifications) enrolling in part-time certificate-level qualifications at wānanga and ITPs. The group of first-time domestic students who were in the workforce in the previous year have experienced the most change, while the group who came directly from secondary school did not experience changes as significant as other groups.

3 Pathways by prior activity

Study outcomes by prior activity

On average, a first-time domestic student who came to tertiary education directly from secondary school was enrolled for 3.7 years¹⁰ between 1998 and 2004. Given the higher propensity of first-time domestic students who had come directly from secondary school to study at bachelors level, it is not surprising that, on average, they stay in study longer than other first-time domestic students.

Figure 6: Average number of years 1998 first-time domestic students were enrolled between 1998 and 2004



Notes:

1. Total also includes those students whose prior activity is unknown.
2. Years are measured as calendar years rather than EFTS years.
3. Breaks in study are not included in years enrolled.
4. See technical notes on page 29 for full notes and definitions.

Around 8.0 percent of 1998 first-time domestic students who came directly from secondary school were enrolled for all seven years between 1998 and 2004, compared with 2.0 percent of first-time domestic students coming from the workforce, and those who were non-employed or beneficiaries. In contrast, 44 percent of first-time domestic students who were non-employed or beneficiaries in the previous year were enrolled for one year only, the highest proportion of all the groups of first-time domestic students.

Attrition¹¹ in the first year was 44 percent for 1998 first-time domestic students from the workforce and those who were non-employed or a beneficiary in the previous year, 41 percent for students who were family workers or retired, and 33 percent for those who were overseas. In contrast, first year attrition was just 20 percent for first-time domestic students who came directly from secondary school.

First-time domestic students who came directly from secondary school are more likely to complete a qualification in seven years than other first-time domestic students.

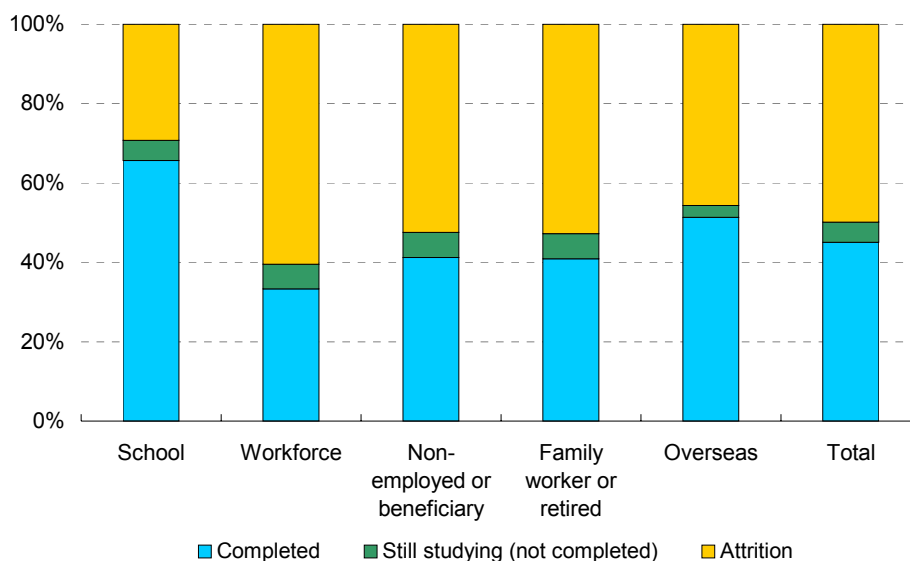
¹⁰ Measured in calendar years rather than EFTS years.

¹¹ 'Attrition' refers to those students who leave study without completing any qualification.

Around 66 percent of first-time domestic students who came directly from secondary school completed a qualification between 1998 and 2004, compared with 33 percent for the workforce group, 41 percent for non-employed or beneficiaries, 41 percent for family workers or retired, and 53 percent for the overseas group. However, first-time domestic students who came directly from secondary school are more likely to be studying on a full-time basis than other first-time domestic students, and studying full-time has been found to be a factor strongly associated with the successful completion of qualifications. Ministry of Education research has shown that, when adjusted for a range of demographic and study influences,¹² students who were in the workforce in the previous year were the least likely to complete a bachelors-level degree, while students who came directly from secondary school were the most likely.¹³

Of those first-time domestic students in 1998 who came from the workforce, or were non-employed or beneficiaries, or family workers or retired, 6 percent were still studying in 2004. This compares with 5 percent of first-time domestic students who came directly from secondary school and 3 percent of first-time domestic students who were overseas. This in part reflects the fact that first-time domestic students from the workforce, were non-employed or beneficiaries, or family workers or retired were more likely to be studying part-time and therefore take longer to complete their qualification.

Figure 7: Proportion of 1998 first-time domestic students by prior activity and seven-year completion status



Notes:

1. Total also includes those students whose prior activity is unknown.
2. See technical notes on page 29 for full notes and definitions.

First-time domestic students who came directly from secondary school were more likely to complete a level 1 to 3 certificate, a diploma or a bachelors-level degree than other first-time domestic students. However first-time domestic students who were

¹² These influences include full-time/part-time study, intramural/extramural, gender, age, ethnic group, school qualifications, and field of study.

¹³ Scott, David, Warren Smart. (2005). *What factors make a difference to getting a degree in New Zealand?* Ministry of Education, Wellington. www.educationcounts.edcentre.govt.nz.

family workers or retired in the previous year were more likely to complete a level 4 certificate. First-time domestic students who were non-employed or beneficiaries, or family workers or retired were more likely to complete a level 1 to 3 certificate than they were to complete a bachelors-level degree, which is against the overall trend.

Table 1: Seven-year completion rates by prior activity and qualification level started in 1998

Level started	School	Workforce	Non-employed or beneficiary	Family worker or retired	Overseas	Total
Level 1-3 Certificate	52%	28%	41%	37%	42%	38%
Level 4 Certificate	27%	16%	22%	40%	9%	22%
Level 5-6 Diploma	29%	19%	21%	29%	26%	24%
Level 7 Bachelors	64%	34%	28%	31%	54%	53%
Total	56%	27%	37%	35%	45%	41%

Notes:

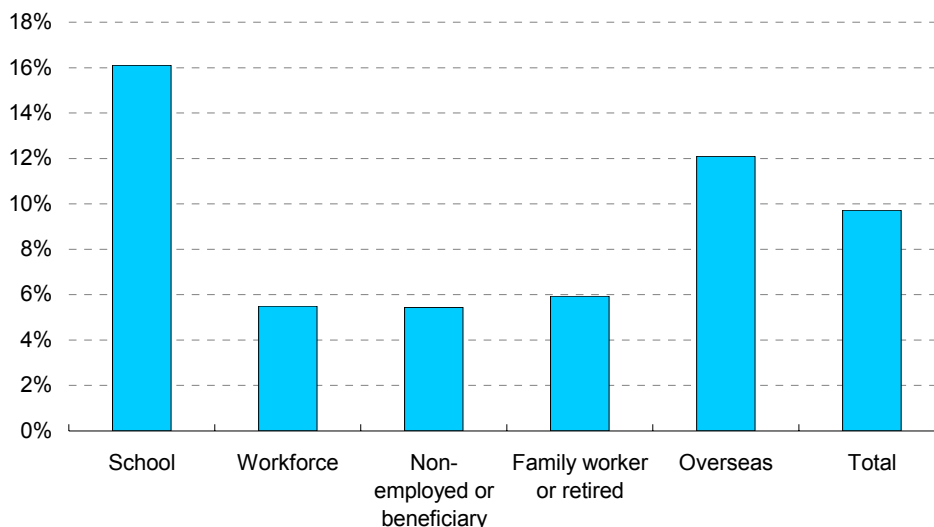
1. Seven-year completion rates are of those who successfully completed a qualification at the same level as the one they started in 1998.
2. Total also includes those students whose prior activity is unknown.
3. See technical notes on page 29 for full notes and definitions.

First-time domestic students who came directly from secondary school, on average took 3.3 calendar years to complete a qualification between 1998 and 2004, compared with 3.0 years for students who were overseas, 2.7 years for students from the workforce, 2.5 years for students who were family workers or retired, and 2.2 years for students who were non-employed or beneficiaries. The longer time to complete for students from secondary school or overseas is mostly due to their higher propensity to study at higher qualification levels.

First-time domestic students who came directly from secondary school or overseas in the previous year were more likely to complete qualifications at two or more levels. Around 14 percent of first-time domestic students from secondary school completed two or more qualifications and 9.5 percent of first-time domestic students who were overseas completed two or more qualifications. The most common combination of qualifications for both groups of first-time students was a bachelors-level degree and a postgraduate certificate or diploma.

First-time domestic students who came directly from secondary school were more likely to progress to and complete higher-level qualifications instead of, or in addition to, the level they started in 1998. First-time domestic students who were non-employed or beneficiaries were least likely to progress and complete higher-level qualifications. First-time students who were employed, non-employed or a beneficiary, or a family worker or retired in the previous year were less likely to progress to higher-level qualifications. Many of these students are more likely to be studying for vocational or personal interest reasons.

Figure 8: Proportion of 1998 first-time domestic students who progressed to and completed higher level qualifications, either instead of, or in addition to, the ones they started by prior activity



Notes:

1. Total also includes those students whose prior activity is unknown.
2. See technical notes on page 29 for full notes and definitions.

First-time domestic students who were non-employed or a beneficiary in the previous year were more likely to take a break from study and then return. First-time domestic students who were overseas in the previous year were the least likely to take a break from study and then return.

First-time domestic students who came directly from secondary school were more likely to study at more than one provider between 1998 and 2004. The most common combination was a university and an ITP, covering 10 percent of first-time domestic students who came directly from secondary school. First-time domestic students from the workforce were the least likely to study with more than one provider.

The following abbreviations are used in tables throughout the rest of this chapter:

Cer	Level 1 to 3 certificate
Cer4	Level 4 certificate
Dip	Diploma level
Deg	Bachelors-level
Uni	University
ITP	Institute of technology and polytechnic
y	Successfully completed a qualification this year

1998 first-time domestic students from secondary school

The most common pathway followed by 1998 first-time domestic students who came directly from secondary school was enrolment in level 1 to 3 certificate study at an ITP for one year without completing, covering 6.0 percent of students in this group. This was also the most common pathway for all the other groups in this study. Nearly 5 percent of the school leavers group started at an ITP and completed a level 1 to 3 certificate in one year. This was the third most common pathway for students in this group.

Students starting and completing a bachelors-level degree at universities in four years was the second most common pathway followed, covering 5.6 percent of students in the school leavers group. Completing a bachelors-level degree in three years was the fifth most common pathway (3.3 percent), completing in five years was the sixth most common pathway (2.4 percent) and completing in six years was the eighth most common pathway (1.2 percent).

The ten most common pathways covered 32 percent of the school leavers group. This is a low proportion when compared to the other groups, which is in part due to the large number of students in this group, but also because of the longer time students in this group spend in study and the postgraduate options available at the end of a bachelors-level degree.

Table 2: Top 10 seven-year pathways – 1998 first-time domestic students from secondary school

		Level and sub-sector and whether completed (y) 1998-2004							Starting students	
	1998	1999	2000	2001	2002	2003	2004	#	%	
1	Cer ITP							1,210	6.0%	
2	Deg Uni	Deg Uni	Deg Uni	Deg Uni	y			1,140	5.6%	
3	Cer ITP	y						1,010	4.9%	
4	Deg Uni							950	4.6%	
5	Deg Uni	Deg Uni	Deg Uni	y				660	3.3%	
6	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	y		480	2.4%	
7	Deg Uni	Deg Uni						450	2.2%	
8	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	y	230	1.2%	
9	Deg Uni	Deg Uni	Deg Uni					220	1.1%	
10	Cer ITP	Cer ITP						200	1.0%	
All other pathways								13,780	68%	
Total								20,330	100%	

Notes:

1. All figures are rounded to the nearest ten.
2. See technical notes on page 29 for full notes and definitions.

1998 first-time domestic students from the workforce

The two most common pathways followed by 1998 first-time domestic students who were in the workforce in the previous year were enrolment in level 1 to 3 certificate study at an ITP for one year without completing, or enrolment in level 1 to 3 certificate study at an ITP for two years without completing. These two pathways covered 25 percent of students in this group. Five percent of the workforce group started at an ITP and completed a level 1 to 3 certificate in one year. This was the third most common pathway for students in this group.

The next four most common pathways for the workforce group all involved enrolling in a qualification for just one year without completing or re-enrolling. Fourth most common was one year in a bachelors-level degree at a university (4.7 percent of students in this group), fifth most common was one year in a diploma at an ITP (3.5 percent), sixth most common was one year in a level 4 certificate at an ITP (2.2 percent), and seventh most common was one year in a level 1 to 3 certificate at a university (2.2 percent).

Students in the workforce group were more likely to enrol in bachelors level at a university for one or two years without completing or re-enrolling than they were to complete a bachelors-level degree in either three or four years.

Table 3: Top 10 seven-year pathways – 1998 first-time domestic students from the workforce

		Level and sub-sector and whether completed (y) 1998-2004						Starting students		
		1998	1999	2000	2001	2002	2003	2004	#	%
1	Cer ITP								2,610	17%
2	Cer ITP		Cer ITP						1,190	7.8%
3	Cer ITP	y							770	5.0%
4	Deg Uni								720	4.7%
5	Dip ITP								530	3.5%
6	Cer4 ITP								340	2.2%
7	Cer Uni								330	2.2%
8	Cer ITP		Cer ITP		Cer ITP				260	1.7%
9	Dip ITP		Dip ITP						250	1.6%
10	Deg Uni		Deg Uni						240	1.6%
All other pathways									8,110	53%
Total									15,340	100%

Notes:

1. All figures are rounded to the nearest ten.
2. See technical notes on page 29 for full notes and definitions.

1998 first-time domestic students who were non-employed or beneficiaries

Enrolling for one year in level 1 to 3 certificate study at an ITP without completing or re-enrolling was the most common pathway for 1998 first-time students who were non-employed or beneficiaries in the previous year, covering 20 percent of this group. The non-employed or beneficiary group is more likely to follow this pathway than any other group of students in this analysis. Studying for two years in a level 1 to 3 certificate at an ITP without completing or re-enrolling was the third most common pathway, covering 6.7 percent of students in this group. Almost 10 percent of the non-employed or beneficiary group started at an ITP and completed their level 1 to 3 certificate in one year. This was the second most common pathway for students in this group.

The next three most common pathways involved enrolling in a qualification for just one year without completing or re-enrolling. Fourth most common was one year in a bachelors-level degree at a university (3.3 percent of students in this group), fifth most common was one year in a level 1 to 3 certificate at a university (2.3 percent). Leaving without completing diploma level study after one or two years were respectively the sixth and seventh most common pathways for 1998 first-time and covered 3.2 percent of students in this group.

Table 4: Top 10 seven-year pathways – 1998 first-time domestic students who were non-employed or beneficiaries

		Level and sub-sector and whether completed (y) 1998-2004						Starting students	
	1998	1999	2000	2001	2002	2003	2004	#	%
1	Cer	ITP						1,550	20%
2	Cer	ITP	y					780	10%
3	Cer	ITP	Cer	ITP				510	6.7%
4	Deg	Uni						250	3.3%
5	Cer	Uni						180	2.3%
6	Dip	ITP						160	2.1%
7	Dip	ITP	Dip	ITP				90	1.2%
8	Cer	Uni	y					80	1.1%
9	Cer	ITP	Cer	ITP	y			70	0.9%
10	Cer	ITP	Cer	ITP	Cer	ITP		70	0.9%
All other pathways								3,870	51%
Total								7,600	100%

Notes:

1. All figures are rounded to the nearest ten.
2. See technical notes on page 29 for full notes and definitions.

1998 first-time domestic students who were family workers or retired

Studying for one year towards a level 1 to 3 certificate at an ITP without completing or re-enrolling was the most common pathway for 1998 first-time domestic students who were family workers or retired in the previous year, covering 16 percent of students in this group. Studying for two years towards a level 1 to 3 certificate at an ITP without completing or re-enrolling was the third most common pathway, covering 6.8 percent of the family worker or retired group. 6.8 percent of 1998 first-time students started at an ITP and completed their level 1 to 3 certificate in one year. This was the second most common pathway for the family worker or retired group.

The next four most common pathways all involved enrolling in a qualification for just one year without completing or re-enrolling. Fourth most common was one year in a bachelors-level degree at a university (5.0 percent of students in this group), fifth most common was one year in a level 1 to 3 certificate at a university (3.1 percent), sixth most common was one year in a level 4 certificate at a university (2.2 percent), and seventh most common was one year in a diploma at an ITP (1.8 percent).

Table 5: Top 10 seven-year pathways – 1998 first-time domestic students who were family workers or retired

		Level and sub-sector and whether completed (y) 1998-2004						Starting students	
	1998	1999	2000	2001	2002	2003	2004	#	%
1	Cer	ITP						280	16%
2	Cer	ITP	y					120	6.8%
3	Cer	ITP	Cer	ITP				110	6.8%
4	Deg	Uni						90	5.0%
5	Cer	Uni						50	3.1%
6	Cer4	Uni						40	2.2%
7	Dip	ITP						30	1.8%
8	Deg	Uni	Deg	Uni				20	1.4%
9	Cer4	Uni	Cer4	Uni				20	1.2%
10	Cer	ITP	Cer	ITP	Cer	ITP		20	0.9%
All other pathways								920	54%
Total								1,690	100%

Notes:

1. All figures are rounded to the nearest ten.
2. See technical notes on page 29 for full notes and definitions.

1998 first-time domestic students who were overseas

The two most common pathways for 1998 first-time domestic students who were overseas in the previous year were to enrol in a level 1 to 3 certificate qualification at an ITP or a bachelors-level degree at a university and drop out after one year. Together these were the paths taken by 17 percent of students in this group. The students in this group are more likely to drop-out after one year enrolled in a bachelors-level degree at university than any other students.

6.1 percent of the overseas group started at an ITP and completed a level 1 to 3 certificate in one year. This was the third most common pathway for students in this group. 4.1 percent of the overseas group enrolled in a level 1 to 3 certificate qualification at a university for one year without completing or re-enrolling. This was the fourth most common pathway for students in this group.

Completing a bachelors-level degree at a university after three years was the sixth most common pathway, followed by 2.9 percent of students in this group, just slightly ahead of the number completing a bachelors-level degree after four years (2.8 percent of students in this group).

Table 6: Top 10 seven-year pathways – 1998 first-time domestic students who were overseas

	Level and sub-sector and whether completed (y) 1998-2004							Starting students	
	1998	1999	2000	2001	2002	2003	2004	#	%
1	Cer ITP							170	11%
2	Deg Uni							100	6.5%
3	Cer ITP y							100	6.1%
4	Cer Uni							60	4.1%
5	Cer ITP	Cer ITP						50	3.1%
6	Deg Uni	Deg Uni	Deg Uni y					50	2.9%
7	Deg Uni	Deg Uni	Deg Uni	Deg Uni y				40	2.8%
8	Cer Uni y							40	2.4%
9	Deg Uni	Deg Uni						40	2.4%
10	Dip ITP							30	1.7%
All other pathways								890	57%
Total								1,560	100%

Notes:

1. All figures are rounded to the nearest ten.
2. See technical notes on page 29 for full notes and definitions.

4 Six different groups of students

In this chapter we compare the pathways followed by six different groups of first-time domestic students. These six groups are characterised by the student's activity prior to starting tertiary study and where and what they study. In 1998 these were the six biggest groups and made up almost 70 percent of first-time domestic students.

The six groups are as follows:

- Group 1 – School leavers who enrol in bachelors-level study at universities.
- Group 2 – Workers who enrol in bachelors-level study at universities.
- Group 3 – Workers who enrol in level 1 to 3 certificate study at ITPs.
- Group 4 – School leavers who enrol in level 1 to 3 certificate study at ITPs.
- Group 5 – Non-employed or beneficiaries who enrol in level 1 to 3 certificate study at ITPs.
- Group 6 – Workers who enrol in diploma study at ITPs.

The characteristics of first-time domestic students changed significantly between 1998 and 2004 and this has meant the biggest groups in 2004 are different to those in 1998. The number of first-time domestic students coming from the workforce to enrol in level 1 to 3 certificate study at ITPs increased by 325 percent between 1998 and 2004 and made up almost a third of first-time domestic students in 2004, making group two the largest of the groups in 2004. Group one, school leavers enrolling in bachelors-level study at universities represented 13 percent of 2004 first-time domestic students, making them the second largest group in that year.

With the recent increase in students enrolling at wānanga, there were large groups of first-time domestic students studying at wānanga in 2004, particularly first-time students who were in the workforce, or non-employed or a beneficiary in the previous year enrolling in level 1 to 3 certificate study. In 2004, these two groups made up 4.1 percent and 3.4 percent respectively of first-time domestic students and were the fifth and seventh largest groups.

Characteristics of the six different groups

Not surprisingly the two groups of school leavers (groups one and four) were, on average, the youngest. The slightly lower average age of students in group four along with the lower levels of secondary school qualifications they gained would suggest they left school at an earlier age than students in group one. Students in group three were, on average, the oldest students and also had the greatest proportion of students who were aged 40 years or over.

Table 7: Characteristics of the six groups

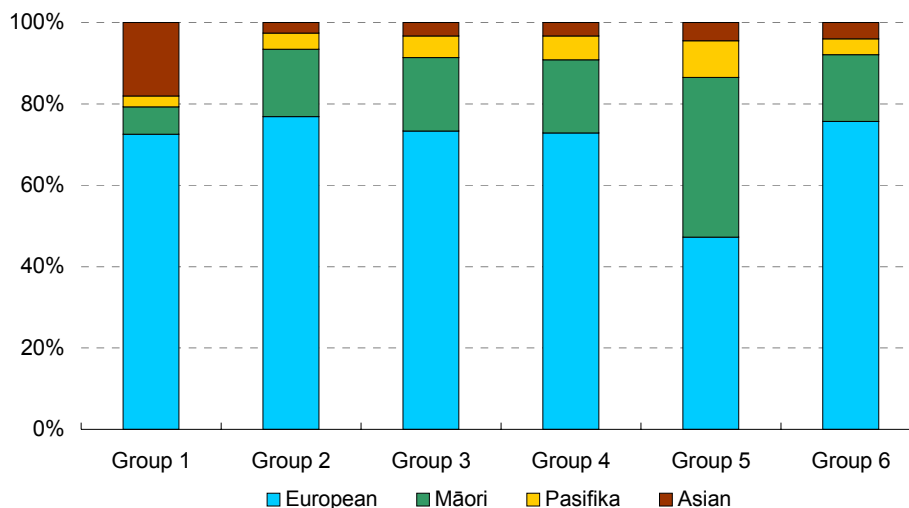
	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
Proportion of students	22%	5%	15%	11%	10%	4%
Average age (years)	18.2	30.0	32.1	17.8	30.5	31.8
Women	55%	52%	42%	45%	62%	51%
Māori	7%	16%	18%	18%	38%	16%
Pasifika	3%	4%	5%	6%	9%	4%
Asian	17%	3%	3%	3%	4%	4%
No school qualification	0%	8%	24%	11%	47%	10%
NCEA level 2 plus	99%	69%	35%	60%	19%	53%
Average study load (EFTS)	0.95	0.56	0.34	0.73	0.54	0.38
Full-time	83%	38%	14%	49%	26%	17%
Extramural	1%	31%	33%	6%	17%	45%

Note: See technical notes on page 29 for full notes and definitions.

There were more men than women in both groups three and four perhaps due to the vocational nature of many qualifications at levels 1 to 3. While this does not hold true for group five, which had the highest proportion of women, this may be due to women making up 61 percent of all non-employed and beneficiaries in New Zealand.¹⁴

Given the over-representation of both Māori and Pasifika among the unemployed it is perhaps not surprising that group five had the largest proportion of students from both these ethnic groups. Māori were 6.5 percent of group one, but 18 percent of all school leavers in 1997. This proportion had increased slightly by 2004, but was still the lowest across the six groups. The trend across the six groups was very similar for Māori and Pasifika. Students in group one were more likely to be Asian, also 39 percent of all first-time domestic Asian students were in group one.

Figure 9: Distribution of first-time domestic students by group and ethnic group 1998



Notes:

1. Other ethnic groups have not been included in this figure.
2. See technical notes on page 29 for full notes and definitions.

Entry requirements into tertiary qualifications will have a major influence on the level of secondary school qualifications of each group. Therefore, it is not surprising that students in group one and group two (degree study) had the highest proportion of

¹⁴ Source: Statistics NZ. This figure is at September 2005 and was likely to be an even higher proportion in 1998, given the recent increase in women returning to work.

secondary school qualifications at NCEA level 2 or above, given the higher entry requirements of bachelors-level study. Students in group four also had high levels of secondary school qualifications though perhaps doing well at school motivated them to progress to tertiary education through a vocational qualification. As would be expected, students in group five had the highest proportion of students with no secondary school qualification.

A key influence on study load appears to be the average age of the groups. Younger groups, e.g. where students have come directly from secondary school, have higher average study loads, perhaps due to having fewer outside commitments, such as work and family. Students in group two had a considerably lower average study load than students in group one as many were still likely to be working, which appears to be the case across all three groups where students had come to tertiary study from the workforce.

Again, those students that came from the workforce are more likely to study extramurally, with 45 percent of students in group six studying this way. In contrast, those students who came directly from secondary school have the lowest proportion of students studying extramurally, with just 1.4 percent of students in group one studying in this way.

Given these characteristics of the six groups, we can identify some general factors motivating these students into study. Students in group one are more likely to include professional career-oriented young people looking to complete a qualification to begin their career. Students in group two will include those professional workers who after forgoing bachelors-level study straight out of school, have chosen to study now to improve career prospects. Students in group three are more likely to include workers looking to up-skill in vocational fields to either progress their current career or to change career. This group is likely to include more students with course specific goals rather than qualification goals.¹⁵ Students in group four are more likely to be young people looking to complete a vocational qualification in order to begin a career. Students in group five include many people who were not successful at school and are using low level certificate study as a way back into study to improve career options as a way back into the workforce. Students in group six are likely to have similar motivations as group two but on average did less well at school.

Study outcomes of the six different groups

It is not surprising that students in groups one and two are enrolled in study for the longest average time, given that the prescribed length of time to complete a bachelors-level degree is normally longer than a certificate or a diploma. Nor is it surprising that those groups with higher completion rates have longer average times in study than groups at similar qualification levels, because to complete a qualification you generally have to spend longer in study and because a large proportion of those who don't complete have dropped out early in their studies.

¹⁵ Qualification completion rates therefore will not be an ideal measure for these students. Course completion rates are an alternative measure, but were not available at the time of writing this report.

Table 8: Outcomes of the six groups after seven years

	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6
Average time enrolled	4.4	3.0	2.1	2.5	2.1	2.6
First-year attrition	12%	40%	45%	36%	44%	43%
Seven-year attrition	23%	52%	66%	38%	51%	65%
Seven-year completion	64%	30%	27%	52%	41%	18%
Average time to complete	4.1	3.8	1.8	1.5	1.7	2.7
Two or more qualifications	18%	7%	2%	8%	4%	4%
Higher-level articulation ¹⁶	19%	7%	5%	11%	5%	4%
Break in study	18%	24%	21%	34%	29%	26%
Studied at more than one provider	19%	19%	10%	21%	18%	15%

Notes:

1. Average time enrolled and average time to complete are measured in calendar years rather than EFTS years.
2. Seven-year completion rates are of those who successfully completed a qualification at the same level as the one they started in 1998.
3. See technical notes on page 29 for full notes and definitions.

Attrition in the first year was 12 percent for students in group one, significantly lower than students in all the other five groups, which ranged between 36 and 45 percent. This rate will be affected by a range of influences, including more students in group one motivated to complete qualifications rather than courses.

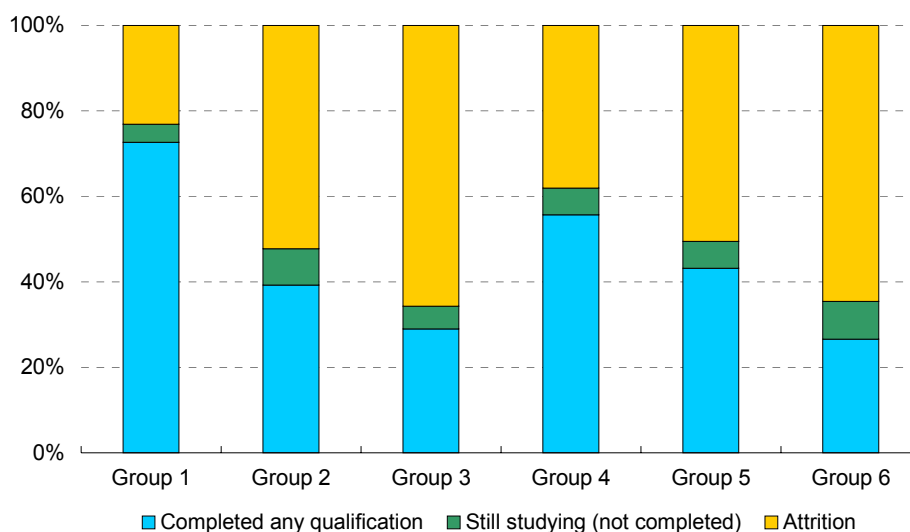
Students in group one were more likely to complete a qualification within seven years than students in the other five groups. Around 64 percent of students in group one completed a bachelors-level degree between 1998 and 2004, compared with 30 percent of students in group two. Students in group one were more likely than students in group two to be studying on a full-time basis and intramurally, factors that have been found to be strongly associated with successful completion.¹⁷

Similarly, students in group four were more likely to be studying full-time and intramurally and therefore more likely to complete a level 1 to 3 certificate between 1998 and 2004 than students in groups two and four, who took the same study pathway in 1998.

¹⁶ “Articulation’ refers to students who progress to and complete higher level qualifications, either instead of, or in addition to, the ones they started.

¹⁷ Scott, David, Warren Smart. (2005). *What factors make a difference to getting a degree in New Zealand?* Ministry of Education, Wellington. www.educationcounts.edcentre.govt.nz.

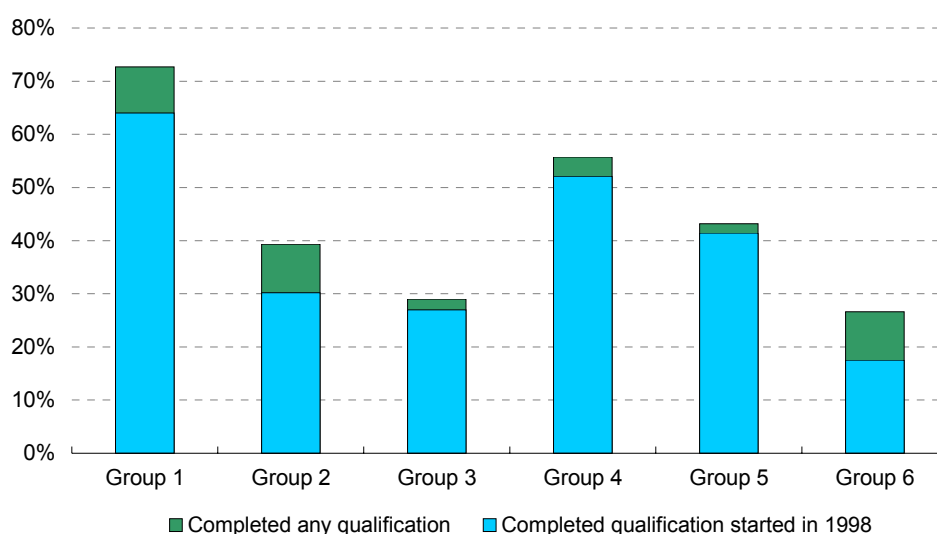
Figure 10: Proportion of 1998 first-time domestic students by group and seven-year completion status



Note: See technical notes on page 29 for full notes and definitions.

Despite students in group three having gained higher secondary school qualifications than students in group five, they have a lower seven-year completion rate. This is perhaps because students in group three are more likely to be combining study with work, or have specific vocational course-based goals rather than qualification goals.

Figure 11: 1998 first-time domestic students by group and seven-year completion rate



Note: See technical notes on page 29 for full notes and definitions.

Although group one students had a higher completion rate for bachelors-level degrees than group two, if we focus solely on those who completed a bachelors-level degree, students in group two were faster to complete a bachelors-level degree than students in group one. This is somewhat surprising given the higher propensity of students in group two to study part-time. However it may be related to the high attrition rate of students in group two during the first two years. Those students who dropped out in the first two years were probably more focused on completing courses rather than qualifications. Those students in the group who are focused on completing a qualification were probably more likely to be full-time. Group two students were also

more likely to enrol in three year bachelors-level qualifications than four or more year bachelors-level qualifications.

Students in group four were faster to complete their certificate than those students in groups three and five. This is not surprising given the higher propensity of students in group four to study full-time.

Students in group one were more likely to complete two or more qualifications. Around 18 percent of students in group one completed two or more qualifications. The most common combination of qualifications for this group was a bachelors-level degree and a postgraduate certificate or diploma.

Students in group one were more likely to progress to and complete higher-level qualifications instead of, or in addition to, the level they started in 1998. This rate is significantly higher than group two where students from the workforce have taken the same study pathway in 1998 as students in group one (school leavers). Students in group four were more likely to progress to and complete higher-level qualifications than those in groups three and five, where study pathways are the same. Overall there were low rates of higher-level qualification progression for students in the groups coming from the workforce or were non-employed or a beneficiary.

Students in group four were more likely to take a break from study and then return. Students in group one were the least likely to take a break from study for at least one year and then return.

Students in group four were more likely to study at more than one provider between 1998 and 2004. Given they also have a high rate of progression to higher-level study, this is not surprising and shows that a lot of this higher-level study is done at a provider other than an ITP. The most common combination of providers for students in group four was a university and an ITP, covering 6.8 percent of this group. Students from group three were the least likely to study with more than one provider.

The following abbreviations are used in tables throughout the rest of this chapter:

Cer	Level 1 to 3 certificate
Dip	Diploma level
Deg	Bachelors level
Pos	Postgraduate certificate or diploma level
Uni	University
ITP	Institute of technology and polytechnic
y	Successfully completed a qualification this year

Pathways of group one

Students starting and completing a bachelors-level degree in four years was the most common pathway for students in group one, covering 11 percent of this group. Studying for one year without completing or re-enrolling was the second most common pathway for students in group one. Nearly one in ten (9.1 percent) students followed this path. Completing a bachelors-level degree in three or five years were the third and fourth most common pathways followed by students in group one respectively. 6.4 percent of students in group one completed in three years and 4.6 percent completed in five years.

Students in group one were more likely to follow any of the pathways that involved completing a qualification and less likely to follow any of the pathways that involved non-completion than other first-time domestic students enrolled in bachelors-level study at universities. They were three times more likely to follow the pathway that involved completing a bachelors-level degree in four years.

While 11 percent of students in group one followed the pathway of completing a bachelors-level degree in four years and then doing no further study, a further 10 percent of students completed a bachelors-level degree in four years and then did further study. An additional 12 percent of students completed a bachelors-level degree in three years and then did further study and an additional 3.8 percent of students completed a bachelors-level degree in five years and then did further study.

The most common pathway that involved progression to a higher qualification level was completing a bachelors-level degree in three years and then completing a postgraduate certificate or diploma in one year. Less than 1 percent of students in group one followed this path. Students in group one followed a large number of pathways when compared to the other groups analysed in this study. This in part due to the greater number of students in group one, however it is also due to the longer time spent in study and the higher progression rates of students in group one.

Table 9: Top 10 seven-year pathways – 1998 first-time domestic students from secondary school enrolling in bachelors-level study at universities

		Level and sub-sector and whether completed (y) 1998-2004								Starting students					
1998		1999		2000		2001		2002		2003		2004		#	%
1	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	1,140	11%
2	Deg Uni													950	9.1%
3	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	660	6.4%
4	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	480	4.6%
5	Deg Uni	Deg Uni												450	4.4%
6	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	230	2.3%
7	Deg Uni	Deg Uni	Deg Uni	Deg Uni										220	2.1%
8	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni									170	1.7%
9	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni						160	1.5%
10	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	100	1.0%
All other pathways													5,800	55%	
Total													10,420	100%	

Notes:

1. All figures are rounded to the nearest ten.
2. See technical notes on page 29 for full notes and definitions.

Pathways for group two

Studying at bachelors level for either one or two years without completing or re-enrolling were the two most common pathways for students in group two, covering 38 percent of all students in this group. Students starting and completing a bachelors-level degree in three years was the third most common pathway, covering 5.4 percent of students in group two. An additional 5.0 percent of students in group two complete a bachelors-level degree in three years and do further study.

When compared with group one, students in group two are less likely to complete a bachelors-level degree in either three years or four years, and are more likely to leave tertiary study without completing a qualification after one or two years.

1.5 percent of students in group two studied at bachelors level at a university for all seven years between 1998 and 2004. This was the eighth most common pathway followed by students in group two and is an indication of the greater number of part-time students in group two. 1.2 percent of students in group two completed a bachelors-level degree in one year of study. This was the ninth most common pathway followed by group two. None of the top 15 pathways involved progression to higher level study.

Table 10: Top 10 seven-year pathways – 1998 first-time domestic students from the workforce enrolling in bachelors-level study at universities

		Level and sub-sector and whether completed (y) 1998-2004							Starting students	
		1998	1999	2000	2001	2002	2003	2004	#	%
1	Deg Uni								720	28%
2	Deg Uni	Deg Uni							240	9.4%
3	Deg Uni	Deg Uni	Deg Uni	y					140	5.4%
4	Deg Uni	Deg Uni	Deg Uni						100	4.0%
5	Deg Uni	Deg Uni	Deg Uni	Deg Uni	y				100	3.7%
6	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	y		40	1.7%
7	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni				40	1.5%
8	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	40	1.5%
9	Deg Uni	y							30	1.2%
10	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	Deg Uni	y	20	0.8%
All other pathways									1,100	43%
Total									2,570	100%

Notes:

1. All figures are rounded to the nearest ten.
2. See technical notes on page 29 for full notes and definitions.

Pathways of group three

Enrolling in level 1 to 3 certificate study for one or two years and not completing were the two most common pathways for students in group three. Together these pathways were taken by 52 percent of students in group three. Students in group three were more likely to follow these two pathways than students in groups four and five.

Starting and completing a level 1 to 3 certificate after one year was the third most common pathway followed, covering 11 percent of students in group three. Students in group three were less likely to follow this pathway, or any pathway that involved completing a qualification, than students in groups four and five. Around 1.3 percent of students in group three studied a level 1 to 3 certificate for two years completing it after two years. This was the sixth most common pathway for students in group three.

Around 19 percent of students in group three had completed a level 1 to 3 certificate in one year and then either continued studying or left study for the remaining years. This is 70 percent of all students in group three who completed a level 1 to 3 certificate within seven years. The twenty most common pathways followed by students in group three all involved enrolment in level 1 to 3 certificate study at an ITP exclusively. There was very little progression to higher level qualifications or study at other providers amongst students in group three. Amongst the top ten pathways of group three there were few which ended in completion when compared with the pathways of groups four and five.

Table 11: Top 10 seven-year pathways – 1998 first-time domestic students from the workforce enrolling in level 1 to 3 certificate study at ITPs

		Level and sub-sector and whether completed (y) 1998-2004						Starting students		
		1998	1999	2000	2001	2002	2003	2004	#	%
1	Cer ITP								2,610	36%
2	Cer ITP		Cer ITP						1,190	16%
3	Cer ITP	y							770	11%
4	Cer ITP		Cer ITP	Cer ITP					260	3.5%
5	Cer ITP		Cer ITP	Cer ITP	Cer ITP				100	1.3%
6	Cer ITP		Cer ITP	y					90	1.3%
7	Cer ITP							Cer ITP	50	0.7%
8	Cer ITP			Cer ITP					50	0.6%
9	Cer ITP	y	Cer ITP						40	0.6%
10	Cer ITP						Cer ITP		40	0.5%
All other pathways									2,120	29%
Total									7,320	100%

Notes:

1. All figures are rounded to the nearest ten.
2. See technical notes on page 29 for full notes and definitions.

Pathways of group four

Enrolling in level 1 to 3 certificate study at an ITP for one year without completing or re-enrolling was the most common pathway followed, covering 23 percent of students in group four. Studying for two years without completing was the third most common pathway, covering 3.8 percent of students in group four. Enrolling for three consecutive years in level 1 to 3 certificate study at an ITP without completing was the seventh most common pathway, covering 0.9 percent of students in group four.

Starting and completing a level 1 to 3 certificate after one year was the second most common pathway followed, covering 19 percent of students in group four. Students in group four were more likely to follow this pathway than students in groups three and five, who were also enrolled in level 1 to 3 certificate study at ITPs.

While 19 percent of students in group four started at an ITP and completed a level 1 to 3 certificate in one year, an additional 24 percent of students in group four had completed a level 1 to 3 certificate in one year and then did further study in the remaining six years. Therefore 82 percent of students in group four who completed a level 1 to 3 certificate within seven years did so in the first year.

Around 1.3 percent of students in group four studied for two years at an ITP, completing a level 1 to 3 certificate in the first year, and another level 1 to 3 certificate in the second year. This was the fourth most common pathway and more common than completing one certificate in two years. Students in group four were more likely to complete a level 1 to 3 certificate and do further level 1 to 3 certificate study. The fourth, sixth and tenth most common pathways followed this pattern.

Table 12: Top 10 seven-year pathways – 1998 first-time domestic students from secondary school enrolling in level 1 to 3 certificate study at ITPs

		Level and sub-sector and whether completed (y) 1998-2004						Starting students		
		1998	1999	2000	2001	2002	2003	2004	#	%
1	Cer ITP								1,210	23%
2	Cer ITP y								1,010	19%
3	Cer ITP		Cer ITP						200	3.8%
4	Cer ITP y		Cer ITP y						70	1.3%
5	Cer ITP		Cer ITP y						60	1.1%
6	Cer ITP y		Cer ITP						60	1.0%
7	Cer ITP		Cer ITP	Cer ITP					50	0.9%
8	Cer ITP			Cer ITP					40	0.7%
9	Cer ITP							Cer ITP	40	0.7%
10	Cer ITP y			Cer ITP					30	0.5%
All other pathways									2,630	49%
Total									5,380	100%

Notes:

1. All figures are rounded to the nearest ten.
2. See technical notes on page 29 for full notes and definitions.

Pathways for group five

Studying for one year in level 1 to 3 certificates at an ITP without completing or re-enrolling was the most common pathway followed, covering 31 percent of students in group five. Studying for two years without completing was the third most common pathway, covering 11 percent of students in group five.

16 percent of students in group five started at an ITP and completed a level 1 to 3 certificate in one year. This was the second most common pathway. Students in group five were more likely to follow this pathway than those in group three. An additional 15 percent of students in group five had completed a level 1 to 3 certificate in one year and then did further study. Therefore 75 percent of students in group five who completed a level 1 to 3 certificate within seven years did so in the first year.

Around 1.0 percent of students in group five studied for two years at an ITP completing a level 1 to 3 certificate in the first year, and another level 1 to 3 certificate in their second year. This was the seventh most common pathway.

Table 13: Top 10 seven-year pathways – 1998 first-time domestic students who were non-employed or a beneficiary enrolling in level 1 to 3 certificate study at ITPs

		Level and sub-sector and whether completed (y) 1998-2004						Starting students		
		1998	1999	2000	2001	2002	2003	2004	#	%
1	Cer ITP								1,550	31%
2	Cer ITP y								780	16%
3	Cer ITP		Cer ITP						510	10%
4	Cer ITP		Cer ITP y						70	1.4%
5	Cer ITP		Cer ITP	Cer ITP					70	1.3%
6	Cer ITP y		Cer ITP						60	1.1%
7	Cer ITP y		Cer ITP y						50	1.0%
8	Cer ITP							Cer ITP	40	0.8%
9	Cer ITP			Cer ITP					30	0.6%
10	Cer ITP						Cer ITP		20	0.5%
All other pathways									1,790	36%
Total									4,960	100%

Notes:

1. All figures are rounded to the nearest ten.
2. See technical notes on page 29 for full notes and definitions.

Pathways for group six

Studying for one, two or three years at an ITP without completing or re-enrolling were the three most common pathways, covering 50 percent of students in group six.

Completing a diploma after one year was the fourth most common pathway followed by 2.8 percent of students in group six, slightly ahead of both the number completing after three years (1.8 percent) and two years (1.3 percent).

Less than 1 percent of students in group six studied a diploma for the first year and then studied a level 1 to 3 certificate the next year and completed neither of these qualifications. This was the eighth most common pathway followed by students in group six. 2.8 percent of students in group six progressed to bachelors-level study in their second year of study, whether they completed a diploma or not.

When compared with all first-time domestic students who started a diploma at ITPs in 1998, students in group six are more likely to leave without completing after one or two years, but less likely to leave without completing after three years. They are more likely to complete a diploma in one year but less likely to complete it in two or three years.

Table 14: Top 10 seven-year pathways – 1998 first-time domestic students from the workforce enrolling in diploma study at ITPs

		Level and sub-sector and whether completed (y) 1998-2004							Starting students	
		1998	1999	2000	2001	2002	2003	2004	#	%
1	Dip ITP								530	31%
2	Dip ITP		Dip ITP						250	15%
3	Dip ITP		Dip ITP	Dip ITP					60	3.6%
4	Dip ITP	y							50	2.8%
5	Dip ITP		Dip ITP	Dip ITP	y				30	1.8%
6	Dip ITP		Dip ITP	y					20	1.3%
7	Dip ITP		Dip ITP	Dip ITP		Dip ITP			20	1.2%
8	Dip ITP		Cer ITP						10	0.8%
9	Dip ITP		Dip ITP	Dip ITP		Dip ITP	y		10	0.8%
10	Dip ITP			Dip ITP					10	0.7%
All other pathways									690	41%
Total									1,690	100%

Notes:

1. All figures are rounded to the nearest ten.
2. See technical notes on page 29 for full notes and definitions.

Technical notes

The cohort used in this report relates to 54,400 domestic students who first studied in 1998 at a TEI and follows seven years of their study until the end of 2004. Students in private tertiary institutions are not included, nor are international students. Only those students involved in formally assessed qualifications of greater than 0.03 EFTS are included. Like the previous study, current data limitations prevent us from including on-job workplace training.

This report is based on data drawn from a longitudinal matched dataset of student enrolments and completions. This, in turn, was created from administrative returns provided by tertiary institutions to the New Zealand Ministry of Education. Up until 2003 no unique national student identifier existed that allowed for accurate tracking of a student over time or across institutions.¹⁸ A matching algorithm was developed during 2003 to construct a statistical match of students in data prior to 2003, and it is the dataset resulting from this matching exercise that is used for this study.¹⁹

Students enrolled in tertiary education are often enrolled in more than one qualification and/or more than one sub-sector at the same time. For the purposes of this report only one pathway for each student has been included in the analysis. This was done by only keeping one enrolment record per student in each year. The enrolment record kept was the one with the highest qualification level. If there was more than one enrolment at the same level, then the enrolment with the highest study load was kept.

Care is needed in interpreting trends, as many students' predominant activity in the previous year may be different from what they were doing at 1 October. In addition, in 1998, 6,810 first-time domestic students did not declare what their activity was at 1 October of the previous year. These students, who make up 12 percent of the 1998 first-time domestic student cohort, have not been included in any analysis of prior activity throughout this report.

Unless otherwise stated, 'completion' refers to the successful completion of any qualification. 'Attrition' refers to those who leave study without completing any qualification. 'Articulation' refers to students who progress to and complete higher level qualifications, either instead of, or in addition to, the ones they started. Taking a break is measured by considering people who were enrolled, then subsequently not enrolled for at least one year, and then enrolled again over the seven years from 1998 to 2004: that is anyone with an interrupted period of enrolment between 1998 and 2004.

The following abbreviations are used in tables throughout this report:

Cer	Level 1 to 3 certificate
Cer4	Level 4 certificate

¹⁸ From 2003 a national student number was introduced, which now provides for accurate tracking of students across time and across institutions.

¹⁹ For full details of this matching, the algorithm used, and the quality of the results, refer to Scott, D. (2004). *Retention, completion and progression in tertiary education 2003, technical documentation*. Ministry of Education, Wellington. www.educationcounts.edcentre.govt.nz.

Dip	Diploma level
Deg	Bachelors level
Pos	Postgraduate certificate or diploma level
Uni	University
ITP	Institute of technology and polytechnic
CoE	College of Education
Wān	Wānanga
PTE	Private Training Establishment
y	Successfully completed a qualification in this year

