3 Student characteristics and choices

Key points

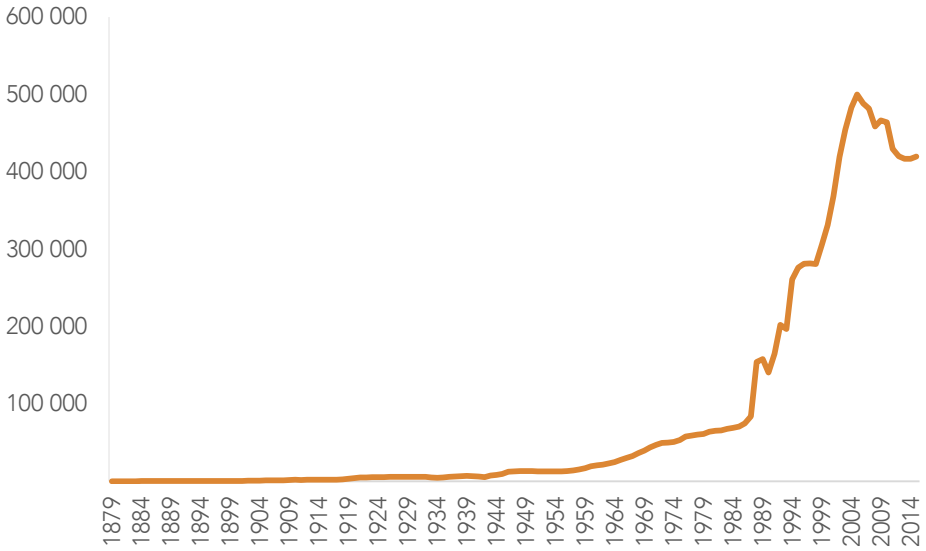
- Students choose tertiary study for a range of reasons. Improving career/job prospects and pursuing personal interests are two key reasons. However, students are also acutely concerned with whether their investment in tertiary education will lead to well-remunerated employment.
- Participation in tertiary education grew enormously through the 1980s and 1990s – but overall, participation rates have been falling since 2005. Participation in industry training follows a different pattern, declining sharply after 2010 due to an economic downturn, and the removal of "phantom trainees" following an operational review of industry training.
- Māori and Pasifika have higher levels of participation in tertiary education than other ethnic groups, but they are less likely to study at university. Their higher participation rates occur entirely in subdegree level study.
- In recent years, students in New Zealand have become more likely to be engaged in a "traditional" conception of tertiary education. The average student is becoming younger and is more likely to be a school leaver. The share of full-year, full-time study is increasing. The share of intramural (on campus) study is increasing. However, some students appear to do better through extramural study, including older people.
- There is widespread concern about how well school leavers transition into tertiary education, and how well the compulsory education system prepares them for further learning. The arrangement and delivery of careers services in schools, and government provision of information to prospective tertiary students, is fragmented and does a poor job of preparing young people to make career and study decisions.
- The New Zealand Qualifications Framework (NZQF) should make it easy for students to have prior learning and credit recognised – but this does not appear to work well in practice. Centralised approaches to coordinating credit transfer in other countries do not appear to have been effective.
- In contrast to domestic students, the number of international students enrolled with New Zealand tertiary providers has steadily increased. The majority of international students studying in New Zealand come from China and India, with Chinese students more likely to be enrolled at university and Indian students at institutes of technology or polytechnics (ITPs). Compared with Australia and the United Kingdom, New Zealand has a relatively high proportion of international students studying at subdegree level, and a lower proportion studying at postgraduate level. However, a high proportion of international students study at doctoral level in New Zealand because they receive the same subsidy as domestic students from the New Zealand government and are able to pay domestic fees.

3.1 Who studies and why?

Why study?

Chapter 1 described how rates of tertiary education study around the world increased in the 20th century. In New Zealand, the number of tertiary enrolments increased in the second half of last century. Enrolments increased dramatically from the late 1980s, before declining after 2005 (Figure 3.1).

Figure 3.1 Enrolments in New Zealand tertiary education, 1879–2015



Notes:

1. Data counts public and private enrolments, by domestic and international students.
2. Statistics New Zealand and Ministry of Education data. Historical data from Thorns and Sedgwick (1997).

Chapter 2 discusses why people spend money, time and effort on their own education. Participation in tertiary education is voluntary (it is sometimes called post-compulsory education). Despite its voluntary nature, the growing expectation is that young people should enter tertiary education, and older people will need to continue to upskill over the course of their careers. And for good reason – a 2007 study by Nair et al. found that:

- attainment of tertiary qualifications is associated with a higher likelihood of employment – especially during times of economic recession;
- those with tertiary qualifications earn more than those without;
- the successful completion of a tertiary qualification results in a premium on earnings over those who do not complete a qualification; and
- the health and lifestyle outcomes for those who attain tertiary qualifications are better, including a higher standard of living and lower mortality rates from all causes.

On average, people with qualifications are more likely to be employed and receive higher wages, as shown in Figures 10.2 and 10.3. Even students who do not achieve at school benefit from a tertiary education. Tumen, Crichton and Dixon (2015) examined the labour market benefits gained by young people who leave school without National Certificate of Educational Achievement (NCEA) level 2, but enrol at a tertiary institution within the first few years of leaving school. They found completing levels 1–3 certificates was associated with an 8.5 percentage point increase in employment rate, and a 6.4 percentage point decrease in benefit receipt. The benefits were even higher for those who completed a level 4 certificate or higher. But the employment rate for those who enrolled but failed to complete was no better than their matched comparison group. Indeed, these students were 2.9 percentage points more likely to be on a benefit two years later. Scott (2009) finds that, although not as good as completing a qualification, passing some courses still has benefits.

In a longitudinal study (Vaughan, 2008), Year 11 and 12 students were asked "what might stop you having the life you want?" The top barriers reported as likely or very likely were:

- "not having qualifications";
- "not being able to find a job or too much competition for jobs";

- "not having skills";
- "finding out that what I chose was not what I expected or really wanted";
- "not being accepted into my chosen course or programme";
- "feeling confused over which option to take for work or study"; and
- "not knowing what my options are or knowing what to do".

Other concerns, such as relationships, money concerns, health concerns, peer pressure, time pressure, motivation and self-confidence came further down the list. A young person's anxiety about their future, and the quality of support needed to help them formulate career plans and navigate education options are discussed in this chapter.

Future income and employment prospects are key considerations for students. Students appear acutely concerned with whether their investment in tertiary education will lead to well-remunerated employment:

> Employers have always demanded tertiary-educated employees and seem like they will always prioritise a candidate with a degree over a candidate without one. However due to the oversupply of tertiary qualifications in many sectors, employers are only taking the absolute best. The tertiary system itself is not responding to this. It continues to produce more graduates and aims to increase graduate output without factoring in growth of the downstream job market. (Victoria University Wellington Students' Association, sub. 80, p. 10)

> My anecdotal impression, on talking with students, is that they regard their futures as precarious, with uncertain prospects of well-remunerated employment, no matter what they study now. They will be faced with debt and high rents anyway, and few will have secure or fulfilling jobs, or so they fear. (Duncan, sub. 18, p. 10)

> Most learners, at every level of the system, expect that their studies will help them in the workforce – whether to obtain a specific job (in the case of a vocational qualification or professional degree for example), or simply to improve their chances of getting some kind of secure, meaningful, well-paid employment. This is also an expectation of government in funding tertiary institutions. However the pathway from school into and through tertiary to employment is unclear for learners and employers, and is often hazy even for educators. (COMET Auckland, sub. 50, p. 4)

In a similar vein, the New Zealand Council of Trade Unions highlighted financial returns to employment:

> There must be recognition through financial rewards for further education and training. Otherwise workers may question its value. (sub. 69, p. 24)

Yet education is clearly not all about employment outcomes. The New Zealand Union of Students' Associations submitted that improving a student's employment prospects was important, but far from the only reason why a student engages in tertiary education:

> Students want their education to enhance their employability, given the link between having a good job and a happy life, but it is not the sole function. Students primarily choose their education based on the things that they are interested in, they do better accordingly, and having a system that is not purely about cost/benefit and releasing human potential in civics, and as social beings, as well as economic units enhances the nation. (sub. 19, p. 1)

Similarly, Ed. Collective surveyed students and found the most important reasons for studying included both getting a job and studying a subject they are interested in and want to learn more about (sub. 89).

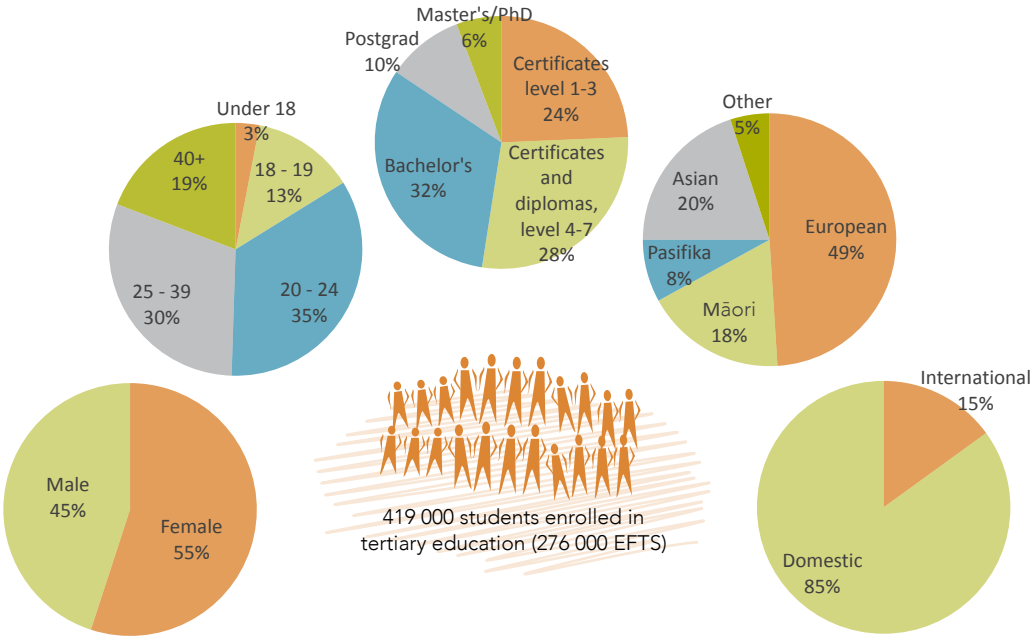
Clearly the objectives of pursuing knowledge in an area of interest, and seeking skills and qualifications to improve employment prospects are both important and, for many students, overlap. There is also some evidence for a "lengthening of adolescence" in developed countries, as the cultural transitions marking adulthood are delayed (Mortimer & Larson, 2002), that may be related to increased participation in tertiary education.

F3.1 Students choose tertiary study for a range of reasons, including improving their career prospects and pursuing their personal interests. Students are acutely concerned about whether their investment in tertiary education will lead to well-paid work.

Who studies?

Figure 3.2 sets out some characteristics of the 2015 domestic and international student population.

Figure 3.2 Characteristics of the New Zealand tertiary student population, 2015



Source: MoE, 2016a.

Notes:

1. Domestic and international students.
2. The pie charts are based on student numbers, not equivalent full-time students (EFTS). The shares in some of these charts would change if they measured EFTS. For example, students studying at Bachelor's level account for 32% of students but, because those students are more likely to be studying full time, they account for 42% of EFTS.
3. The sum of some figures adds to more than 100%, because students can associate with more than one ethnicity, and can be enrolled at different levels of study simultaneously.

Almost 360 000 domestic students were enrolled in tertiary education in 2015.Table 3.1 provides information on the characteristics of domestic students, including their rate (and, where appropriate, their age-standardised rate) of participation in tertiary education.

Table 3.1 Domestic students' participation in tertiary education by selected characteristics, 2015

Characteristic	Students	EFTS	Participation rate	Age-standardised participation rate
Females	206 200	135 575	11.0%	11.3%
Males	152 110	98 020	8.5%	8.3%
Under 18 years	12 255	7 175	6.6%	na
18-19 years	51 065	43 835	39.2%	na
20-24 years	113 805	89 565	33.5%	na

Characteristic	Students	EFTS	Participation rate	Age-standardised participation rate
25-39 years	102 075	55 380	11.7%	na
40 years and over	79 110	37 640	3.7%	na
Europeans	224 225	142 980	8.8%	9.7%
Māori	81 805	53 095	17.2%	14.5%
Pasifika	35 615	23 970	15.1%	11.4%
Asian	46 775	33 890	9.5%	7.6%
Other	16 965	11 005	na	na
Universities	146 015	112 070	4.0%	na
ITPs	129 870	65 870	3.6%	na
Wānanga	37 260	23 140	1.0%	na
Public providers	307 055	201 080	8.4%	na
Private training establishments	57 020	32 510	1.6%	na
Total	358 305	233 590	9.8%	na

Source: MoE, 2016a.

Notes:

1. Data relate to students enrolled at any time during the year with a tertiary education provider in formal qualifications of greater than 0.03 EFTS (more than one week's full-time duration).
2. Data exclude all non-formal learning and on-job industry training.
3. Data include those private training establishments that received Student Achievement Component funding, and/or had students with student loans or allowances, and/or Youth Guarantee programmes.
4. Private training establishments includes other tertiary education providers (OTEPs).
5. One equivalent full-time student (EFTS) unit is defined as the student workload that would normally be carried out in a single academic year (or a 12-month period) by a student enrolled fulltime.
6. The total participation rate is the percentage of the population aged 15 and over who were enrolled at any time during the year.
7. The age-standardised participation rate is standardised to the 2014 national age distribution (ie, it represents the rate a group would have if it had the same age distribution as the 2014 national age distribution).
8. Students are counted in each subsector they enrol in, so the sum of the various subsectors may not add to the total.
9. Students are counted in each ethnic group they identify with, so the sum of the various ethnic groups may not add to the total.
10. "na" indicates that the data are not available.

Overall, tertiary participation levels in New Zealand have fallen since 2005, but remain high compared to pre-1990 levels. The total number of EFTS enrolled in tertiary education remained relatively unchanged between 2007 and 2015. However, the number of enrolments declined, particularly among domestic students, as more students studied full-time. The share of EFTS at Bachelor's level increased (from 38.5% of EFTS in 2007 to 42% of EFTS in 2015), and the number of EFTS enrolled at lower levels reduced (MoE, 2016).

The Ministry of Business, Innovation and Employment (MBIE) and the Ministry of Education submitted that a sharper focus on the quality of provision, and changes to the employment market were important contributors to declining participation rates:

> As the draft report notes (p33), domestic student enrolments dropped by 19% between 2007 and 2015. This was driven by a fall in enrolments in part-time study, extramural study, and degree level study, by students aged over 25, and those previously employed.

Before concluding that these trends were driven by the funding system's EFTS caps and performance measures, other contributing factors should be considered:

- From 2005, successive governments took active steps to cease funding some large lower level courses and programmes targeting part-time, extramural and older students. This was done because significant problems arose concerning quality, student outcomes and value for money;
- Changing labour market conditions have greater influence on enrolment rates by older, part-time students, and previously-employed students.

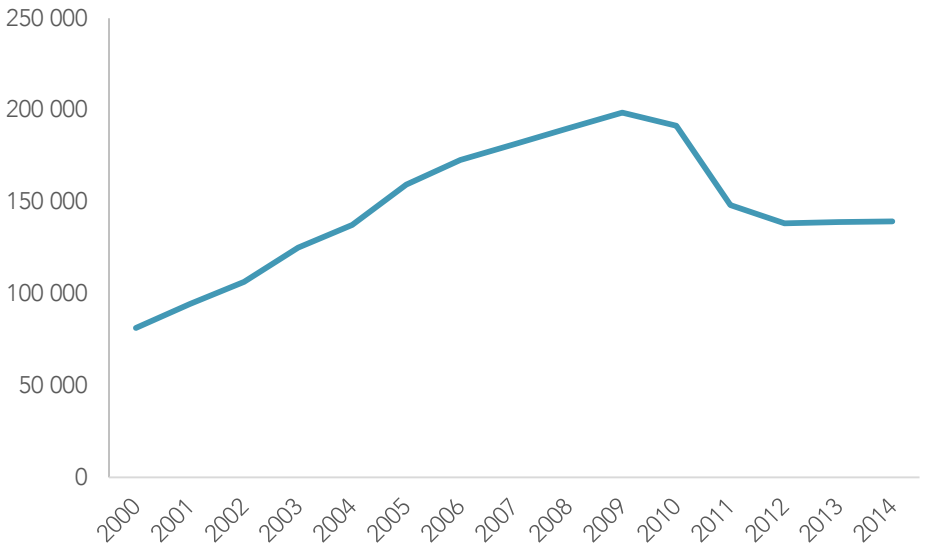
The growth in full-time and degree-level participation may also illustrate the system's responsiveness to changing demand, rather than an inherent bias against part-time and lower-level programmes. (sub. DR 162, p. 5)

Despite this recent decline in overall tertiary participation, New Zealand still has higher rates of participation than many other OECD countries:

At tertiary levels, participation remains higher than the Organisation for Economic Cooperation and Development (OECD) average for ages under 20, about average for ages 20-29, and higher than average for older ages. (MBIE & MoE, sub. DR 162, p. 2)

Participation in industry training (Figure 3.3) follows a different pattern to provider-based training. Participation grew through to 2010 and then declined quite sharply. This was a result not just of the economic downturn, but also of the operational review of industry training that removed significant numbers of trainees from the system (discussed below).

Figure 3.3 Participants in industry training, 2000–14



Source: MoE, 2016a.

Notes:

1. Data are counts of all apprentices and industry trainees, regardless of whether the Tertiary Education Commission funded their activity in the year shown.
2. The graph shows counts of distinct people in total in each year.

People from less deprived areas study at higher levels (Figure 3.4) and consume a commensurately larger average volume of EFTS (Figure 3.5).

Figure 3.4 Highest level of study by deprivation index, 1990 cohort

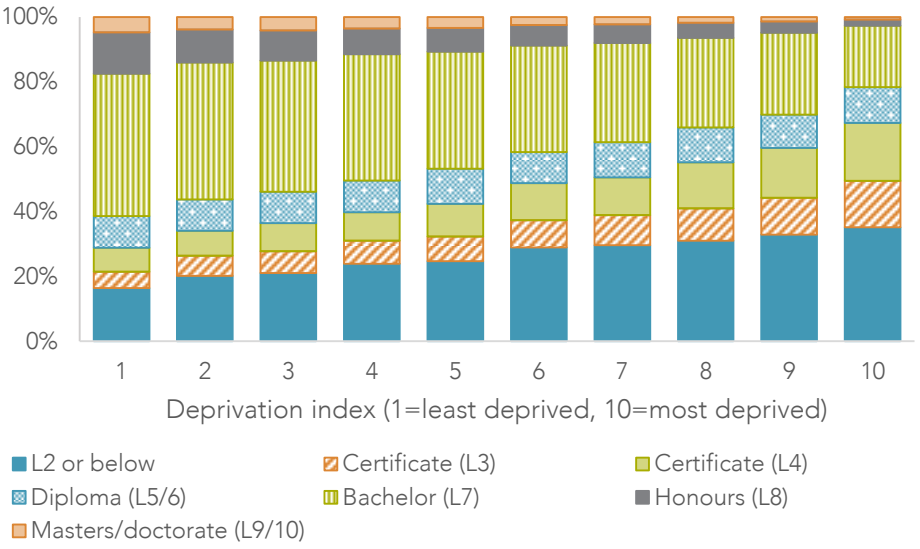


Figure 3.5 Average EFTS and SAC funding consumed per person by deprivation index, 1990 cohort

Source: Productivity Commission

Notes:

1. The population for this analysis is those people whose records in the Integrated Data Infrastructure database show they were born in 1990; attended a New Zealand school during ages 15 and 16; had an address at that age; and were in New Zealand for 300 days during the 15th and 16th years. People are included whether or not they undertook subsidised tertiary education.
2. Deprivation index for each person is the deprivation index for the meshblock containing their address aged 15-16.
3. The "highest level studied" is the highest level of all courses undertaken by that person. It does not mean that the person passed a course at that level, nor does it mean they completed a qualification at that level. "L2 or below" includes no tertiary study.

F3.2 On average people from higher socioeconomic communities study longer, and at higher levels. They also receive more government funding towards tertiary education at above foundation level.

Notes about tertiary ethnicity data

Ethnic identity is a complex characteristic. Most tertiary education ethnicity data reported by the Ministry of Education and the Tertiary Education Commission (TEC) are multiple-response data. This means a student

who indicates on their enrolment that they identify with both Māori and Pasifika ethnicities is included in both categories.[11] This can result in ethnic group data adding up to more than 100%.

Sometimes (especially in older datasets) the data are prioritised, rather than multiple-response. This means students are allocated to one ethnicity category only, according to the "highest priority" ethnicity they indicated in their multiple responses. A standard prioritisation order is: Māori, Pasifika, Asian, Middle Eastern/Latin American/African, Other, New Zealand European. This means if, for example, a student indicates on their enrolment that they identify with both Māori and Pasifika ethnicities, they will be recorded in the data as Māori. Only those students who identify solely with the New Zealand European ethnicity will be included in that group.

How ethnicity is defined in any given dataset can change what the data show. For example, Engler (2010a) found, consistent with earlier research by Chapple, that students who identify as Māori on at least one tertiary enrolment ("ever-Māori") show statistically different results to those who identify as Māori on every tertiary enrolment ("sole-Māori") on various measures of tertiary achievement and outcomes.

Ethnicity data throughout this report should be interpreted with this caveat in mind. The persistent overall patterns shown in the data will be accurate, but detailed statistics may change according to the chosen methodology.

Māori and Pasifika learners are often bracketed together in reporting and discussion, and many students have plural ethnic identities. However, Māori and Pasifika are culturally different groups with different patterns of tertiary participation and attainment, as shown in the data below and in Chapter 9.

Māori and Pasifika learners are over-represented in the low-income population, making it hard to separate ethnicity effects from income effects.

The number of domestic student enrolments dropped by 19% between 2007 and 2015, including drops for both male and female students, and students of all ethnicities – except for Pasifika students (Table 3.2).

Table 3.2 Domestic student enrolments by ethnicity and gender, 2007–15

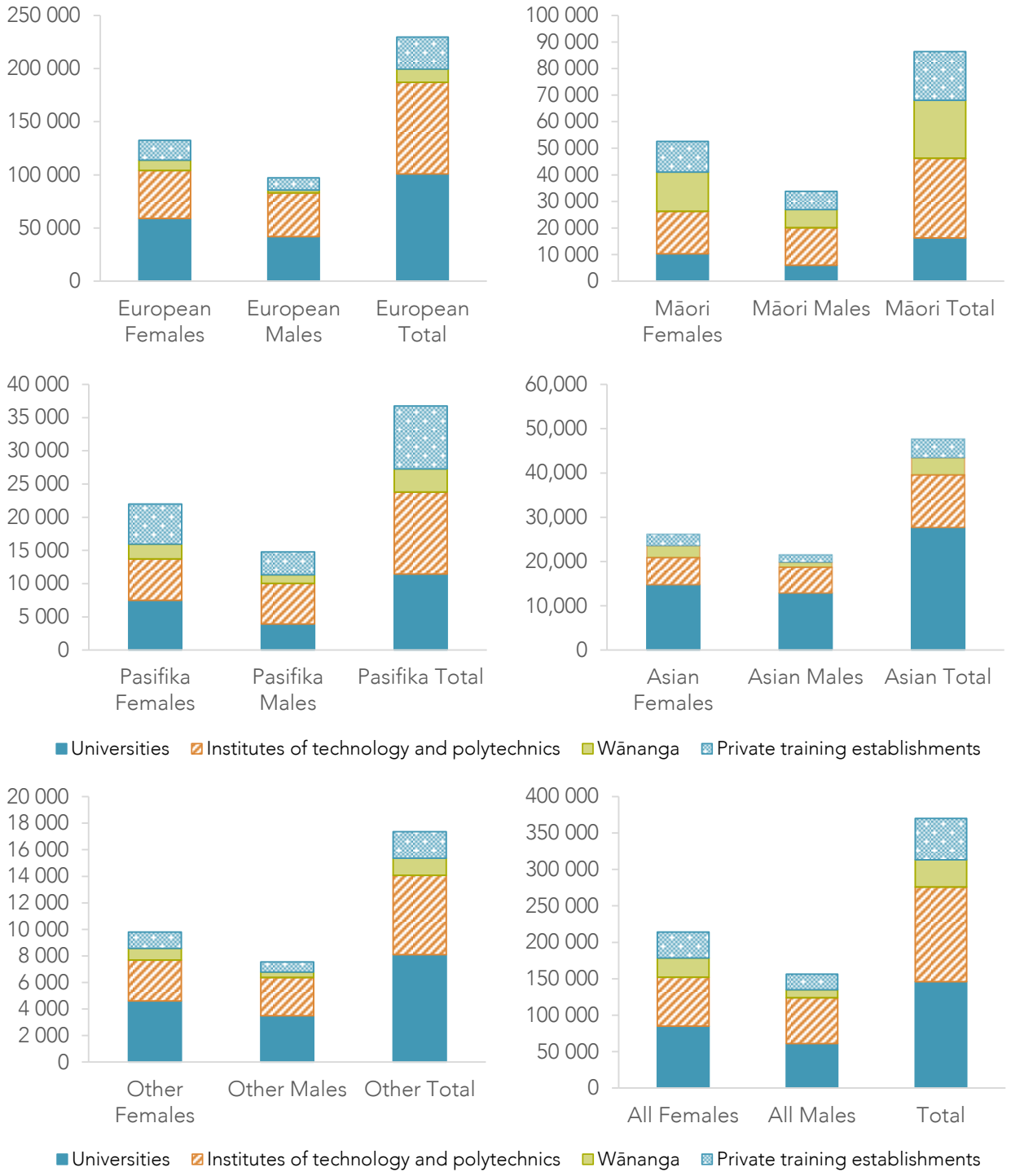
Ethnicity	2007	2015	Change, 2007–15
European	289 739	224 225	-23%
Māori	83 745	81 805	-2%
Pasifika	29 216	35 615	22%
Asian	54 072	46 775	-13%
Other ethnicity	20 702	16 965	-18%
Female	241 347	206 200	-15%
Male	200 644	152 110	-24%
Total domestic enrolments	**441 991**	**358 305**	**-19%**

Source: MoE, 2016a.

A rich amount of data are available about domestic student enrolments by ethnic group, age group, and gender. An overview of some of this data is presented in Figure 3.6.

[11] In some reports (eg, Mahoney, 2014a, 2014b) "Cook Islands Māori" is classified with "Māori" rather than with "Pasifika" in the aggregated data.

Figure 3.6 Number of domestic tertiary enrolments by ethnicity, gender and subsector, 2015



Source: MoE, 2016a.

Notes:

1. Data relate to students enrolled at any time during the year with a tertiary education provider in formal qualifications of greater than 0.03 EFTS (more than one week's full-time duration).
2. Data exclude all non-formal learning and on-job industry training.
3. Data include those private training establishments that received Student Achievement Component funding, and/or had students with student loans or allowances, and/or Youth Guarantee programmes.
4. Private training establishments includes other tertiary education providers (OTEPs).
5. Students are counted in each ethnic group they identify with, so the sum of the various ethnic groups may not add to the total.
6. Students are counted in each subsector they enrol in, so the sum of the various subsectors may not add to the total.

There are more female enrolments than male enrolments across all ethnicities and subsectors, though at certain ages there may be more males enrolled (eg, students aged under 18). Students who identify as Māori

are more likely to be enrolled in a wānanga. Pasifika students are the most likely to attend a private training establishment (PTE). European students and those who identify with an "other" ethnicity are most likely to be enrolled in university. Women participate in tertiary education at higher rates than men across most qualification levels (Table 3.3).

Table 3.3 Age-standardised participation rates by gender and level of study, 2015

Level of study	Females	Males	Total
Certificates 1	0.4%	0.4%	0.4%
Certificates 2	0.9%	0.9%	0.9%
Certificates 3	1.8%	1.4%	1.6%
Certificates 4	1.6%	1.4%	1.6%
Certificates and diplomas 5-7	1.6%	1.1%	1.3%
Bachelor's degrees	4.4%	2.6%	3.5%
Graduate certificates/diplomas	0.4%	0.2%	0.3%
Honours	0.7%	0.6%	0.7%
Master's	0.4%	0.3%	0.4%
Doctorates	0.2%	0.1%	0.1%
All study levels	11.3%	8.3%	9.8%

Source: MoE, 2016a.

Notes:

1. The age-standardised participation rates are standardised to the 2015 national age distribution (ie, they represent the rate a group would have if they had the same age distribution as the 2015 national age distribution).
2. Data relates to students enrolled at any time during the year with a tertiary education provider in formal qualifications of greater than 0.03 EFTS (more than one week's full-time duration).
3. Data exclude all non-formal learning and on-job industry training.
4. Data include those private training establishments that received Student Achievement Component funding, and/or had students with student loans or allowances, and/or Youth Guarantee programmes.
5. Students are counted in each qualification level they enrol in.

However, women and men have different patterns of participation by field of study (Table 3.4).

Table 3.4 Distribution of participation by broad field of study and gender, 2015

Field of study	Total enrolments	Male %	Female %
Engineering and Related Technologies	33 565	86.0	14.0
Architecture and Building	19 315	79.4	20.6
Information Technology	17 555	72.0	28.0
Agriculture, Environmental and Related Studies	18 620	59.5	40.5
Mixed Field Programmes	19 165	48.0	52.0
Natural and Physical Sciences	31 350	48.0	52.0
Management and Commerce	76 055	38.2	61.8
Creative Arts	30 395	37.6	62.4
Society and Culture	99 555	33.1	66.9
Health	47 205	26.7	73.3

Field of study	Total enrolments	Male %	Female %
Food, Hospitality and Personal Services	13 415	22.1	77.9
Education	27 370	19.6	80.4
Total	358 305	42.5	57.5

Source: MoE, 2016a.

Notes:

1. Data relate to students enrolled at any time during the year with a tertiary education provider in formal qualifications of greater than 0.03 EFTS (more than one week's full-time duration).
2. Data exclude all non-formal learning and on-job industry training.
3. Data include those private training establishments that received Student Achievement Component funding, and/or had students with student loans or allowances, and/or Youth Guarantee programmes.
4. These tables present statistics relating to the predominant field(s) of study of students enrolled at tertiary education providers. These data look at all the courses studied within a qualification to determine a student's predominant field(s) of study.
5. Students are counted in each field of study they enrol in, so the sum of the various fields may not add to the total.

The narrow fields of study with the lowest proportion of male participation were in personal services (6.3%) and nursing (7.9%). The narrow fields of study with the lowest proportion of female participation were in mechanical and industrial engineering and technology (8.4%), electrical and electronic engineering and technology (9.9%), building (10.1%), and automotive engineering and technology (10.1%).

OECD's *Education at a Glance* (2016a) reports that women make up the majority of entrants into tertiary education in all OECD and partner countries studied except Germany, Greece, India, Japan, Mexico, South Korea and Turkey. On average across OECD countries, 54% of new entrants are women. The reasons for women's higher participation in many in tertiary education has been the subject of considerable academic discussion (Box 3.1).

Box 3.1 **Why do women have higher rates of participation in tertiary education?**

A review of the literature by Callister et al. (2006) finds a number of theories given for increasing female participation, including that:

- the schooling system has become feminised, in terms of both curriculum and teaching staff, which assists a greater proportion of girls to move on to tertiary education;
- more boys are being raised by mothers, without good male role models present in the family, which influences their propensity to study;
- new courses being developed by tertiary education providers tend to be in "female dominated" subjects;
- women have seen higher returns than men in earnings and other material benefits from their participation in higher education;
- women are genetically "brighter" than men, but have historically been held back by discrimination within the family, within schools and in the wider society;
- boys have slower social development and more serious behavioural problems than girls, so fewer advance to tertiary education;
- the increase in the age at first marriage has enabled women to invest more time in education; and
- more effective birth control methods have helped women invest in education and their careers.

Becker et al. (2010) examined the question of why women's participation in higher education is now outstripping that of men in many countries, given that women face the same traditional costs of study

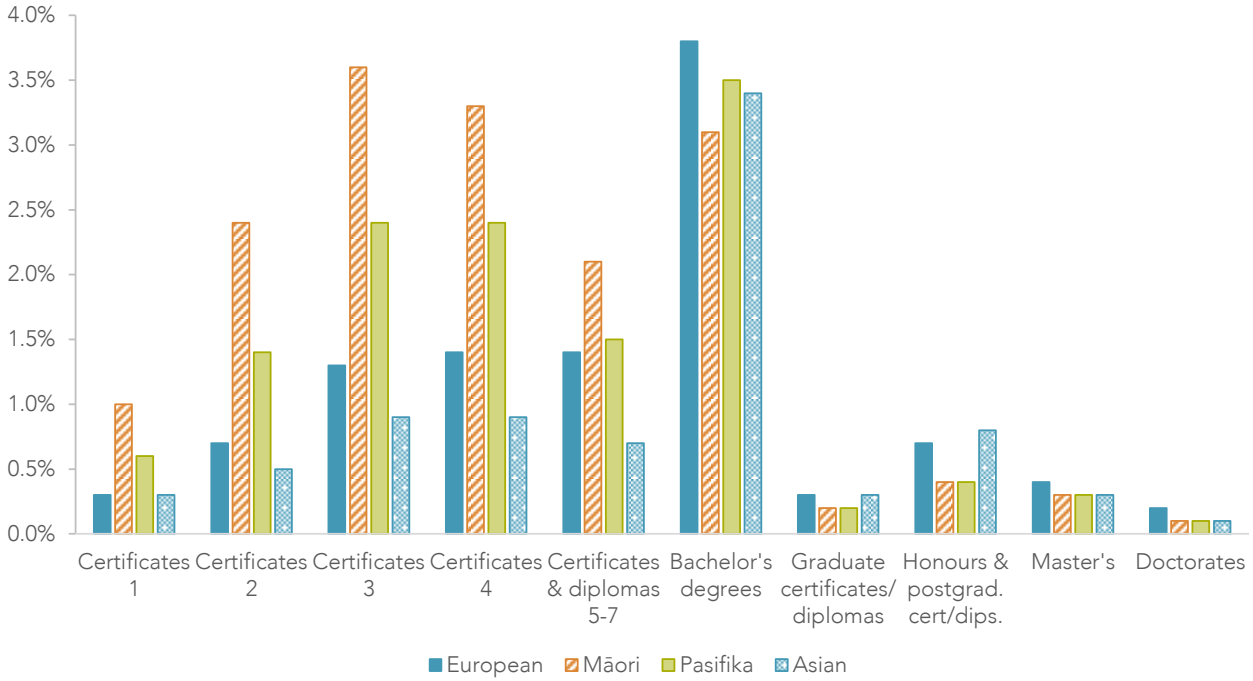
as men, and tend to receive lower returns. They suggested women face lower "non-traditional costs" of study than men; in particular, that the higher mean and lower variability of women's non-cognitive skills (which are known to contribute to educational success) mean that a higher proportion of them, relative to men, receive positive net returns from tertiary education.

In New Zealand, females have typically outperformed males in NCEA assessment, providing greater access to tertiary education, though some of the influences noted here may also be responsible for that achievement gap.

Māori and Pasifika have relatively high levels of participation in tertiary education. In 2015, 17.2% of Māori aged 15 and over were enrolled in tertiary education, while the corresponding figure for Europeans was 8.8%. The participation rate for Pasifika was also much higher than Europeans at 15.1%. Demographic factors partly explain these higher rates of participation in tertiary education for Māori and Pasifika. Both groups have a relatively young population, meaning that a greater share of their population is in the age category where tertiary enrolments are highest (18 to 24 years). The age-standardised participation rate eliminates the effect of different age distributions, by adjusting the age distribution of each ethnic group to match that of New Zealand's total population. The 2015 age standardised participation rates for European, Māori and Pasifika were 9.7%, 14.5% and 11.4% respectively. As shown in Figure 3.6 and Figure 3.7, Māori and Pasifika are less likely to study in university, and their higher participation rates occur entirely in subdegree level study. Ako Aotearoa submitted:

> Simple measures or analysis can be particularly misleading when applied to marginalised or under-served learners. For example, Māori have the highest rates of participation in tertiary education; in 2014 14.7% of the (age-standardised) Māori population engaged in tertiary education, compared to 11.4% of Pacific, 9.9% of Pakeha, and 8.2% of Asian New Zealanders (Ministry of Education, n.d. a). However, most of this enrolment occurs at foundation levels; in 2014 approximately 52% of Māori tertiary learners were enrolled in Level 1-3 Certificates, compared to 43% of Pacific, 26% of Pakeha, and 19% of Asian learners (Ministry of Education, n.d. b). This suggests that high participation by Māori – an apparent indicator of success – may actually reflect issues in our compulsory education sector's capability to serve young Māori. (sub. 58, p. 6)

Figure 3.7 Age-standardised participation rates by ethnicity and level of study, 2015



Source: MoE, 2016a.

Notes:

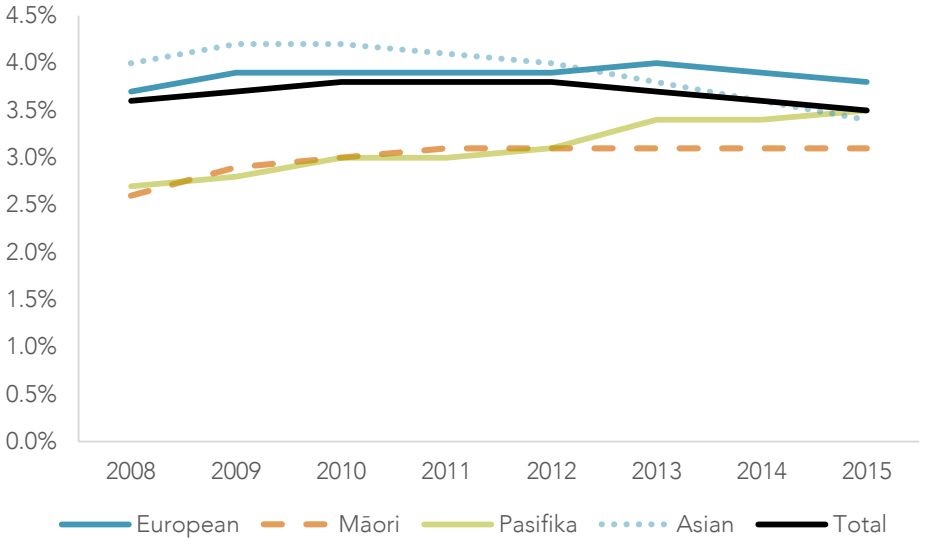
1. Shows the percentage of the population aged 15 and over who were enrolled in tertiary education at any time during 2015.
2. Does not include international students.

MBIE and the Ministry of Education submitted that:

> While Māori in particular have higher participation rates in lower-level qualifications than the whole population, participation by both Māori and Pasifika as measured in EFTS in bachelor degree level or higher study has improved steadily since 2001. (sub. DR162, p. 8)

The age-standardised participation rates towards Bachelor's degrees of different ethnic groups have been converging over time, particularly as Asian participation rates have declined and Pasifika participation rates have increased. More recently, Māori and European participation rates have been steady (Figure 3.8).

Figure 3.8 Age-standardised participation in Bachelor's degree study by ethnicity, 2008–15



Source: MoE, 2016a

Notes:

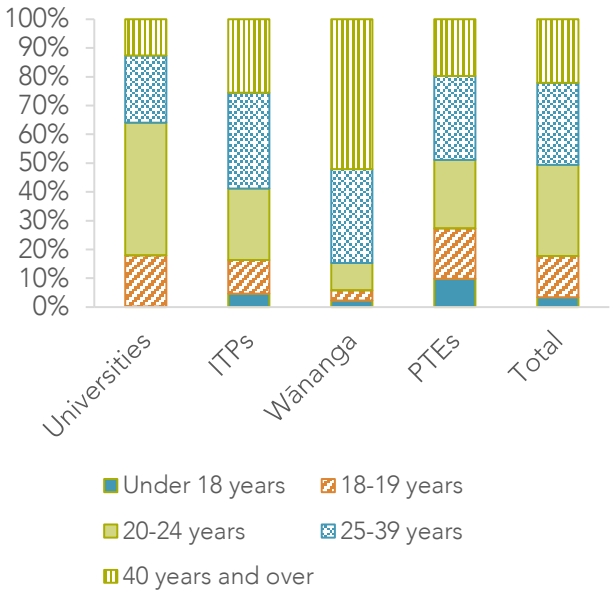
1. The total participation rate is the percentage of the population aged 15 and over who were enrolled at any time during the year.
2. The age-standardised participation rates are standardised to the 2015 national age distribution (ie, they represent the rate a group would have if they had the same age distribution as the 2015 national age distribution).
3. Data relates to students enrolled at any time during the year with a tertiary education provider in formal qualifications of greater than 0.03 EFTS (more than one week's full-time duration).
4. Students are counted in each ethnic group they identify with.
5. Total and Māori rates are based on the latest available population estimates. Pasifika, European and Asian rates are based on the 2001, 2006 and 2013 ethnic population projections.

Between 2008 and 2015, age-standardised participation rates towards Bachelor's degrees at universities increased for Pasifika, but were flat or decreased for European, Māori, and Asian ethnic groups and for the total population. Age-standardised participation rates towards Bachelor's degrees at ITPs increased for Māori and Pasifika, but were flat for European and Asian ethnic groups, and for the population as a whole.

F3.3 Māori and Pasifika have relatively high rates of participation in tertiary education, but the high participation rates are entirely at subdegree-level study.

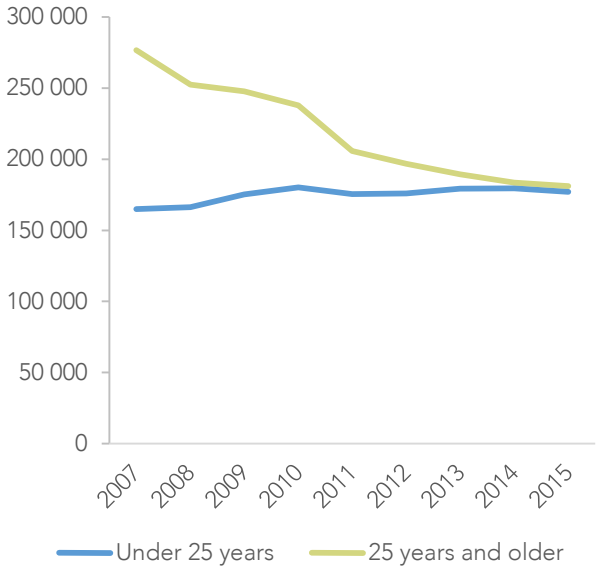
Compared to other OECD countries, New Zealand has a high proportion of older students in tertiary education (Scott, 2014). Universities have the youngest student profiles, and wānanga by far the oldest (Figure 3.9). However, the overall number and proportion of enrolments of students aged over 25 fell each year from 2007 to 2015 (Figure 3.10).

Figure 3.9 Domestic enrolments by subsector and age, 2015



Source: MoE, 2016a.

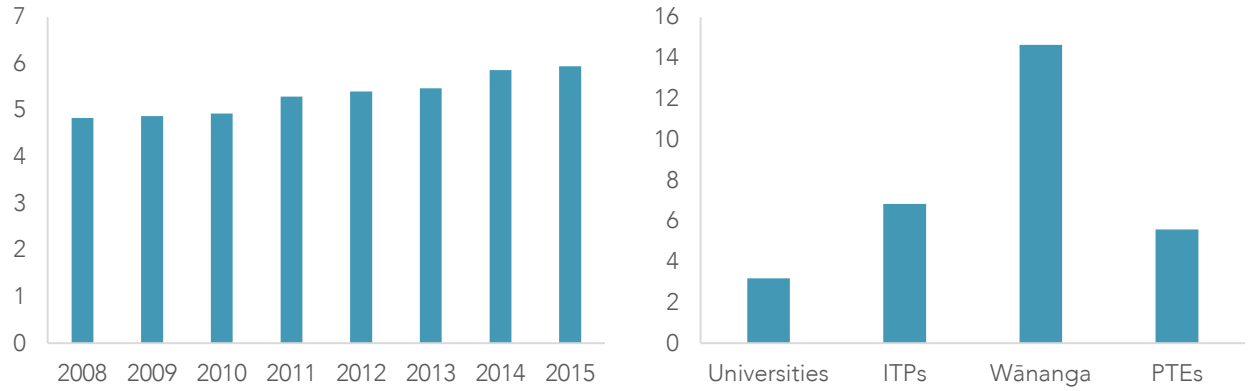
Figure 3.10 Domestic enrolments by age, 2007–15



Source: MoE, 2016a.

The proportion of students who have a disability has been increasing in recent years. In 2015, 5.94% of students reported having a disability. Students enrolled at a university were less likely to report having a disability, and students at wānanga more likely to do so (Figure 3.11). Students studying at levels 1–4, Māori students, and students aged under 18 years or 40 years and over were more likely to report having a disability. Disability status did not vary significantly by gender. It is difficult to draw inferences from the available data about the performance of the tertiary education system for students with disabilities, in terms of either access or outcomes.

Figure 3.11 Domestic students who reported having a disability, by year and subsector, 2015 (%)

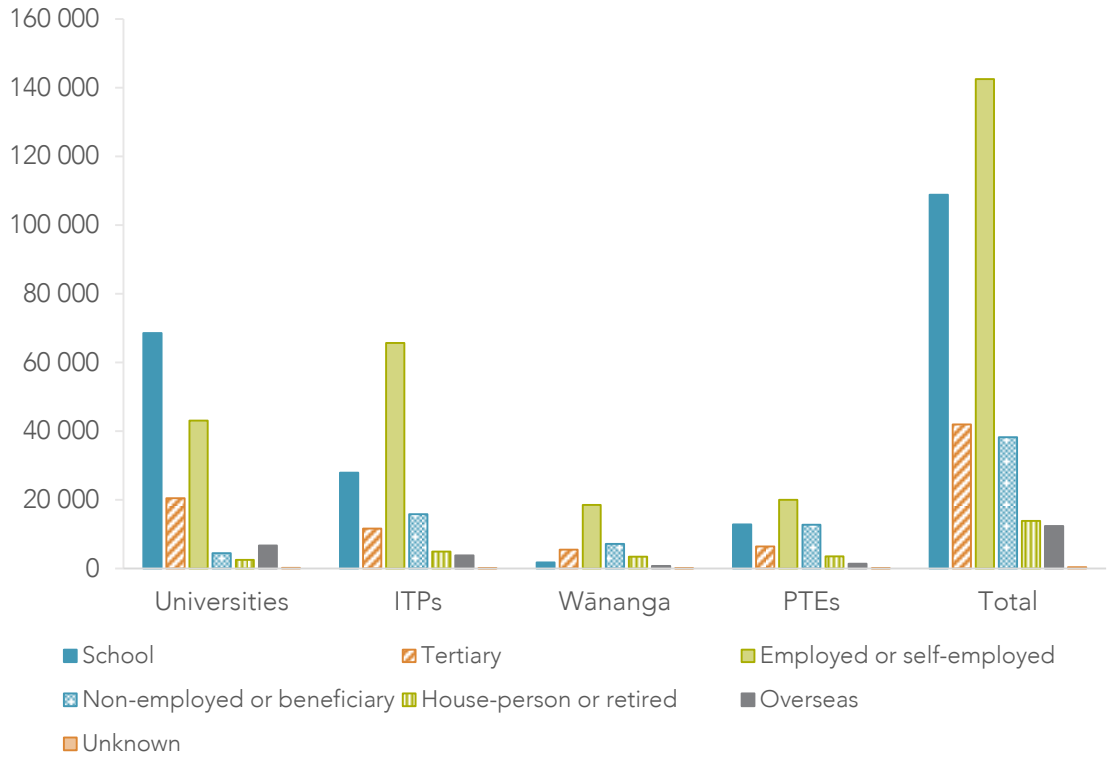


Source: MoE, 2016a.

Students' prior achievement

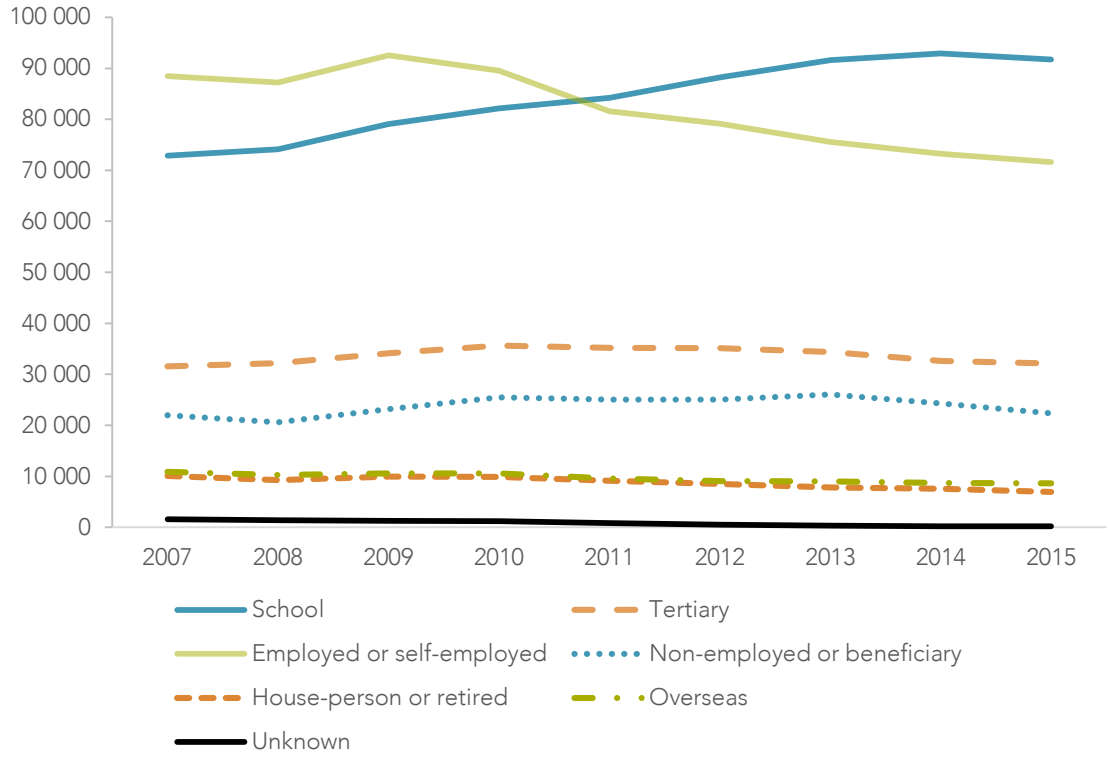
Universities take almost half of their students directly from school. For other provider types, the most common activity prior to enrolling is employment, and this is also true for the enrolled student population as a whole (Figure 3.12). Overall, most tertiary students in New Zealand do not come to study directly from school. Most students had been most recently employed, unemployed, or on a benefit. Looking at the prior activity of EFTS takes into account that many students enrol part-time, and school leavers are more likely to study full-time. Over time, more tertiary students are coming to education from school, and fewer from employment (Figure 3.13).

Figure 3.12 Domestic students' prior activity by subsector, 2015



Source: MoE, 2016a.

Figure 3.13 Domestic EFTS by prior activity, 2007–15



Source: MoE, 2016a.

Notes:

1. Data relate to students enrolled at any time during the year with a tertiary education provider in formal qualifications of greater than 0.03 EFTS (more than one week's full-time duration).
2. Data exclude all non-formal learning and on-job industry training.
3. Data include those private training establishments that received Student Achievement Component funding, and/or had students with student loans or allowances, and/or Youth Guarantee programmes.

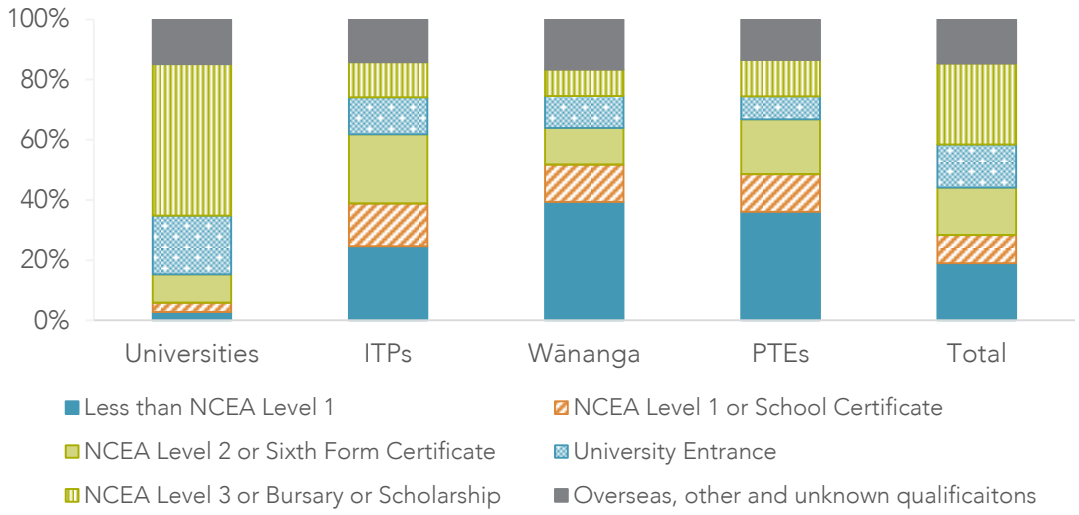
4. Private training establishment includes other tertiary education providers (OTEPs).
5. Students are counted in each subsector they enrol in, so the sum of the various subsectors may not add to the total.
6. Prior activity relates to the student's main activity at 1 October in the year before they started their first year of current formal study.

The 2007 and 2010 Tertiary Education Strategies both had a focus on people under 25 achieving qualifications, and the 2010 strategy also focused on enrolling students in tertiary education directly from school.

The highest school achievement of tertiary students varies significantly by subsector (Figure 3.14). At wānanga, the highest school achievement of more than half the students was NCEA level 1, School Certificate, or lower. The highest school achievement of almost two-thirds of university students was NCEA level 3, Bursary, or higher.

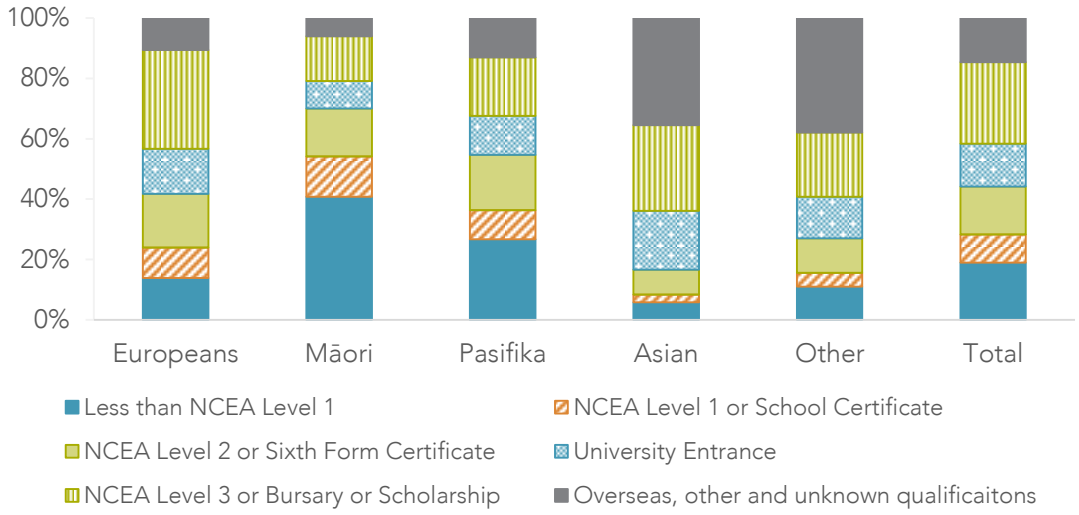
The highest level of school achievement of domestic tertiary students also varies significantly by their ethnicity (Figure 3.15). Students who identify as Māori are very likely to have NCEA level 1, School Certificate or lower as their highest school qualification. Almost a third of students who identify as European have a school qualification of NCEA level 3, Bursary or higher as their highest school qualification.

Figure 3.14 Highest school achievement of domestic tertiary students by subsector, 2015



Source: MoE, 2016a.

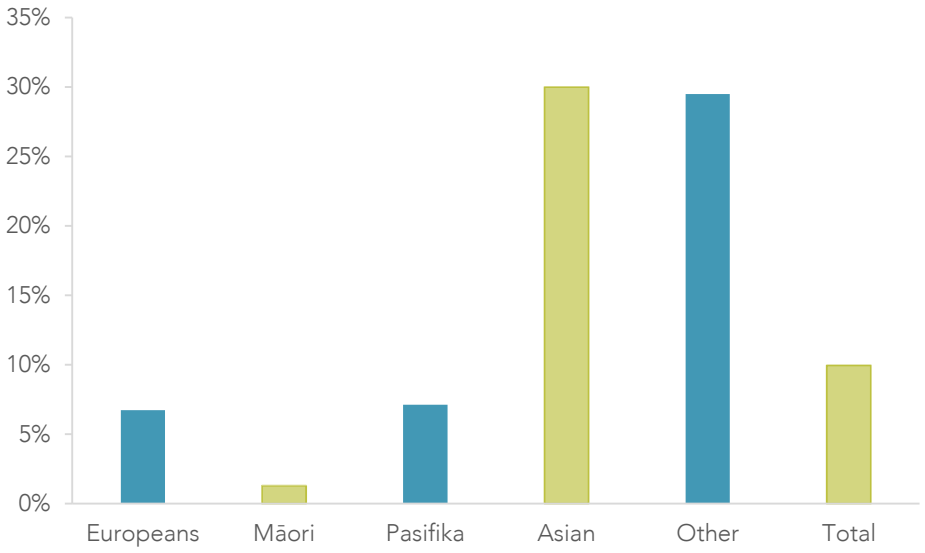
Figure 3.15 Highest school achievement of domestic tertiary students by ethnicity, 2015



Source: MoE, 2016a.

In 2014, 10% of domestic students' highest school qualification was from overseas[12] and, for domestic students of Asian or other ethnicity, as many as 30% had an overseas school qualification (Figure 3.16). Even putting aside international fee-paying students, New Zealand's domestic student population is ethnically diverse. Immigration settings are likely to play a role here. Unlike international students, domestic students face no English language proficiency requirements.

Figure 3.16 Domestic students who gained highest school qualification overseas, by ethnicity, 2015

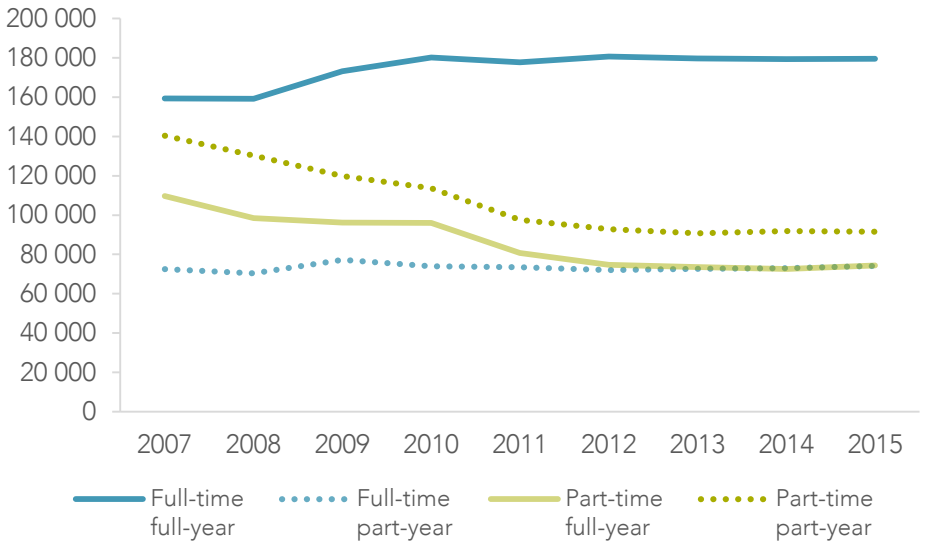


Source: MoE, 2016a.

What type of study?

Enrolments in part-time study have been declining since 2007 (Figure 3.17).

Figure 3.17 Students by study type, 2007–15

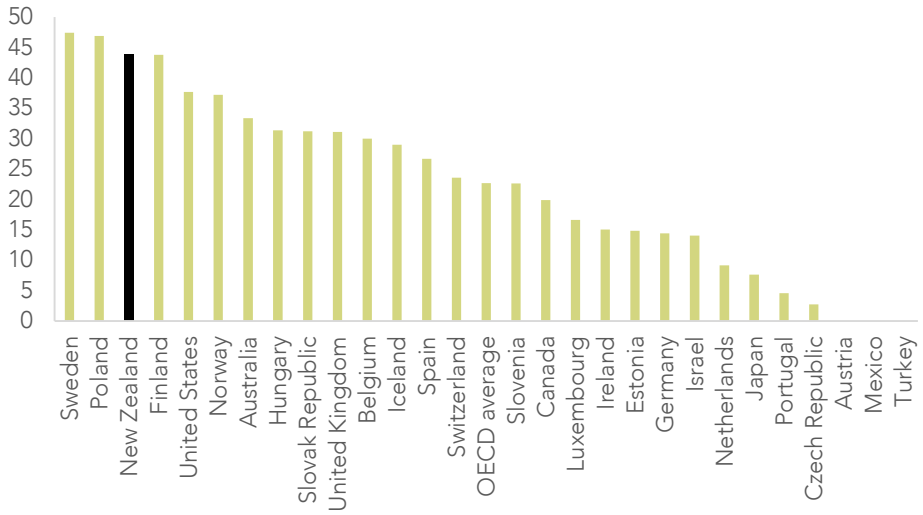


Source: MoE, 2016a.

Despite the relative decline in part-time study, New Zealand still has among the highest rates of part-time study in the OECD (Figure 3.17). For every provider type, more than half of enrolments come from full-time study, either full-year or part-year, and more than half of their EFTS come from full-time, full-year study (Figure 3.18).

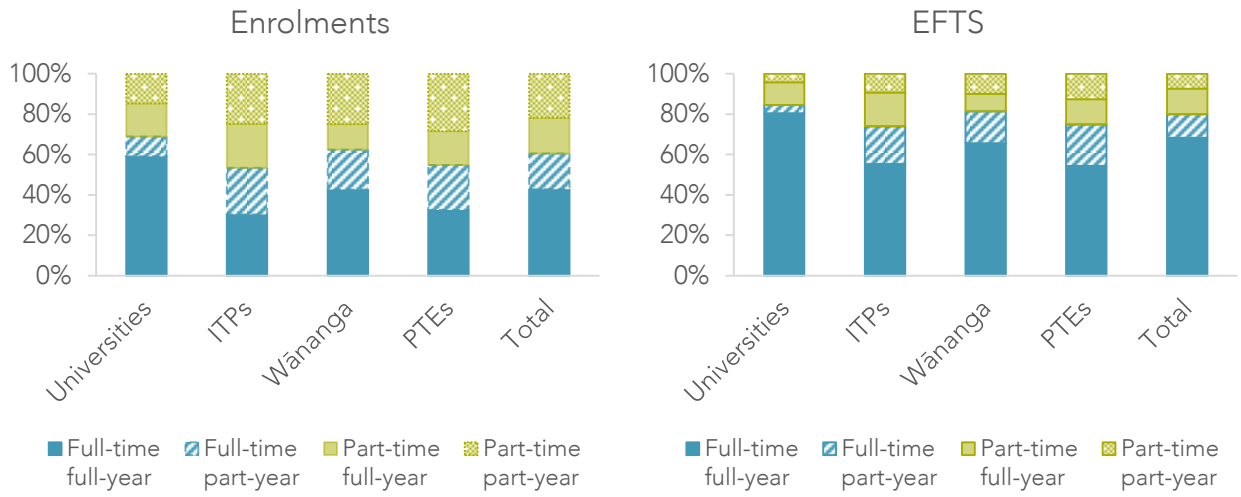
[12] This includes students who studied at school overseas, as well as students who achieved an overseas qualification (such as Cambridge or International Baccalaureate) in New Zealand.

Figure 3.18 Percentage of tertiary students studying part-time in OECD countries, 2013



Source: OECD, 2015.

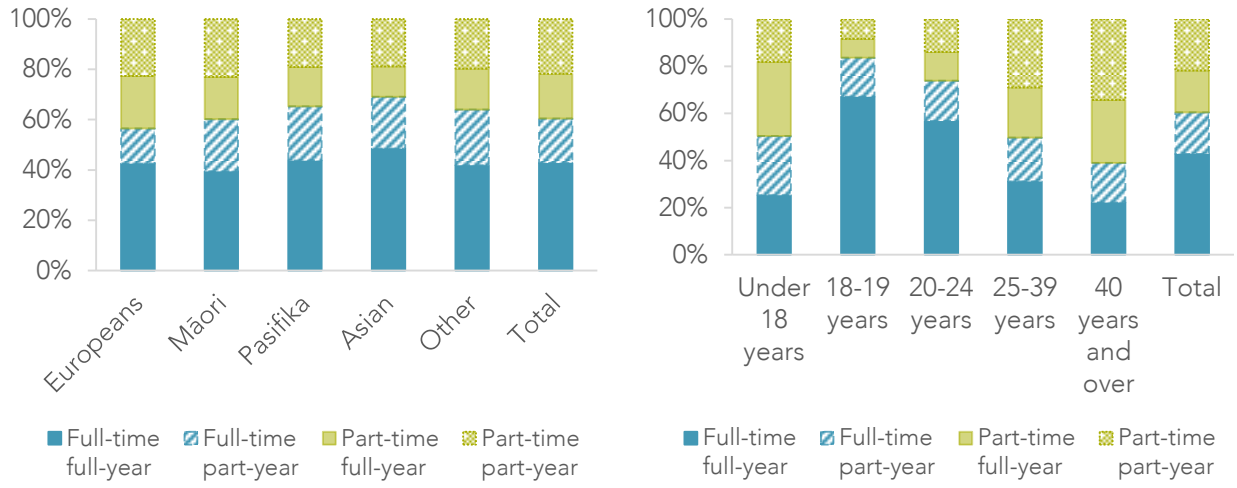
Figure 3.19 Enrolments and EFTS by study type and subsector, 2015



Source: MoE, 2016a.

Study type does not vary much by ethnicity, although students who identify as European are slightly less likely to be enrolled in full-time, part-year study, and slightly more likely to be enrolled in part-time, full-year study. Study type shows no significant differences by gender. As might be expected, study type varies significantly with age, although full-time study comprises a large share of enrolments at all ages (Figure 3.20).

Figure 3.20 Enrolments by study type, ethnicity and age, 2015

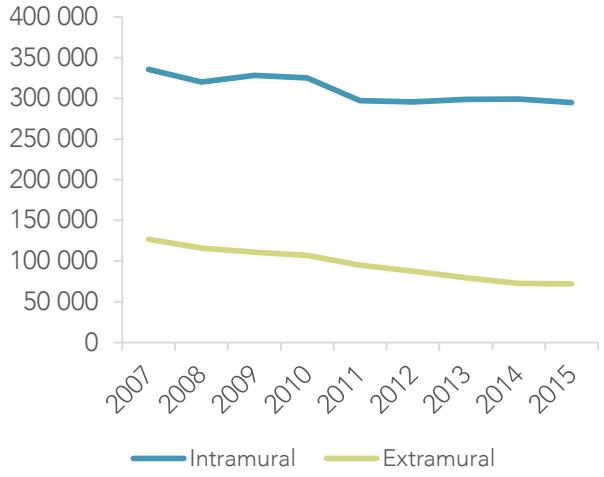


Source: MoE, 2016a.

Generally, New Zealand students can leave school when they turn 16. A range of secondary-tertiary partnership schemes provide for part-time study at school and part-time study at a tertiary institution.

Despite technological innovations in distance education, the number of students studying extramurally has declined continuously since 2007, with more than 40% fewer extramural student enrolments in 2015 than in 2007 (Figure 3.21).

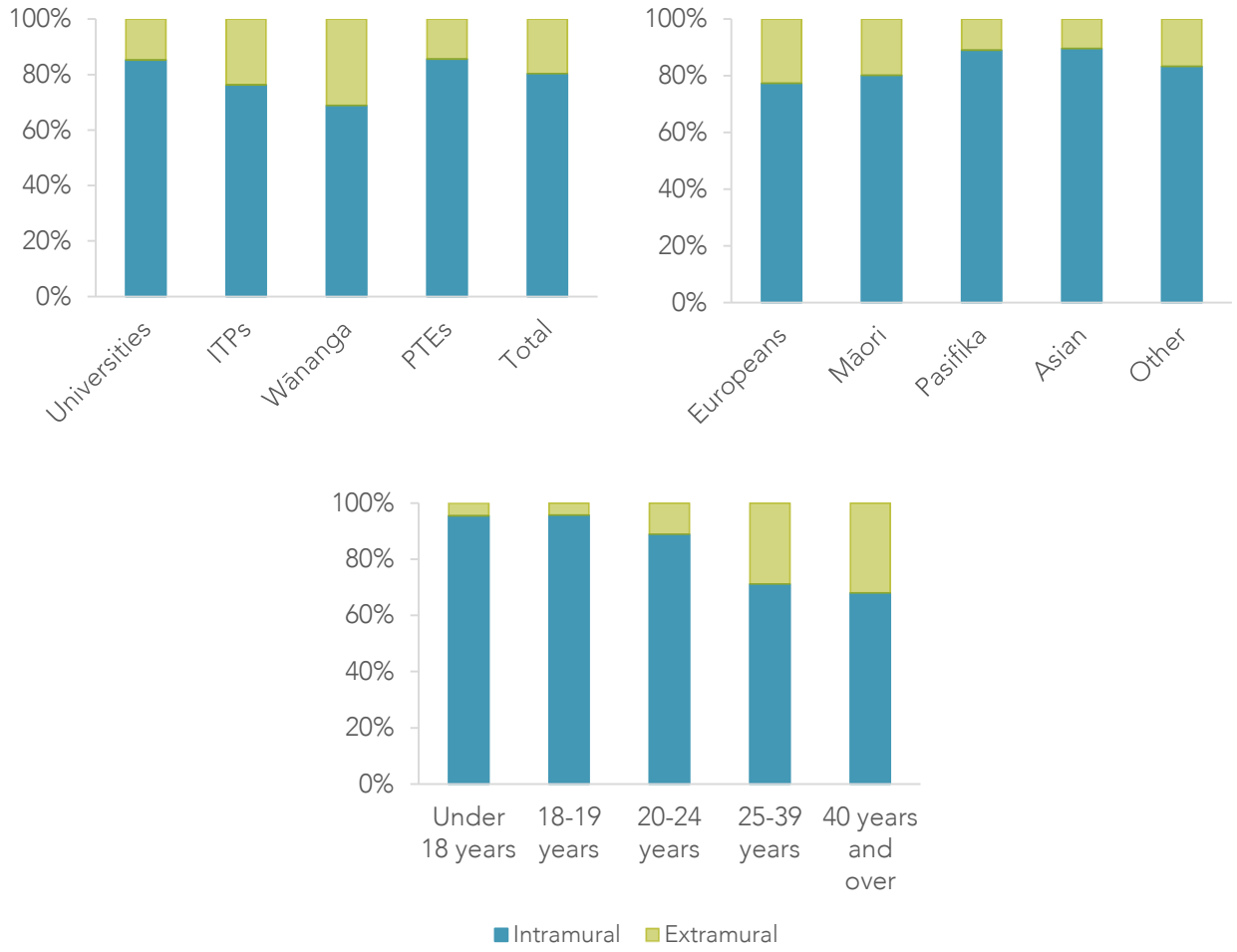
Figure 3.21 Domestic enrolments by attendance status, 2007–15



Source: MoE, 2016a.

Students enrolled at a wānanga are more likely to study extramurally, and European and Māori students are slightly more likely to study extramurally. The likelihood of students studying extramurally increases with age (Figure 3.22).

Figure 3.22 Attendance status of domestic enrolments by subsector, ethnicity and age, 2015



Source: MoE, 2016a.

Much extramural study occurs at the certificate and diploma level. Depending on the mode of delivery, completion rates in extramural study can be higher than those in intramural study for students aged over 40, students with non-working backgrounds, students at wānanga, students taking Agriculture, Environmental and Related Studies, and students in Mixed Field Programmes (MoE, 2014).

Over the last decade, students have become slightly less traditional in some respects. Female participation in tertiary education has increased notably, as has the proportion of Pasifika students. On average, however, it is clear students in New Zealand have become more likely in recent years to be engaged in a "traditional" conception of tertiary education. The average student is becoming younger; the share of full-year, full-time study is increasing; and the share of intramural (on-campus) study is increasing.

In a profile, Tony Angelo, long-serving Professor at Victoria University of Wellington's Faculty of Law, commented on the way the university had changed over time:

> When I studied, the first-year classes were 50 or 60 people. The library that the Faculty of Law used was a small room on the first floor of the Hunter Building, and on today's standards there was hardly anything in it.
>
> In those days, the majority of students were part-timers. Classes tended to be before 10am and after 4pm, so they would come from their office job and the academics would come from the courts. ("From "chalk and talk"", 2016)

The type of study undertaken by Professor Angelo has largely disappeared in New Zealand.

F3.4 The tertiary education system is increasingly oriented towards full-time study, towards younger students (under 25 years) and away from extramural study.

Why study at a university?

Some 146 000 domestic students were enrolled at New Zealand universities in 2015, representing about 4% of the population. Universities took most of their students directly from school and, unsurprisingly, the vast majority of their learners achieved at least NCEA level 2 (or Sixth Form Certificate) at school.

Many young people now view university as the default pathway for those able to enrol there. This is reinforced by the messages young people receive from diverse sources. This view is also supported by the existence of the University Entrance qualification; for those who attain it, the strong implication is that the place for the young person is in a university.

> "Generally you are told you need a tertiary qualification to get a job. But this is very general. Lots of my friends go to university because they're told they should, do a BA and then struggle to find a job. We need to be teaching students the right skills and give them good career advice at high school." (Student quoted in Victoria University Wellington Students' Association, sub. 80, p. 10)

Universities New Zealand says that universities here "have some of the best graduate outcomes in the world" (sub. 17, p. 8), with 97–98% of graduates being in employment three years after graduating. The Commission has not been able to substantiate this percentage but, by itself, this does not mean the skills acquired by graduates are being well-used (skills matching is described further in Chapter 4). Universities New Zealand says that, all things being equal,

> students prefer and are more successful when studying in a campus environment where their learning is supported by others and where they have access to libraries, laboratories, workshops and a range of social and recreational opportunities that facilitate wider personal growth. (sub. 17, p. 12)

Universities New Zealand says that the value students place on the wider academic and social environment means they "generally regard gaining knowledge and skills as only one part of the value proposition of a university education" (sub. 17, p. 27).

For example, universities also provide opportunities for students to network with each other and sometimes with industry representatives, and to form relationships that will be useful to them in later life, especially in business. This can include international connections through studying alongside international students and/or spending time studying overseas.

Some university students value university as a coming-of-age experience or "rite of passage" between leaving school and entering the workforce. This is often supported by auxiliary services provided by the university, such as student accommodation and campus activities. The University of Otago notes that one of the valued dimensions of the University is

> [t]he transformative effect that living and studying at a residential university has on Otago's students as they progress through study and emerge as well-rounded, confident and independent work-ready graduates. (sub. 37, p. 6)

Other submitters take a different view on the value of campus life. Nichols comments that, with respect to learning,

> [t]here is no substitute for real-world experience, as opposed to the rarefied on-campus setting. Perhaps the rite-of-passage idol is part of the problem. (sub. 6, p. 9)

Ed. Collective comments that "the days when students spent the bulk of their time on campus are already behind us", as the student body becomes more diverse, and students increasingly juggle study with work and family commitments (sub. 89, p. 43).

Professor Kerry Shepherd, who researches higher education policy and practice, argues the value proposition offered to prospective students in respect of the knowledge and skills they might gain is opaque:

> The logic is clear. Higher education promises all sorts of benefits to learners (in particular for employment and lifetime earnings) and to employers, essentially on the basis of the improved skills that graduates will have. But higher education has been unable or unwilling to identify what these skills are, other than in the form of elaborate wish-lists, or to employ quality-assured processes that will identify

> who has these skills and who does not. Rather the message that comes from higher education is "trust us and trust our reputation". … The inability or unwillingness of higher education to engage in an evidence-based research-exploration of graduateness leads many to assume that it is scared to look under this particular carpet. (sub. 16, p. 4)

Professor Shepherd suggests alternative online private providers will emerge that are able to emulate this "trust and reputation" model, without three or more years of institutional study.

Why study at a wānanga?

Some 37 000 domestic students were enrolled in wānanga in 2015, representing about 1% of the population. Students at wānanga are predominantly Māori, though many identify with European, Pasifika and Asian ethnicities. The majority (about 70%) are women. Most learners at wānanga had poor achievement at school, achieving no more than NCEA level 1 (or School Certificate). Few learners come to wānanga from school; most have most recently been employed, while a smaller proportion have most recently been unemployed or engaged in other tertiary study. Students at wānanga are more likely to study extramurally than students in other subsectors, but the majority of enrolments are still classified as intramural. Students at wānanga are significantly older than students in other subsectors, with the majority aged over 40. Contrary to some perceptions, a majority of wānanga students study full-time, either in full-year (44% of enrolments) or part-year (18% of enrolments) programmes.

The Tertiary Education Union (TEU) submitted:

> The emergence and continued growth of wānanga in the tertiary education sector provides a defined space where mātauranga Māori can flourish in a setting determined by āhuatanga Māori and tikanga Māori. Wānanga have made a substantial contribution to improvements in educational outcomes for Māori in the sector, but equally importantly to social and cultural wellbeing indicators that underpin productivity for wellbeing. (sub. 83, p. 12)

The Education Act 1989 says:

> [A] wananga is characterised by teaching and research that maintains, advances, and disseminates knowledge and develops intellectual independence, and assists the application of knowledge regarding ahuatanga Maori (Maori tradition) according to tikanga Maori (Maori custom). (s 162(4)(b)(iv))

In a report into the economic contribution of wānanga, BERL said:

> People choose to study in a Wānanga learning environment to enhance their skills and productivity, to improve their current and future job and career prospects; to increase their earning potential and to increase their knowledge about things Māori. Each of these factors impacts on the individual, their whanau and the community they live in. They also lead to economic growth, which in turn contributes to higher living standards.
>
> However, economic benefits are not the only driver behind investment in skills, education and training. People also choose to study in a Wānanga learning environment because this sector is focused on inter-generational, marae-centred learning, and te reo Māori and mātauranga Māori are central tenets of the activities of Wānanga. (2014, p. 5)

TEC says that "New Zealand's three wānanga provide quality education using Māori ways of teaching and learning; contributing towards the survival and well-being of Māori as a people. Wānanga also have a continuing role to play in re-engaging learners into education" (2015).

Why study at an institute of technology or polytechnic?

Some 130 000 domestic students were enrolled at ITPs in 2015, representing about 3.6% of the population. Students at an ITP are generally older than students at university, but younger than those at wānanga. The majority of students were most recently employed, though a significant number also entered from school. ITPs have a larger proportion of part-time students, and a smaller proportion of full-time, full-year students, than wānanga or universities.

> Unlike Universities whose major source of students is school-leavers, ITPs source over 50% on average from already-employed or mid-career adults seeking to upskill or retrain in the course of their working lives. Very many enrol part-time so they are continually framing their study purpose in the context of their industry's or profession's requirements. (NZITP & Metro Group, sub. 42, p. 3)

In 2014, some 1 730 students were in Managed Apprenticeships, which are administered by ITPs with little involvement by industry training organisations (ITOs). This was a large increase from the number of learners between 2010 and 2013, driven by increased enrolments in building trades qualifications in Christchurch (MoE, 2015a).

Like providers of vocational education in other countries, study at an ITP is distinctive because the learning is contextualised in work. In their submission, NZITP and Metro Group emphasised that ITPs "offer an extensive and wide ranging provision from foundation to post graduate level study" (sub. 42, p. 13). Wellington Institute of Technology (WelTec) and Whitireia Community Polytechnic (Whitireia) submitted that study at an ITP, and vocational education generally, has the potential to transform the lives of many groups of people including those:

- for whom an applied and industry-infused programme of study that has the direct link to employment, or the aspiration to run their own business is their dream;
- for whom an applied postgraduate programme provides them greater career and career progression options;
- who are simply great at creating things, whether that be performance, jewellery, or robotics;
- who are good at developing and innovating systems/products/constructing and deconstructing, and in doing so sometimes create that bright new idea that improves productivity and efficiency, or leads to something new;
- who want the next job opportunity and are looking to upskill;
- who are sitting in our prisons and at some point will be released;
- for whom compulsory education was not a success; and
- who are young sitting on their couches at home, disengaged and disaffected. (sub. 59, p. 26)

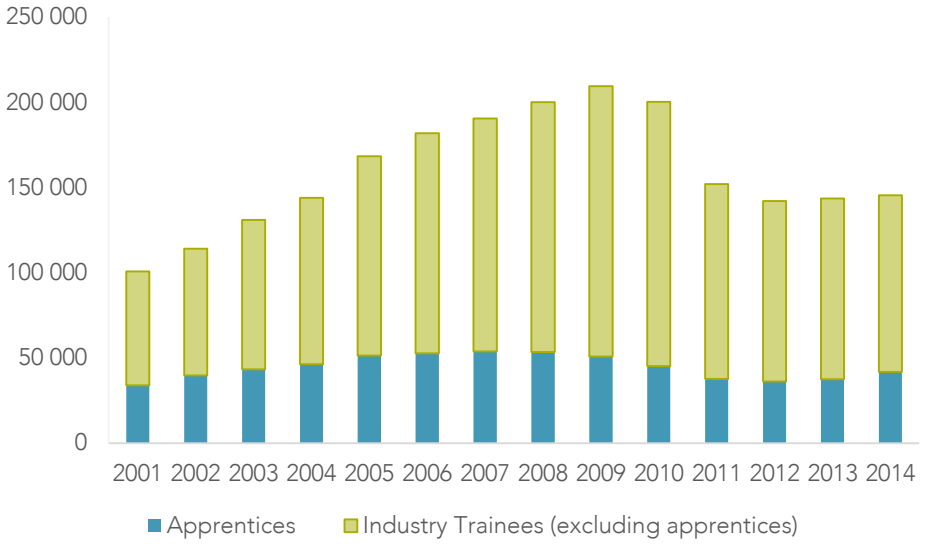
Why participate in industry training?

Industry training is the delivery of work-related learning to employees, often in work settings. ITOs are not providers of education, but they do arrange industry training through other providers. Three types of industry training are noted below.

- Traineeships are industry training programmes that do not meet the New Zealand Apprenticeships criteria. This is the majority of industry training, often comprising "short-burst, just-in-time skills acquisition training" (MoE, 2015a, p. 5).
- New Zealand Apprenticeships, Industry Training Apprenticeships, and Modern Apprenticeships (the latter of which is being phased out) lead to qualifications on at least level 3 and, from 2018, at least level 4 on the NZQF.
- Managed Apprenticeships are administered by ITPs, rather than ITOs, and attract student achievement component (SAC) funding. They are not considered in this section.

The number of workers in industry training increased through the 2000s, then declined steeply between 2010 and 2012, though it has since stabilised (Figure 3.23).

Figure 3.23 Participants in industry training, 2001–14



Source: MoE, 2016a.

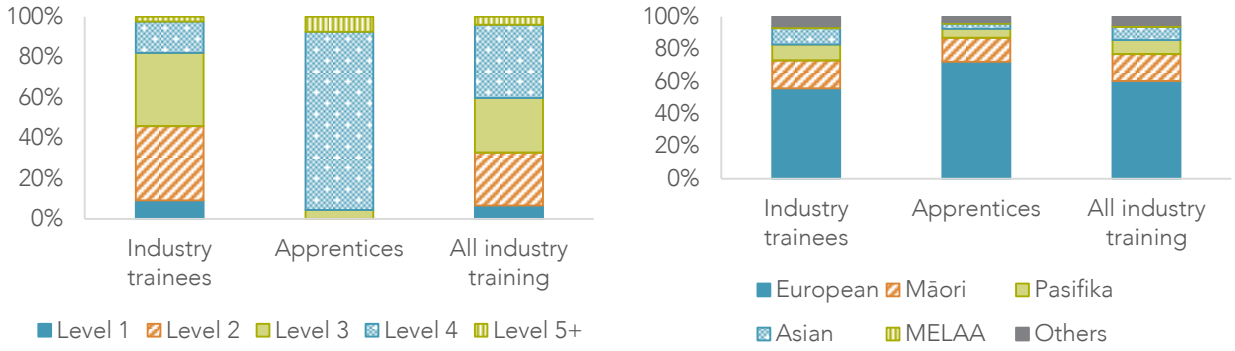
Notes:

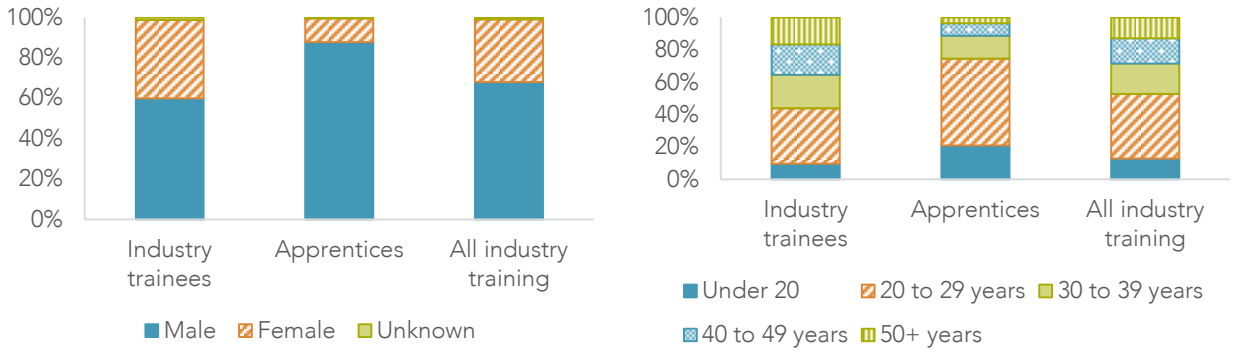
1. These definitions of industry trainees and apprentices differs from those used by TEC
2. Data are counts of trainees, regardless of whether their activity was funded by TEC in the year shown.

The decline in industry trainees from 2009 is because of operational and compliance reviews that found significant performance and enrolment issues in ITOs. Some 53% of trainees enrolled in 2008 (96 831 trainees) and 54% of trainees enrolled in 2009 (100 801 trainees) achieved no credits at all; some 44 400 people were enrolled in both years without achieving any credits (Joyce, 2011).

Almost all industry training occurs at level 2, 3 or 4 on the NZQF, with almost all apprenticeships being study towards level 4 (as required by the new New Zealand Apprenticeships pathway). Apprentices are slightly more likely to be European than other industry trainees, and industry trainees are predominantly male, particularly apprentices. Despite New Zealand Apprenticeships recently opening up the apprenticeship pathway to all ages, most apprentices are still aged under 30. More than half of non-apprenticeship industry trainees are aged 30 or over (Figure 3.24).

Figure 3.24 Industry trainees by level of study, ethnicity, gender and age, 2014





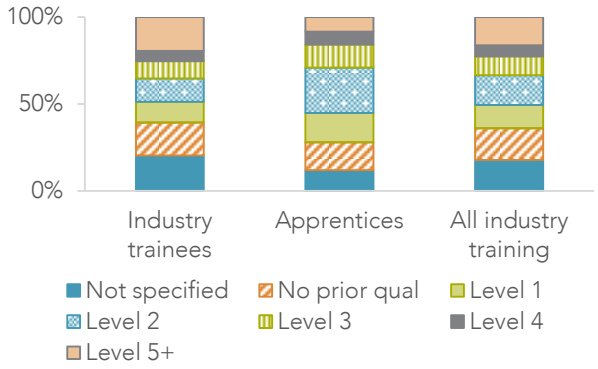
Source: MoE, 2016a.

Notes:

1. Industry Trainees are defined as non-apprentice industry training learners. They are industry trainees whose programme does not meet the New Zealand Apprenticeship criteria.
2. This graph shows counts of trainees during the calendar year.
3. Trainees participating with multiple ITOs are counted just once.
4. Ethnic group is a multiple response value. People can be counted in multiple ethnic group categories. Summing the categories will give a higher number than the total number of people, and summing the percentages calculated from them will often give a percentage greater than 100%.
5. MELAA is Middle Eastern, Latin American and African ethnic groups.
6. Age is at 30 June in the given year.
7. NZQF level is the highest level the trainee was active in in each year.

Industry trainees have a range of prior education experience (Figure 3.25). Apprentices are slightly more likely to already have a level 2 or 3 qualification than other industry trainees; but a large number of non-apprenticeship industry trainees already have a qualification at level 5 or above, and are presumably seeking to fill particular skill gaps.

Figure 3.25 Industry trainees by previous qualification, 2014



Source: MoE, 2016a.

Notes:

1. Industry Trainees are defined as non-apprentice industry training learners. They are industry trainees whose programme does not meet the New Zealand Apprenticeship criteria.
2. This graph shows counts of trainees during the calendar year.
3. Trainees participating with multiple ITOs are counted just once.
4. The previous highest qualification is at the time the trainee enters their training.

The Industry Training Federation submitted that:

> increasing numbers of people are seeking out work-based learning options, such as apprenticeships, either because they wish to secure a future in industries which traditionally use this model, or because it provides a way to up-skill the existing workforce throughout the lifetime of a career without having to leave their job, lose income, spend money, and potentially attract debt. (sub. DR160, pp. 1–2)

Why study at a private training establishment?

Some 57 000 domestic students were enrolled at a PTE in 2015, representing about 1.6% of the population. The profile of PTE students is diverse. Students are more likely to be under 18, and under 20, than for any other subsector, but many people from older age groups study at a PTE as well. PTEs have relatively high participation by Māori and Pasifika learners. PTEs have the highest rates of intramural study among subsectors, and students are less likely to study full-time, full-year than students in other subsectors.

The majority of PTE students were most recently in the labour market (employed or unemployed). Almost half of the students' highest school achievement was no higher than NCEA level 1 (or School Certificate).

The largest area of delivery for PTEs has been in levels 3–6; but, since competitive funding was introduced for level 1 and level 2 Certificates, participation at this level of study through PTEs has increased.

PTEs are diverse and tend to operate in niche areas of provision, so it is difficult to generalise about why students study there.

Why study in community education?

ACE Aotearoa pointed to the diversity of people who study through the Adult and Community Education (ACE) sector:

> Those who have had a lack of success in their school education experience a burden of guilt and shame with at times total disengagement and feelings of hopelessness about trying again – they may not have learned relevant subject matter but they have learned they are "no good at learning" or "Dumb". Part of the ACE sector (often taxpayer funded) is focused on helping those learners regain their confidence, and reach their potential as contributing adults. Most of the ACE Sector (user pays) is focused on enriching courses for successful, curious and high achieving adults (who experienced success in their school education) who wish to continue to grow, contribute and have satisfying lives and have the financial capacity to action this option for themselves. (sub. 32, p. 1)

Like other submitters, the ACE Strategic Alliance and Methodist Mission Southern stressed the poor learning skills of many ACE learners:

> ACE learners generally have a low base from which to start tertiary education often due to not having the appropriate skills to learn (organise learning materials for future use) or those who have had damaging experiences in the compulsory school system … Learning how to think, how to learn and how to collaborate are key focuses for ACE. (ACE Strategic Alliance, sub. 34, p. 2)

> …in Foundation Education it is clear that most students are still developing the skillset required for informed choice: that of developing a frame of reference, understanding and legitimising their own needs and motivations. (Methodist Mission Southern, sub. 5, p. 2)

SeniorNet Wellington said older people wanted to learn new skills for a range of reasons (including to play a meaningful role in the community, and to maintain independence), but acquiring a qualification was not a priority for older people (sub. 11).

3.2 Who does not study in New Zealand?

Young people entering the workforce

Not much information is available about school leavers that do not progress to any form of tertiary education, unless they are not in employment, education or training (NEET):

> There is a great deal of data available on students and the tertiary system, but it is focused on those already in the system and what they have achieved. What it does not tell us is what the gaps are, and why they exist. The exception to this is the work on NEET (young people not in employment, education or training), where government has put in considerable policy and resource effort to address the issues for this group. However, once on an employment track, these people disappear from view and little is known about whether a gap remains between their achievement and their potential. Joining up the data that exists across the government system would help show the gaps that exist, and suggest effective policy responses – government is already doing this for its social investment approach in the health, social welfare and justice sectors. (New Zealand Federation of Graduate Women, sub. 47, p. 4)

Young people who are not in employment, education or training

Most young people are NEET at some point. One paper finds only 24% of people are not NEET at some point between ages 16 and 22 (Dixon, 2013). But while 23% are only NEET for one short-term spell (up to five months), 25% experience multiple short-term spells, and 28% experience at least one long-term spell of six months or longer.

Dixon found that Māori youth were more likely to be long-term NEET than Europeans, and that long-term NEET status was also associated with: living in a neighbourhood with a high New Zealand Index of Deprivation, living in a rental property, living with a non-working parent, leaving school without a qualification or with a level 1 qualification, and becoming a parent at ages 16 to 18.

However, Dixon found that around two-thirds of young people who had long-term NEET spells enrolled in some education or training before age 20, and half worked for a year or more before that age.

A study by Earle (2016) of the 1991 birth cohort found those who had only studied in levels 1–3 certificates by age 22 had the same incidence of being NEET during the year at age 22 than those who had undertaken no tertiary study.

Young people who choose to study abroad

There is some evidence that an increasing number of young New Zealanders are choosing to study abroad, supported by scholarships from foreign universities. According to the OECD around 2% of New Zealand tertiary students study abroad. Some 47% of New Zealanders who study abroad do so in Australia, with 19% in the United States and 16% in the United Kingdom (OECD, 2016a).

Universities New Zealand submitted that universities from Australia and the United States "are now actively recruiting top students from within New Zealand and this is only likely to grow" (sub. 17, p. 85). The US Embassy runs a yearly expo in Auckland and Wellington promoting US providers to New Zealand students. Inquiry participants told the Commission scholarships to overseas universities were increasingly available to New Zealanders. Indeed, one elite Australian university said it made conditional offers to top New Zealand students before NCEA results were reported, stealing a march on New Zealand universities that tended to wait for results. The Commission was told of one New Zealand school where as many as 19 of the top 20 students in 2015 had left the country to study overseas.

Older people in various situations

Fewer older people are undertaking tertiary education over recent years. A range of drivers for this is likely. These include a reduction in student support for older students, and the removal of "phantom trainees" from the industry training system. It is also clear that government has asked the tertiary sector to focus provision on younger students, and school leavers in particular. The effect of this government priority, coupled with the quota system for funded student places and increased emphasis on completions, is that fewer older people are participating in tertiary education.

New Zealand does have high rates of participation in "non-formal" education[13] compared to other OECD countries by one measure. The Survey of Adult Skills (PIAAC) found that 64% of New Zealand respondents reported participating in non-formal education in the previous 12 months, compared to an OECD average of 46% – the highest among participating countries. However, the number of hours New Zealanders spend on non-formal learning is at or below the OECD average (OECD, 2016a). Other OECD data shows New Zealand has high rates of participation in online courses (which are likely to be classified as non-formal learning) among internet users, behind only Korea, Canada and Finland (OECD, 2016b). More discussion on workplace learning is found in Chapter 4.

[13] The OECD defines non-formal education as "institutionalised, intentional and organised learning that is not formally recognised. It can include for example, online or distance courses, organised on-the-job training, seminars or workshops, or other non-formally recognised courses".

3.3 Decisions and transitions into tertiary education

Many submitters to the inquiry pointed to problematic transitions for young people from school into tertiary education. The Commission was told collaboration between secondary schools and tertiary institutions was limited:

> Transitions from compulsory to post-compulsory education need better ownership, funding support, strategies and capability. The lessons from successful initiatives such as the Auckland Starpath Project should be taken up nationally and the traditional guidance counselling and careers planning functions in schools should be replaced by nationally supported academic and vocational pathway planning functions. (UNZ, sub. 17, p. 14)

Such concerns are not new. A report from the age-16 stage of the longitudinal Competent Children, Competent Learners project (Vaughan, 2008) looked at the aspirations and concerns of young people for their future study and career. The project commented on two issues arising from the study:

> The first is that while young people are required to make decisions about an ever-increasing range of in-school courses and post-school possibilities, they receive no real preparation for doing this well. Schools – the major site of school to work transition preparation for most young people – are not yet in step with many knowledge society shifts that have affected labour markets, skills demands, employer-worker relationships, and the very nature of "career". The second issue is that those in-school and post-school possibilities for young people continue to be structured by family and background experiences and resources, and by school experiences and in-school learning systems. Yet the "pathways framework" and its underpinning invocation of "Choice for all" means our understanding of young people's transition from school implicitly sidesteps any recognition of the structural constraints around those choices. The danger is that we may miss patterns of inequality, misreading them for individual failure to make a good transition. (p. 2)

Tertiary providers submitted that the funding arrangements for secondary-tertiary programmes acted as a barrier to students moving to study at the tertiary settings that may better provide for their needs:

> The secondary-tertiary interface is a complicated one and current conflicting policy settings do not help with certainty and smoothness in this space. While we all appreciate a learner cannot be funded twice for the same hours of contact – both through compulsory education funding and tertiary funding – it does make it hard for schools making choices to release students to the tertiary provider and potentially lose funding as a result. (WelTec & Whitireia, sub. 59, p. 14)

> Pathways and transitions and the link to compulsory education are not yet a coherent set of policies operating at a level that is best for the learner. Compulsory sector partners [schools] feel the cost of learners transitioning to the tertiary sector earlier than "normal" even though the outcome for the learner is often better. A transitions funding model that is linked to student outcomes and carries no penalty for the "releasing" educator is required. (Manukau Institute of Technology, sub. 67, p. 3)

How does school prepare students for tertiary study?

A number of submitters pointed to growing problems with schools in preparing students for, and providing a clear pathway to further study:

> University Entrance through NCEA does not sufficiently prepare students to be independent learners. (Faculty of Arts, University of Canterbury, sub. 35, p. 5)

Other submitters pointed to poor preparation by schools in particular subject areas. One professor expressed particular concern about the quality of mathematics teaching in schools, submitting that "[t]ertiary education, no matter how configured, cannot overcome insurmountable obstacles left for it by an inadequate secondary system" (Shepherd, sub. 16, p. 7). Unitec Department of Civil Engineering submitted that:

> [t]he importance of … preparing high school students in communication English, mathematics and the general sciences (particularly physics – anecdotally we have learned that some high schools do not even offer this subject) cannot be overemphasized and is something that the E2E [engineering education to employment] and other initiatives are well aware of and seem to be addressing. (sub. 76, pp. 6–7)

The E2E initiative is discussed further in Chapter 11.

Many other submitters told the Commission in engagement meetings that increasing pressure on schools to meet government NCEA level 2 targets was resulting in students collecting standards that did not provide a coherent qualification that would enable participation in tertiary study. The Commission heard of the surprise and anguish many young people and their parents experience when they find that a school qualification they achieved does not contain the prerequisites to enrol in their desired field of tertiary study.

> [T]he NCEA Level 2 target is encouraging secondary schools to direct students into courses of study where they are most likely to pass and achieve NCEA Level 2, rather than directing students into programmes of study that will more adequately prepare them for success in tertiary education and leave options open for study at university. (University of Waikato, sub. 93, p. 4)

University Entrance

Section 247 of the Education Act 1989 requires the New Zealand Qualifications Authority (NZQA), in consultation with universities, to establish criteria a student must meet to gain entrance to a university if under the age of 20. These criteria includes setting the standard known as University Entrance. The University Entrance criteria currently comprises a package of credits at NCEA level 3, including a minimum number of credits in literacy, numeracy, and various "approved subjects".

Several submitters commented that the University Entrance qualification had little relevance for the type of students who should be eligible for study at university:

> The long-standing notion of setting a University Entrance standard may not be assisting student choice. The entry requirement for a student to have a "reasonable chance of success" is not uniform across all university degrees. Furthermore, to have a reasonable chance of success in many Level 7 ITP qualifications, the student at entry should have reached the University Entrance standard. It may be that the concept of a standardised University Entrance is now outdated. Moreover, gaining it may be interpreted as a signal that the student should enrol in university, even when their academic record suggests that they would have a higher likelihood of success enrolling in a vocational qualification at an ITP. (Royal Society, sub. 41, p. 5)

The University of Auckland has "selective entry for all programmes, with undergraduate entry standards for all programmes that are significantly above minimum University Entrance (UE) requirements" (sub. 85, p. 1). Conversely, the University of Waikato considered that University Entrance arbitrarily restricted access to university for students who might benefit:

> The requirement that all students achieve University Entrance as it is currently defined also represents both a minimum quality mechanism and a barrier to competition. Given the potential for students to acquire knowledge and skills as part of their degree, it is not clear why particular sets of knowledge and skills should be imposed on entrance to all universities and all degree programmes in universities. Neither is it clear why an arbitrary standard of readiness for university study would be used instead of an assessment of who would benefit from tertiary study. The TEC has the power to constrain universities from taking students with lower academic results from Year 13 (if it thought this was a bad thing) by constraints on the number of funded places. So it is not clear why universities cannot be left to set their own entrance standards and be judged on their ability to bring those students up to the level required for degree completion. (University of Waikato, sub. 93, p. 5)

University Entrance holds little or no value, and may do harm.

1. Despite the name, attaining University Entrance does not guarantee a student entrance to university study. Each university is free to institute additional requirements for entrance to particular courses, and they all do so for some or all of their courses. The University of Otago submitted that students should consider University Entrance to be the standard necessary to be considered for enrolment in a university (sub. DR130).

2. Conversely, not having University Entrance does not prohibit access to universities. Each university has alternative admission pathways for promising students who lack University Entrance (in addition to the statutory provision[14] that guarantees access at age 20). Students who fail to achieve a University Entrance qualification at school may be unaware of this, and be dissuaded from applying to study at university.

[14] See s 224 of the Education Act 1989.

3. Students seeking University Entrance need to accumulate a certain number of credits in "approved subjects" nominated by the universities. The Commission heard that senior secondary teachers, in order to make sure students earn enough credits in a particular "subject", tend to arrange NCEA delivery into traditional subject clusters (eg, English or biology). This means they do not take advantage of the intended flexibility of NCEA to teach and assess learning from multiple disciplines within a single project or theme (eg, teaching elements of maths, physics, design, carpentry and art, via a single project to design a skateboard).

4. The statutory provision for entrance requirements for universities, but not for other tertiary provider types, reinforces the traditional view that university education is better, and has higher standards, than other types of education.

How do students make decisions?

Education is sometimes described in economic literature as an *experience* or *credence* good (Chapter 2). Essentially, this means that students cannot accurately judge the quality of the education they are choosing until they are already undertaking it, until it is finished, or perhaps ever. Methodist Mission Southern emphasised the inability of prospective students to undertake such quality judgements when making decisions about tertiary education:

> If education is the one transformative good – a position the Mission strongly endorses – then axiomatically, the very nature of learning is that students can only fully understand the costs and benefits of attending any particular course via any particular provider once the experience has been completed. (sub. 5, p. 2)

Although now more than a decade old, Leach and Zepke's 2005 literature review *Student decision-making by prospective tertiary students* still provides rich evidence on how individuals make decisions about entering tertiary education (Box 3.2).

Box 3.2 **Decision making by prospective tertiary students**

Leach and Zepke (2005) systematically reviewed the literature on decision making by prospective tertiary students, and identified 13 findings.

1. *Decision making is a complex process*. Transitions from school to tertiary education are complex, with numerous studies identifying varied influences on decision making. Personal experiences, interests, aspirations, academic achievement and psychological variables interplay with family, socioeconomic and cultural influences.

2. *Decision making can be modelled*, and the authors adopt a working model for decision making across three phases: *predisposition, search* and *choice* phases.

Decisions	Factors	Information	Diversity
Predisposition	• Socioeconomic status • Parental disposition • Self-belief in ability • School	• Family experience	• Socioeconomic status • Gender predispositions • Cultural habitus
Search	• Career outlook/aspirations • Academic achievement • Subject area interest • Institutional profile (location, courses offered, reputation/image)	• Information networks • Interpersonal information (school, home, peers) • Contact with tertiary providers (taster courses, involving parents, brochures)	• Different aspirations • Minorities (have community orientation, job often more important) • Gender differences

	• Costs and financial aid		
Choice	• Right courses/degrees • Admission • Social fit	• Communication with institution of choice (open days, information on needs)	• Cultural differences • Gender differences • Age differences

3. *Decision making starts very early*. Studies consistently found the decision-making process starts much earlier than Years 11 and 12, likely as early as Year 7. One study of Year 10–12 students intending to go to university found they had made an initial decision two to three years earlier (James, 2000). So, early identification of a student's interests, strengths and skills is important (Boyd et al., 2001) and a student should be made aware of the ramifications of subject choices (Whitney & Neil, 1998).

4. *Socioeconomic status is a powerful factor* and the strongest predictor of tertiary study. School decile is strongly predictive of whether a student enters tertiary education and where they study (Choat, 1998). Maani (2000), using data from the 1977–1995 Christchurch Health & Development Surveys, found that the probability of attending university increases significantly with parental income decile, even while controlling for IQ and academic performance.

5. *Parents influence decisions*, which can have negative and positive effects on study decisions.

6. *Academic achievement is important*, with a number of studies finding that school achievement, when combined with social class background, reliably predicts choices about tertiary study.

7. *Subject area interest affects choice of and type of institution*. Interest in a subject area strongly influences people to choose one institution or type of tertiary education over another. An institution's reputation (but not prestige) was important, but research track record and international rankings were not considered important (James, 2001; Lilly et al., 2000).

8. *Full information on cost and financial support is necessary*. Where students and their families perceive high costs, and lack money or finance, they are less likely to participate in tertiary education. Where programmes are seen as affordable or good value for money, these become important factors in choice of institution. Many studies found that students and parents did not have a realistic perception of cost (Connor & Dewson, 2001). Offsetting this is knowledge of the availability of financial aid, which can affect dispositions to attend tertiary education from as early as Grade 9 [the equivalent of Year 10 in New Zealand] (Looker & Lowe, 2001).

9. *Schools can influence decisions*. Although the research in this area is weak, schools, teachers and career guidance staff can play an important role, particularly for "non-traditional students" and students from families with lower socioeconomic status (SES).

10. *Family experiences of tertiary education inform decisions*. Parental levels of education are influential at the predisposition stage, with the children of professionals and managers tending to assume they would attend university (Chalmers, 2001). Parents without education were less informed and participated less in planning for tertiary education, and their children had lower aspirations for study. "The more complex the system gets, the more "choices" are inserted, the more difficult it is for these working class parents to understand and move competently around the education system … The implication is that working class families in the future are likely to depend *more* on the schools to get everything right for their children" (Connell, 2004, p. 238).

11. *The most effective information is interpersonal*, and mass information campaigns (including advertising) may not be very effective. Students are part of a "complex web of interpersonal information networks" where teachers, career advisors, parents, family, and friends all play a role.

12. *Information sharing between students, families, schools and tertiary providers is effective*, and this is more effective as an ongoing exchange. Taster and foundation courses, visits and open days were effective, providing the focus was on information exchange rather than recruitment (Boyd & MacDowall, 2003).

13. *Additional factors for "non-traditional" students makes their decision making even more complex.* Research on the decision-making processes of Māori and Pasifika learners is limited, but a number of studies emphasised that, for many other ethnic groups studied, a key decision-making factor centred on the needs of the family and community. Students "at risk" were less likely to choose tertiary education. Where these students had friends already studying, had taken a foundation course, or had parental involvement in study decisions, they were more likely to enrol (Choy et al., 2000).

Advice to prospective students

Many submitters to the inquiry were critical of the types of information, advice and guidance available to prospective tertiary students:

> Information asymmetries are right across the system. The information and data on labour markets, education and training offerings, education and training quality and outcomes is spread across multiple websites, is difficult to navigate and is insufficient for key tertiary education actors, employers and students to make informed decisions. (BusinessNZ, sub. 77, p. 9)

NZQA submitted that Māori and Pasifika in particular were not well served:

> [S]ome Māori and Pasifika parents and families are unaware of the different education pathways available. Information about tertiary pathways often occurs too late, when subject and programme choices have already been made. Some Māori and Pasifika learners are not provided with sufficient guidance and advice on clear pathways and may find themselves enrolled in low-level or foundation programmes. This limits the choice and access to preferred tertiary study. (NZQA, sub. 88, p. 3)

COMET Auckland submitted better advice could reduce "false starts" and save learners and government money:

> Providing more information and advice for learners to help them choose a career direction (not a specific job) but broad pathway based on their values, strengths, and interests), and to use this to identify the most suitable course(s) to take. Effective advice, provided before and during the transition to tertiary, could reduce the number of learners swapping courses mid-stream, thus reducing cost to taxpayers and to students themselves. There are some key points where it would be useful for stakeholders to align: late primary school, year 10 and the senior higher school. (sub. 50, p. 5)

Universities New Zealand notes that work is underway to improve the information available to prospective students, but says that advice on this is

> being developed in a largely uncoordinated and inefficient manner across at least five different agencies through at least eight different initiatives. … From the perspective of the university sector, all of these initiatives have been implemented following a ministerial decision and all of them have significant methodological and operational flaws … (sub. 17, pp. 14, 34)

Submissions from ITPs expressed concern that the advice and information given to young people was already too biased in favour of promoting university study:

> It is unfortunate that in terms of the perceived pathway from secondary to tertiary, while the school to University route is well-marked and clearly understood by school and career advisers as well as by most families, school-based advisors in general regard the ITP as a destination for less able and successful leavers. This flavour has come through Ministry of Education communications and guidance as well. We acknowledge that the problem is widespread and that it will take input from all players to solve. (NZITP & Metro Group, sub. 42, p. 4)
>
> School leavers are not always prepared for the possibilities that exist for them across the tertiary system. There is still a strong bias to university education, due in part no doubt to the fact that the secondary

> school system is populated in the main by university graduates, and therefore new and different vocational opportunities are not presented to school leavers either through the vocational pathway programmes or in discussions about careers. This is not about our relationships with schools, nor the engagement they have with some of our programmes. Rather it is a wider societal lack of understanding about vocational education and the careers that lead from it. It is also about the alignment of compulsory education with that of tertiary education, and the preparedness of our school leavers to succeed within it. (WelTec & Whitireia, sub. 59, p. 14)

Similarly, the peak body for ITOs expressed concern that academic pathways were emphasised at the expense of vocational qualifications:

> Careers advice tends to focus on higher level qualifications and the 'professions', reinforcing the parity of esteem issue between academic and vocational tertiary education. (Industry Training Federation, sub. 54, p. 6)

Careers services in schools

Schools are required to provide careers education. Specifically, they must

> provide appropriate career education and guidance for all students in Year 7 and above, with a particular emphasis on specific career guidance for those students who have been identified by the school as being at risk of leaving school unprepared for the transition to the workplace or further education/training. (MoE, 2013a, NAG 1f)

In 2012, the Education Review Office (ERO) evaluated the provision of careers information, advice, guidance and education in secondary schools (Box 3.3).

Box 3.3 ERO review of *Careers Information, Advice, Guidance and Education (CIAGE) in Secondary Schools*

ERO reviewed the provision of CIAGE in 44 secondary schools against MoE's *Career Education and Guidance in New Zealand Schools* (2009). ERO described the guidelines as setting out

> a model of career education and guidance that emphasises the need for students to develop career management competencies. This represents a move away from career guidance based on vocational counsellors managing student exits from school and towards an approach in which students take more control of their lives. (ERO, 2012, p. 4)

ERO categorised the 44 schools reviewed into four approaches.

- Whole-School Higher Quality – four schools had innovative school-wide approaches to student futures. Through the integration of CIAGE, these [schools] regularly supported students to develop set goals, explore opportunities and make decisions.
- Conventional Established – 17 schools had careers departments that provided some opportunities for students in CIAGE. These initiatives were driven by the school's careers department and did not extend across the school's curriculum departments.
- Conventional Developing – 19 schools had limited opportunities for students to set goals, develop self-awareness, and explore opportunities. CIAGE systems and processes were also driven by the school's careers departments – although these schools had yet to develop the same level of organisation as the schools in the categories above.
- Low quality – four schools had low-quality CIAGE systems and processes typically focussed on Year 13 destinations and little else. CIAGE at these schools was typically characterised by leadership difficulties, either in the careers department or in the school's senior management. (ERO, 2012, p. 7)

ERO concluded that, although there were some positive factors,

> it was evident that significant system-wide improvements in CIAGE will require schools to move from having efficient careers departments to having innovative school-wide systems and processes that are consistent with those developed by a small group of schools in this evaluation. This potentially represents a significant shift for schools and policy-makers, as it involves a broad range

> of secondary school staff actively supporting students to develop career management competencies, and focussing on their futures. (ERO, 2012, p. 2)

Source: Education Review Office, 2012; Ministry of Education, 2009.

Similarly, an earlier longitudinal study (Vaughan, 2008) found nearly half of Year 11 and 12 students, when asked what activities were useful in thinking about their future career, were unable to evaluate the usefulness of "talking with teachers or careers advisors", "visiting tertiary settings", "careers expos" or "carrying out careers/life planning" because they had not undertaken such activity. Vaughan and Spiller describe "three persistent and long-standing problems: inequitable access, marginalisation and lack of fitness-for-purpose" (2012, p. v).

Provision for careers services in schools appears not to have substantially changed since the ERO report was released.

> In its recent report … ERO noted that the careers service needs to more actively support schools. PPTA [Post Primary Teachers' Association] would point out that the formula for career guidance in schools hasn't changed in more than 50 years. There is provision for only one allowance per school ($1500) regardless of the number of students and they receive no guaranteed time to do the work. (PPTA, sub. 61, p. 8)

Yet providing careers education is important not just for the transition to tertiary education. Having an intention in junior secondary school to undertake post-school study makes a material difference to a student's attitude to learning while still at school. Khoo and Ainley (2005) find this association to be important, irrespective of student background or academic aptitude.

The National Council of Women of New Zealand submitted that good career advice has the potential

> to encourage girls to consider trades as a career option, and boys to consider roles in the caring and health sectors. The breaking down of gender segregation in different types of studies and subsequent employment is a necessary part of address the gender pay gap that is large in Aotearoa New Zealand. (sub. DR131, p. 2)

Chapter 2 discusses the importance of co-production to student success in tertiary education. Similar ideas are prominent in describing what good careers services in schools look like. Vaughan and Spiller write of the importance of emphasising not just the provision of information, but building career skills in young people:

> It is clear that, while career information and career guidance are essential, *they [are] not sufficient* to support young people to deal with complex pathways and transitions. This is because individuals differ in their capacity to source information, to interpret it, to relate it to themselves and their circumstances, and to make meaningful decisions based on it. It is also because we do not have good systems in place to help young people develop those capabilities. …
>
> One of the most important aspects of a shift from career guidance to career management is the emphasis on individuals as playing an active role in their own development regarding work (and learning). (2012, pp. 1–2)

Other sources of information

Careers New Zealand (Careers NZ) is a Crown agent established under the Education Act 1989. Its functions, as described in s 280, are to:

- establish and maintain a database of information about occupations and about post-compulsory education and training;
- make information available to the public and to institutions, PTEs, students, and other interested bodies and people;
- provide training and assistance to people who advise about occupations, and career advice and associated counselling relating to post-compulsory education and training;

- liaise with, and monitor the needs of, institutions, PTEs, students and other bodies and people with respect to information, training, and advice relating to occupations, and career advice and associated counselling relating to post-compulsory education and training; and
- provide support services for the purpose of promoting transition education that prepares students for employment, or further education and training, or both.

Careers NZ does this through a number of activities. It works with and connects local schools, tertiary organisations, communities, employer and iwi groups in four "Career Capable Communities" to support the transition of young people to study and work, and to promote career skills. Careers NZ publishes benchmarks for quality careers education in schools. It runs seven "career networks" in regions, and it provides a number of online tools that give information about career and study options.

A 2013 Performance Improvement Framework review of Careers NZ was critical of its delivery of core business. The review said its staff and other agencies were confused about Careers NZ's role and had "serious questions about its mandate and capacity to assert an interagency leadership role" (SSC, Treasury & DPMC, p. 21). The review said it was difficult to assess Careers NZ's success in developing career competence in the absence of agreed baselines and robust performance measures. Although its online tools were praised, reviewers found its website was not widely known or used, "particularly among learners and at-risk groups" (p. 24).

Careers NZ aims to ensure school leavers are "career management competent" individuals making smart career decisions. Yet, according to reviewers, it lacks the levers to achieve this, particularly given the patchy delivery of careers education in schools. In 2016, government introduced legislation to transfer Careers NZ's functions, described above, into TEC. The Bill would also make it a function of TEC to:

- provide a publicly available careers information service that includes a database of information about occupations and tertiary education and training; and
- facilitate and strengthen the connections between schools, employers, and tertiary education organisations to ensure students are better prepared for employment and further education and training, or both.

Government has a number of new initiatives that aim to improve the quality of information and guidance to prospective students:

> - The *Employment Outcomes of Tertiary Education* (EOTE) project provides information about how students' choices may affect their labour market outcomes, enabling them to have realistic expectations for the future. From 2017, this information will be available at provider level.
> - Under the *Information for Learners* initiative, TEOs will from 2017 be required (as a condition of funding) to publish standardised *Key Information for Students* on their websites. This includes a statement of expected outcomes, fee information, completion rates and graduates' employment outcomes. Learners will be able to compare qualifications across providers when deciding what and where to study. […]
> - The MyQual pilot project will enable employers to provide direct feedback to tertiary providers and students about the qualifications they value. The feedback will inform student decision making in 2017 for the 2018 year. (MBIE & MoE, sub. DR162, p. 10)

MBIE and the Ministry of Education also noted that the latter Ministry was developing indicators of industry training learners' outcomes, to publish by 2018. The *Key Information for Students* is a new version of the existing *Key Information Set*. These initiatives add to an already crowded landscape that includes:

- Careers NZ's existing *Compare Study Options Tool* and its searchable database of courses;
- Studylink's *Sussed? What will you study?* website;
- MBIE's *Occupation Outlook*;
- Te Puni Kōkiri's *Māori Future Makers* website;

- marketing campaigns by providers and ITOs; and
- websites and tools (such as the University of Auckland's *What in the world do I want to study?*) of individual providers.

MBIE and the Ministry of Education submitted that government intended to consolidate the careers information provided by government agencies in TEC, "with the ultimate aim of providing a single authoritative source of careers information for end users" (sub. DR162, p. 12).

Submitters were almost unanimous that the careers education system (both nationally and in schools) is fragmented, poorly coordinated, poorly targeted, and often poorly delivered. Ako Aotearoa points to the challenge of providing information in a way that takes into account how students use information:

> Although the quality and availability of information for learners has received significant attention in recent years, in our view focusing on data is less useful for young people than focusing on learner decision-making. Specific data sources and sets are often problematic for or irrelevant to the position of the individual learner. For example, they may relate only to young learners, are often historical rather than representing the situation a learner will actually experience, or may relate only to short-term outcomes.
>
> Moreover, learners are not always well-placed to make sense of and understand the significance of data when it is available. Notably, such data may be competing for learners' attention with aspirational marketing campaigns of TEOs that emphasise 'best possible' results, such as outcomes for one or two exceptionally-talented and high-performing graduates. This can be a particular issue for learners and communities who have lower levels of pre-existing educational capital and are less well-positioned to make sense of the range of information with which they are presented. For example, feedback from our Pacific Caucus is that some Pacific communities feel that they cannot fully trust information that TEOs provide to learners, as they assume that this will be intended to serve the organisations' interests over those of the prospective learner.
>
> Focusing on developing career management skills and competencies that support decision-making is therefore likely to be more practically useful to learners. This would involve enabling learners to identify what information is relevant to them, make sense of that information, and then make realistic choices on the basis of that within the context of a broader career pathway that meets their goals and needs. This has been a particular focus of our work on support for foundation learners (Educational Attainment Working Group, 2012; Ako Aotearoa, 2014), and we supported its inclusion in the graduate profiles and outcomes for the new Foundation and Bridging Qualifications.
>
> Active support for learner decision-making can be achieved in multiple ways. One method of doing so would be through a brokerage approach: an independent agency (such as Careers NZ) tasked to actively consult with prospective learners about their career goals and capabilities and then place them within appropriate programmes. The work of Skills Development Scotland provides one example of how this can work with regard to vocational education, while a centralised admissions process – accompanied by effective integrated career guidance and support – might be valuable for degree-level education. The Finnish model is one of the strongest international examples of guidance systems, involving active 'wrap-around' support for young people from early teenage years, formal qualifications for career professionals, and an assumption that such support should be easily available throughout a person's lifetime. (Ako Aotearoa, sub. 58, pp. 10–11)

Other submitters noted career education is also important in tertiary education and beyond. By itself, transferring Careers NZ's functions to TEC is unlikely to improve arrangements for career education and information, in particular in schools.

Box 3.4 **NZCER's submission on career education**

The New Zealand Council for Education Research (NZCER), building on its substantial research into career education, submitted that:

- Career decision making is not linear: "Young people do not so much follow pathways as *produce* them".

- **Career management competencies need to be supported**: "As a society we continue to privilege the provision of career information over supporting meaning-making and information *use* … We need to help young people and those within the tertiary education system itself develop capabilities – skills, attitudes, knowledge, values – to enable *lifelong* and *lifewide* management of work and learning. We think career management competencies would be most effective woven throughout the school and its activities, including subject classes (ie, not confined to the school careers department activities)".
- **Career education in schools needs to transformed**: "Career brochures, expos and websites provide information, but it only becomes worthwhile when situated within a school-wide focus on developing students' long-term capabilities for managing multiple education and work commitments throughout life."
- **Career management and competency development must continue beyond school**: "[W]ell over half of the tertiary student population do not come directly from school. Career education must continue into the tertiary sector itself."

Source: NZCER, sub. DR135.

Despite the evidence on the complex nature of young people forming intentions about future study and making decisions about post-school study, "at a systemic level, providing *information* (often marketing brochures) is privileged over assisting students to *make sense* of the information or to learn decision-making skills" (Ministry of Women's Affairs, 2008).

Because co-production is an essential element of tertiary education, helping ensure students are prepared is important. Prospective students need to make sense of the many available study options. Individual motivations and preferences matter. Yet the systems supporting young people to make these decisions are not individualised, and pay too little attention to equipping them with career skills.

MBIE and the Ministry of Education submitted that the latter ministry was "engaging schooling sector representatives to explore how careers advice and guidance services can be improved and how these services might evolve in the context of Communities of Learning | Kāhui Ako" (sub. DR162, p. 112).

F3.5 Decisions about entering tertiary education and the influences on prospective students are complex. The arrangement and delivery of careers services, including in schools, and government provision of information to prospective tertiary students, is fragmented and operating poorly.

Student fees

There is some evidence that differences in subsidy, fee and student support arrangements can influence the study decisions of students (and employers). For example, members of the ITO sector expressed concern about these influences on decisions on undertaking industry training while in full-time employment through an ITP, PTE or ITO (Chapter 6).

In the Issues Paper, the Commission presented evidence from Robbins (2016) that suggested higher tuition fees have not restricted access to UK universities by disadvantaged students. Using data from Universities and Colleges Admissions Service (UCAS), it showed that, in 2015, those aged 18 and living in disadvantaged areas of the United Kingdom were more likely to apply for university than ever before. The difference in probability of applying for university between an "advantaged" person aged 18 and living in the United Kingdom and a "disadvantaged" person of the same age living there fell from 3.7% in 2006 to 2.4% in 2014.

Sampson et al. (sub. 14) submitted that this represented a normalisation of debt, and noted that those UK universities that had been most successful in expanding access also had the highest drop-out rates, citing Reay et al. (2010). Ako Aotearoa submitted:

> We suspect that the availability of student loans, the necessity of tertiary education qualifications in the modern labour market, and low levels of financial literacy amongst young people mean that the direct impact of fees on whether young people choose to engage in tertiary education may be small (beyond choosing which TEO to enrol with). (sub. 58, p. 11)

The University of Waikato submitted that fees combined with geographic distance may still represent a substantial barrier to obtaining a university education. In particular, it notes:

> While parents with professional incomes and substantial net assets may not be concerned about their children acquiring large amounts of debt to fund tertiary study, the poorest families with minimal net assets will quite rationally be averse to their children acquiring large amounts of debt. (University of Waikato, sub. 93, p. 6)

Understanding the effect of student fees on students' decision making is difficult. The direct application of international literature on the subject is problematic, because of the mix of policy settings. This includes the availability of interest-free loans, the rules around loan repayment, the effect of student allowances, and the apparently relatively low returns to education in New Zealand (Zuccollo et al., 2013).

The evidence suggests that higher fees reduce demand, that students in non-university tertiary education and lower-income students are more price-sensitive, and that some minority groups may be more price-sensitive (Leslie & Brinkman, 1987; Heller, 1997). Where the actual cost students will pay is not transparent, because various grants or discounts apply that mean actual cost is lower than the advertised price, students from lower-income families are more likely to be discouraged. The availability of loans and allowances will offset this, although students from lower-income households may also be more debt-averse.

Most students underestimate the amount of subsidy provided by government to tertiary education costs and, in particular, the level of direct financial assistance provided to students (Baxter, 2012).

More detail on trends in student fees is presented in Chapter 10. A recent literature review concludes "[i]nteractions between socioeconomic status, geographic proximity, financial costs, and tertiary education rates are highly complex and difficult to measure (NIDEA, 2016, p. 18). It also notes evidence that price elasticity can be greater, and geographic proximity more significant, for socioeconomically disadvantaged families.

Student support

Along with tuition subsidies paid to tertiary providers, government also contributes to the student support system. That contribution is comprised primarily of the Student Loan Scheme and student allowances.

Loans

New Zealand citizens, residents who have been in New Zealand for three years, and residents who hold refugee status, or have a family member who holds refugee status, are eligible for student loans. Students can borrow for course fees, course-related costs, and living costs – but people aged 55 or older and part-time students can only borrow for course fees. People who are bankrupt or have overdue loans cannot borrow; and prisoners and people on a benefit cannot borrow for living costs. Students can usually borrow up to $1000 a year in total for course-related costs, and up to $176.86 a week for living costs.

An individual has a limited amount they can borrow in their lifetime. Generally, students can only borrow for study up to seven EFTS. Students need to pass at least half of their study to maintain access to a loan.

No interest is charged on loans if borrowers remain in New Zealand; even the real value of the loan is not maintained. Borrowers must start making repayments if they earn more than $19 084 a year before tax; that is, repayments would be required for an individual working more than 24 hours a week on the minimum wage.

The number of active borrowers has been reducing each year since 2010. In 2014, some 186 000 students, about 72% of eligible students, borrowed. Together, they borrowed $1.6 billion in 2014.

Allowances

A student allowance is a weekly payment to help with living expenses. Unlike student loans, the allowance does not need to be repaid. Students generally have to be aged between 18 and 65 to get an allowance, studying full time at an undergraduate level, and be a New Zealand citizen or meet the residency requirements.

The size of an allowance depends on the income of a student, the combined income of a student and their partner, if any, and the income of the student's parents if the student is aged under 24. As with loans, students have to pass at least half their study to maintain access to an allowance. Student allowances also have lifetime limits: up to 200 weeks for those aged under 40, and 120 weeks for those aged 40 and over.

In 2014, almost 80 000 students received a student allowance, with an average value of $6 800. Of these students, 44% also borrowed money for living costs.

More detail on trends in student support is presented in Chapter 10.

Location of study

Proximity to a tertiary provider is a key influence on student decisions. Ussher (2006) studied patterns of student travel to tertiary study, using last secondary school attended as a proxy for home location.

- Almost all tertiary education institutions (TEIs) draw the majority of their students from less than 44 km away, with some notable exceptions (Whitireia in Porirua, Otago Polytechnic in Dunedin, and the University of Otago in Dunedin).
- Students will tend to travel to a close tertiary provider, up to a point. Once a student has to travel a moderate distance to study, they become more likely to travel still further to a provider that is not the closest to them.
- Students were less likely to travel large distances to attend an ITP than a university, except where the ITP offered specialist courses.
- Māori students were more likely, and Pasifika students less likely, to travel long distances for tertiary study. Women were more likely to travel long distances than men, and students from low-decile schools were more likely to do so than those from high-decile schools.

Ussher suggests students from low-decile schools may be more likely to travel long distances because they are more likely to be able to access student allowances. By contrast, students from high-decile schools may "be less inclined to move away from the comforts of home and the financial support offered by parents" (2006, p. 4).

Ussher contrasts these findings – that access to a campus most influenced a student's likelihood of travelling to study – with an Australian study on student mobility. This study found academic ability and subject choice as the most dominant factors in choice of provider. The relatively homogenous nature of tertiary institutions in New Zealand, in terms of course offerings and entry requirements, means students do not have to travel far to find a TEI campus that offers their preferred course of study, and will accept them.

Concerns about student decisions on field of study

Many submitters, particularly industry groups, submitted that more students should be studying to enter their field. Horticulture New Zealand submitted that:

> [a]t more of a micro level our industry is in need of graduates yet both universities struggle to capture horticulture students. […]
>
> HortNZ will often field calls from horticulture businesses looking for university graduates that could be considered for agronomist and pack house manager positions. A recent graduate of Massey University was offered four positions and indicated that her colleagues were also in a similar situation. The number

> of graduates at all levels from industry trainees to postgraduates is not enough to cater for need. (sub. 92, pp. 8, 13)

Rural Women New Zealand submitted that "the low number of students graduating with degrees in agricultural based subjects also suggests there is a mismatch between tertiary education and demand for skilled workers in primary production" (sub. 30, p. 1). It argued that "additional government funding may also be necessary to attract students to enrol in skill shortage areas" (p. 3).

The Tourism Industry Association submitted:

> A significant gap exists in the bigger picture of employers influencing the tertiary environment, particularly in the supply of training places. For example, there have been shortages of chefs for many years. The role has become a permanent fixture on the government's Long-term Skill Shortage List. While there is insight into how many extra chefs are required (… an extra 6213 will be required by 2025), there is no strategy or process that drives how this will be achieved. (sub. 51, p. 5)

The New Zealand Manufacturers and Exporters Association (NZMEA) submitted:

> Too many young people and their parents, teachers and other influencers regard attaining a university degree as a preferred option, never mind what the degree is in and what the employment and career opportunities post-graduation may be. Compared to that, they do not see a career in manufacturing that is launched form a tertiary qualification at certificate or diploma levels as attractive. This is based on a perception of pay levels, career advancement opportunities and work environment that is far from reality and fails to recognise the scope of opportunities in manufacturing. (sub. 66, p. 3)

Of the submitters, NZMEA recognised the role that industry should play in addressing these perceptions. It submitted: "We suggest that fixing that is outside the scope of this review and largely a task the industry itself has to shoulder. However, a government … should play an active role too" (sub. 66, p. 3).

Students may well be taking rational decisions in at least some of these areas, given what's known about graduate outcomes (Table 3.5).

Table 3.5 Average salary and employment outcomes of graduates in selected fields

	Bachelor's: Horticulture & Viticulture	Bachelor's: Agriculture, environmental and related studies	Bachelor's: All fields
Median salary two years after study	$42 547	$43 490	**$44 709**
Employment rate two years after study	58%	60%	**66%**
Median salary five years after study	$46 285	$56 003	**$52 822**

	Diploma: Manufacturing, Engineering & Technology	Diploma: All fields
Median salary two years after study	$31 116	**$33 376**
Employment rate two years after study	62%	**54%**
Median salary five years after study	$42 939	**$40 470**

	Certificate level 4: Food & Hospitality	Certificate level 4: All fields
Median salary two years after study	$29 522	**$30 344**
Employment rate two years after study	57%	**43%**
Median salary five years after study	$37 241	**$37 077**

Source: Careers NZ's "Compare Study Options" website.

Wages send important signals about what type of study will be rewarded. In none of the examples cited is it obvious that a student would be clearly better off pursuing the suggested qualification instead of an alternative. Where there is an income premium, it is typically small and takes time to emerge. On this data, no clear evidence exists that employers are responding to a shortage of suitably trained graduates through increasing wages.

F3.6 Wage levels send important signals to prospective students about what type of tertiary education will be financially rewarding to them, and of value to employers.

Equity of access

Equity of access aims to ensure everyone has a fair opportunity to participate in tertiary education. This is widely regarded as an important aspect of system performance, but is inherently challenging to both define and achieve:

> [T]he public debate on fair access is often unhelpfully simplistic: some argue that it is a straightforward matter of closing the school attainment gap, others that it is simply down to what they perceive as the elitism of universities.
>
> In reality, it could hardly be a more sophisticated, subtle problem. It is rooted in family homes and local communities, in the complex mix of factors that shape aspiration and in the cultural differences between socioeconomic groups. It is exacerbated by the systemic unfairness evident in the admissions and selection processes of institutions, in the school attainment gap and in the efficiency of transitions between education sectors. (Scottish Commission on Widening Access, 2016, p. 3)

In New Zealand, s 224 of the Education Act 1989 gives people right of entry to tertiary education at a public TEI at age 20, regardless of prior attainment. This reflects the principle that everyone who is capable of benefiting from education should have an opportunity to do so – and that part of the role of tertiary education is to give people a second chance at learning. Provider and system performance in achieving equity of access is hard to measure.

Access is also an important goal of Adult and Community Education, especially for those who have become disengaged in education through bad experiences in the compulsory system:

> ACE learners generally have a low base from which to start tertiary education often due to not having the appropriate skills to learn (organise learning materials for future use) or those who have had damaging experiences in the compulsory school system (finished or dropped out of school with no qualifications). … ACE learners are not ready for higher-level learning. … ACE providers work toward increasing confidence in a person to the point where they feel confident to contribute to society or go on to further learning. (ACE Strategic Alliance, sub. 34, p. 4)

Another measurement challenge is knowing how to adjust for a person's skills and potential, which affects their participation at higher levels of tertiary education. One option would be to use prior school attainment as a proxy for skills and potential. However, schools do not themselves produce equitable outcomes for different types of learners (Education Review Office, 2015a; Engler, 2010b). Using data on prior school attainment to set expectations about tertiary participation could therefore reinforce pre-existing educational disadvantage.

How much should tertiary education providers do to try to rectify inequalities in schooling outcomes, given their funding and policy arrangements – and how much should government do to help? This is a fraught question, here and overseas. Georgia State University in the United States has successfully closed the achievement gap between its black and Hispanic students and its white students through a data-driven overhaul of its educational administration. The university's Vice President, Tim Renick, argues universities have – and should use – the power to improve equity for students:

> Universities are honour-bound to defy conventional approaches to students, otherwise they merely perpetuate inequalities for disadvantaged students that the higher education system has been producing for decades. … The bottom line is, [our] approach has levelled the playing fields. (Jenvey, 2016)

Florida State University (Engle, 2012) and Carnegie Mellon (Thille, 2012) have taken similar approaches, and other examples are presented in Chapter 11.

Universities New Zealand seems to place most responsibility on government and the schooling system to address equity of access in New Zealand:

> The universities are already doing a lot of work on improving access, participation and achievement for Māori and Pasifika students, and they are committed to improving parity in both access and achievement. ...
>
> The best way to increase participation and completion rates would be [for the government] to increase Equity Funding for the specific purpose of lifting Māori and Pasifika participation and achievement and to allocate that funding equitably between the universities in a way that carries low overhead and compliance costs. ...
>
> Until Māori and Pasifika are achieving at a much better rate in the compulsory and non-compulsory schooling system, any significant participation increases [at universities] will be both costly and challenging to achieve. (sub. 17, p. 19)

The idea that government should specifically "buy" improved outcomes for Māori and Pasifika learners appears to conflict with Universities New Zealand's position that universities should be bulk-funded to achieve agreed goals: "Bulk funding is not just desirable, it is essential for a modern university. […] Universities would strongly oppose anything that reduced or removed this operating flexibility" (sub. 17, p. 36).

In the ITP subsector, ITPs identify delivering educational opportunities to a wide diversity of learners as part of their value proposition:

> ITPs are the most successful sector at providing an open door and a learning pathway to success to students who have not felt at home in the compulsory or the academic environment. Achievement and retention levels for Maori and Pasifika students are very high and ITPs have developed an innovative range of programmes to engage and support priority learners. (NZITP & Metro Group, sub. 42, p. 3)

However, they too noted that funding settings effectively penalise them from enrolling learners who need more help to succeed. Potter (2016) notes that providers used to invest substantially in programmes to help improve outcomes for Māori. However, "much of the investment in culturally-responsive teaching and student support services has been wound-back across the tertiary sector in recent years", once government no longer supported it via a separate funding stream (p. 3).

The wānanga model, as a tertiary education model designed by Māori for Māori, has played a role in providing education to Māori learners who many not be able to access tertiary education through other institutions.

New research into ethnic disparities in Bachelor's qualifications in New Zealand

The Productivity Commission and the Auckland University of Technology (AUT) undertook research into how degree-level participation and completion rates vary by ethnicity in New Zealand, and to what extent the differences can be explained by observable characteristics (Box 3.5).

Box 3.5 **Participation, Retention and Completion: Explaining ethnic disparities in Bachelor's qualifications in New Zealand**

The research

Meehan, Pacheco and Pushon (2017) use newly linked administrative data to investigate the key factors associated with ethnic disparities in study towards Bachelor's degrees in New Zealand. They track almost 200 000 people from a cohort of young people born between 1990 and 1994, and who were enrolled in a New Zealand secondary school during their 15th and 16th year.

Their research describes differences in enrolment, progression and completion in Bachelor's level study by ethnicity, and examines the effect of controlling for other individual, family and school characteristics in explaining these differences. These include factors previously suggested in the literature as being explanatory variables, such as SES, parents' educational attainment, and students' prior academic achievement.

Marginal effect of higher socioeconomic status and prior school achievement on Bachelor's degree study

One aspect of the study looked at the marginal effects of differences in SES, prior school achievement, and other variables on the likelihood of participation in Bachelor's level study. The authors found, for example, that while higher SES generally increased the probability of studying towards a Bachelor's degree, the marginal effects were larger for European students than for other ethnicities. Europeans living in the least deprived areas were 13.5% more likely to enter Bachelor's study than Europeans living in the most deprived areas, holding prior academic achievement and other variables constant. For Māori, the difference was 7.8%, Pasifika 5.8%, and Asian 9%.

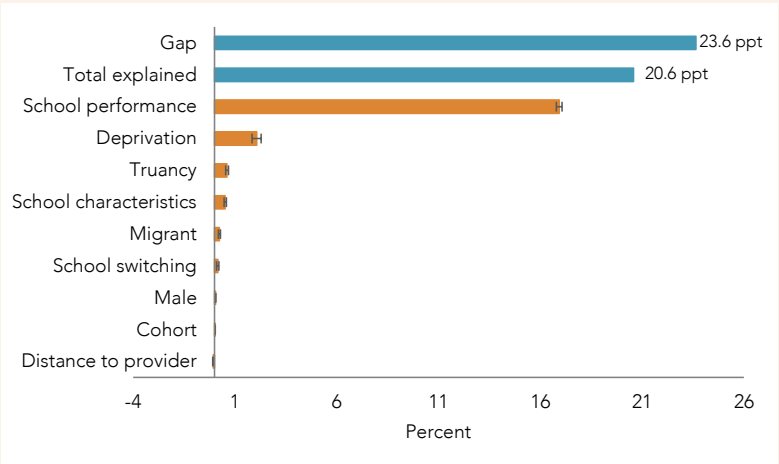
The authors also found achieving NCEA increased the likelihood of study towards a Bachelor's degree compared to not achieving it, and that each level of endorsement (Merit or Excellence) further increased that likelihood. These effects, however, were smaller for Māori students than for other ethnic groups. The authors said:

> These results signal that it is not enough for Māori to just attain an NCEA level 1 qualification, it appears imperative to have that qualification endorsed with either merit or excellence if we wish to improve their propensity for participating in bachelor's qualifications. (Meehan, Pacheco & Pushon, 2017, p. 21)

Explaining the Māori – European participation gap

Most, but not all, of the gap between Māori and European participation in Bachelor's level study was explained by differences in observed characteristics (Figure 3.26).

Figure 3.26 Contributors to the gap between Māori & European participation in Bachelor's level study



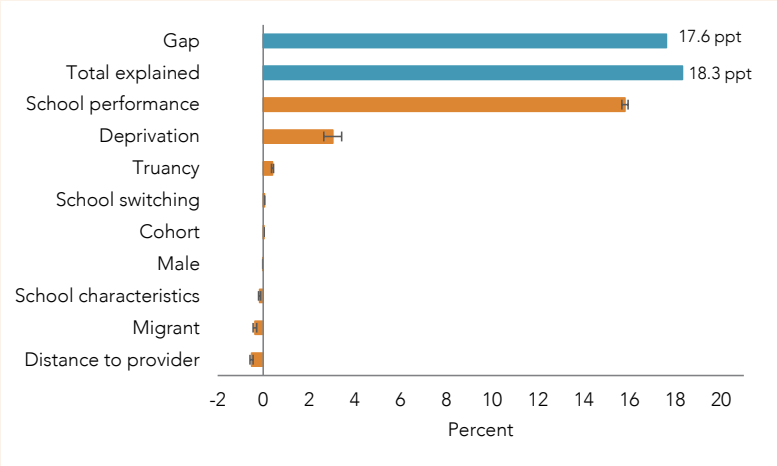
The biggest contributor to the explained portion of the gap was "school performance", which is the students' prior achievement at school. The study used achievement and endorsement at NCEA level 1 as the measure of students' prior school performance, because virtually all students, regardless of whether they intend to pursue tertiary study, attempt this qualification. The second largest contributor to explaining the gap in participation was deprivation, which is the deprivation index of the "meshblock" in which the student resides. This is a far more refined measure of SES than has been available to previous studies, which have used school decile as a proxy for students' SES.

The results show that, for Māori, the observable characteristics in the study explained just 86% of the gap in participation in Bachelor's level study. That is, even if Māori in the cohort had the same prior school achievement, SES, and other characteristics studied as European students, there would remain a gap in participation that was unexplained by variables measured in the study. This unexplained gap could arise from cultural-specific factors, discrimination, or any other factor that was not measured in the study.

Explaining the Pasifika – European participation gap

All of the gap between Pasifika and European participation in Bachelor's level study was explained by differences in observed characteristics (Figure 3.27).

Figure 3.27 Contributors to the gap between Pasifika & European participation in Bachelor's level study



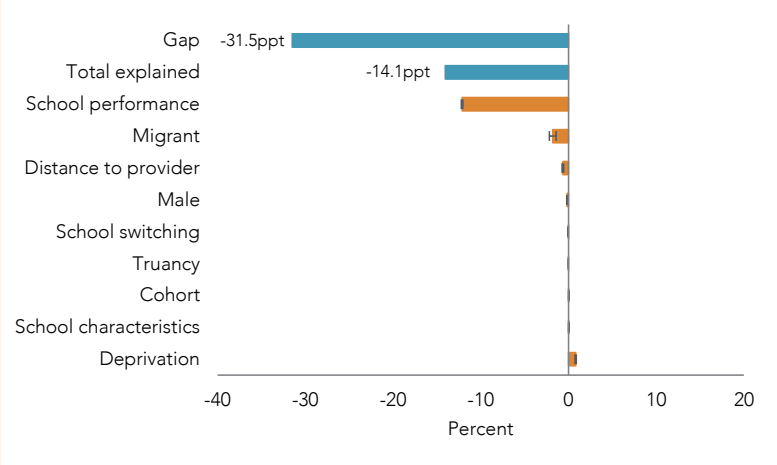
The biggest contributor to the explained portion of the gap was students' prior achievement at school. The second largest contributor was deprivation. The results showed that, for Pasifika, the observable characteristics in the study explained more than the entire gap in participation in Bachelor's level study. That is, Pasifika were slightly more likely than Europeans to participate in Bachelor's level study, once the study adjusted to take account of their lower prior achievement at school, lower SES, and other observed characteristics. Again, this difference could arise from any other factor not studied, including cultural-specific factors.

Explaining the European – Asian participation gap

In this cohort, Asians had higher participation in Bachelor's level study than Europeans.[15] Less than half of the gap between Asian and European participation was explained by differences in observed characteristics (Figure 3.28).

[15] Although, see Figure 3.8 which shows that age-standardised participation rate for Asians in Bachelor's level study has fallen behind that of Europeans in recent years.

Figure 3.28 Contributors to the gap between Asian & European participation in Bachelor's level study



The higher prior school achievement of Asian students explained some of their higher participation in Bachelor's level study, relative to European students. The results for deprivation show that Asians had higher participation, despite having lower SES than Europeans. Most of the gap, however, was unexplained by observed characteristics in the study. The unexplained portion may arise from any other factor not studied, including cultural-specific factors.

The effect of parents' education levels

The researchers also included parents' education level as an additional variable for the subset of the cohorts for which this information was available (some 91%). This may be the first study to include parents' education level in a population-wide analysis of higher education outcomes.

Including this variable finds that parental education level explained almost as much of the Māori/European and Pasifika/European gaps as "deprivation" did. The marginal effects of parental education are stronger for Europeans in the cohort than for other ethnic groups. A European with a parent who had a Bachelor's qualification was 17.4% more likely to study at Bachelor's level than a European whose parents had no school qualification, all else being equal. For Māori, a parent with a Bachelor's qualification increased the child's likelihood of Bachelor's study by 6.8%, for Pasifika by 13.7%, and for Asians by 11.3%.

The authors concluded:

> These results are relatively easy to summarise – consistent with the extant literature, the three factors of importance are socioeconomic status, prior performance in school, and parents' educational attainment. What is most interesting from these findings is the relative contributions of each of these factors – which indicate that prior performance in school plays the largest role, by far. (Meehan, Pacheco & Pushon, 2017, p. 24)

Source: Meehan, Pacheco & Pushon, 2017.

These results confirm that the biggest contributor to lower levels of Bachelor's degree study among Māori and Pasifika school leavers was their lower average achievement at school. A key implication of the research is that improving the performance of the school system for Māori and Pasifika learners is key to improving their participation in Bachelor's study.

SES is the second and far smaller contributor to differences in participation. For all ethnic groups, living in higher socioeconomic communities increased the likelihood of bachelor's study. More attention needs to be paid to improving the participation of people living in lower socioeconomic areas in Bachelor's study. This could include, for example, through raising aspirations and awareness of study opportunities at this level, and providers making connections with students and schools in poorer communities.

However, Pasifika had slightly higher participation, and Māori lower participation, than would be expected when these and other variables in the study are taken account of. The research finds more Māori would be expected to have participated in Bachelor's study than was the case, notwithstanding differences in school achievement and SES. This finding should challenge providers of Bachelor's study to do more to increase Maori students' participation.

Chapter 9 further discusses this research in explaining ethnic differences in progression and completion rates towards bachelor's degrees.

F3.7 Differences in prior school achievement are the major drivers of lower Māori and Pasifika participation in Bachelor's degree study. Improving school-level outcomes for Māori and Pasifika is important to improve their participation at higher levels of tertiary study. But Māori participate in Bachelor's degree study at lower rates even after taking account of prior school achievement and socioeconomic status.

Figure 3.4 and Figure 3.5 showed people from less deprived areas studied more (consumed more EFTS) and at higher levels. This research confirms that remains true, at least for Bachelor's degrees, even after correcting for prior school achievement and the other variables measured in the study.

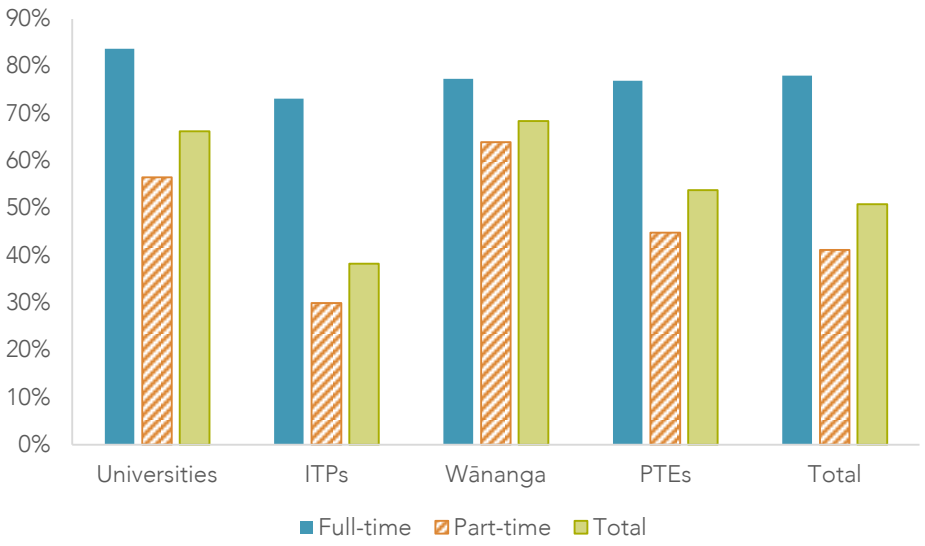
3.4 Decisions and transitions within tertiary education

Who leaves study?

Not everyone who starts study completes it. Across all levels of study, 61% of students who began a qualification in 2011 had completed it within four years. Overall qualification completion rates have been improving over time. For example, only 43% of those who started a qualification in 2007 had completed it within four years, and 52% within eight years. Showing completion rates over a long period of time is necessary because it takes some students years to complete a qualification, particularly if they are studying part time; but this also masks subsequent improvements in completion rates.

Qualification completion rates measure students who complete a qualification at the same or higher level of study than they initially enrolled in. The rates take account of students who switch to a different qualification at the same level, or "upgrade" their qualification. Completion rates vary by provider type (Figure 3.29). Part-time students have a lower completion rate than full-time students.

Figure 3.29 Eight-year qualification completion rates by subsector, 2007–14



Source: MoE, 2016a.

Scott (2009) found about 12% of degree students end up completing a lower-level qualification, and this is particularly prevalent among students who study part-time.

TEOs are required to enrol students in a qualification, but some students likely do not enrol with the intention of completing a qualification. Scott (2009) reports that 12% of part-time students and 7% of all degree students pass all their courses, but leave without a qualification. The author infers that, in many cases, these students did not intend to gain a qualification.

However, this leaves a number of students who "fail" at their study, or choose to drop out. Students leave study for a variety of reasons, often including personal circumstances. One study of students in New Zealand universities finds that "convenience" is a major reason to consider leaving study. The author comments:

> One interesting finding from the AUSSE [Australasian survey of student engagement] is that early departure is often due to personal and convenience reasons. This suggests that the provision of more flexible learning options (e.g. using mobile technologies and online learning or supported environments) may help mitigate some students' early departure intentions, by making study more convenient when trying to balance financial, family, work and study commitments. Especially among first-year students, there are a large number who plan to change their qualification and/or shift to a different university. This highlights a need for more quality academic advice in the early stages of the tertiary experience, to help students better understand the different study options available to them and for them to work out the best options available. (Radloff, 2011a, p. 54)

Although students at universities and ITPs report similar levels of student engagement, ITP students are more likely to consider leaving study. In ITPs, the major reasons given are boredom and quality concerns, which should be amenable to intervention by the provider:

> A significant relationship exists between ITP students' feelings of support and their departure intentions, suggesting that if more can be done to support students at risk of leaving before completing their qualification, ITPs may be able to retain more students. (Radloff, 2011b, p. 25)

Success at tertiary study requires particular knowledge and skills that not all learners possess (Box 3.6).

Box 3.6 **Some of the knowledge and skills necessary to success in tertiary study sit outside any formal curriculum**

To succeed at university, students need to master not only the content of the formal curriculum in school and during their university study, but also the "mix of bureaucratic know-how and sound study skills that can make or break a student's first year in college" (Zinshteyn, 2016).[16] These skills often lie outside any formal curriculum, and include:

- knowing how to deal with bureaucratic processes for admissions, enrolment and finance;
- knowing how and when to communicate with faculty, and what to expect from these interactions;
- knowing how, when, and who to ask for help or guidance when needed; and
- being able to manage an independent (and often quite loosely structured) programme of study, to make good decisions about how to allocate time and energy, and how to deal with stress.

Universities often implicitly expect students to possess these skills on arrival. Indeed most students do learn them at secondary school or via conversation with family during the lead-up to tertiary study and in its first few months. By contrast, students who are the first in their family to go to university, or those from schools with few school leavers attending university, may arrive at university not possessing this information, and not knowing where to find it – or sometimes even that they need to know it. This can increase the stress and difficulties they face in navigating the university environment. It may also contribute to a higher drop-out rate for such students (Hodge & Mellin, 2010).

[16] Zinshteyn uses the term "hidden curriculum" to refer to this useful and practical know-how as something positive and valuable. However, the term "hidden curriculum" more usually refers to the implicit or unofficial set of norms, beliefs and values transmitted to students by schools or tertiary institutions, with negative connotations of oppression (eg, Jackson, 1968) or structural inequality (eg, Raskoff, 2012). Snyder (1970) argued that alongside the formal and explicit college curriculum ran a second, tacit curriculum, teaching students the "right way" to think and to learn. Snyder argued that the normative pressure of this hidden curriculum served to thwart students' creativity and independence of thought. Raskoff (2012) described the hidden curriculum as "a by-product or otherwise unintended knowledge that is generated within an organization and that often reinforces systematic inequality", and argued that it is manifest in various aspects of modern US college administration.

Universities can do various things to make the implicit explicit, and help ensure all students acquire the knowledge and skills they need to succeed in tertiary study. One way is to provide mentoring and coaching services, which appear to be effective in increasing first-generation students' retention and completion rates (eg, Bettinger & Baker, 2011). Mentors and coaches can pass along practical advice, but they can also provide valuable emotional and moral support to students. Barry, Hudley, Kelly & Cho (2009) found many first-year college students find relief in disclosing their stressful college experiences to someone who understands what it is like to be in their situation. Some students can use their parents or older siblings for this; but for first-in-family students, a coach or mentor may fill the role. Zinshteyn (2016) quoted one student as saying that her phone conversations with her college mentor reminded her that "I'm not alone, I'm not the only one that's going through these issues".

Universities can also provide more structure for students who have not yet acquired the skill of self-managing their tertiary study. Complete College America (2012) promotes the value of default pathways for students and "intrusive, on-time advising" to help ensure all students get and stay on track to graduate.

Who switches programmes and providers?

Many features of the New Zealand tertiary education system should make it easy for students to change their course of study, and even their provider. The tertiary sector is managed as a single system, with a single qualifications framework and statutory power for NZQA to make rules relating to credit transfer and recognition of prior learning.

Student mobility requires effective arrangements that allow for the recognition of learning that has occurred elsewhere, and the transfer of credit. An effective system for recognising learning and transferring credit reduces costs to students and empowers them to choose qualifications and providers that best meet their needs.

The New Zealand Union of Students' Associations submitted the system to allow credit transfer was broken:

> Another aspect of the system which fails students and the other investors in tertiary education is the wastage that comes from poor arrangements between institutions – despite the unified Qualifications Framework. We believe that there would be considerable advantage in requiring articulation agreements between (particularly) regional polytechnics and universities. … There also need to be better arrangements between universities for movement between them. (sub. 19, p. 6)

Some submitters disagreed that there were problems. The University of Otago submitted that "our Student Records Office is unaware of any recent student complaints about the process" (sub. DR130, p. 7).

But there is a lack of systematic data about credit transfer. There is some old data about students who change their course of study. In 2008, the Ministry of Education reported on a study of 170 000 students who either began a degree or postgraduate qualification for the first time in 1997, or began a certificate or diploma for the first time in 2000. The study found that:

- 5% of students completed a higher-level qualification than the one they started;
- 5–10% of students completed a lower-level qualification than the one they started;
- 40% of Bachelor's students, 34% of diploma students and 25% of certificate students changed qualification before they completed;
- 19% of students transferred to a different provider before completing a qualification; and
- 52% of students who completed a qualification and progressed to higher-level study transferred to a new provider after completing their first qualification.

These data are quite old. Universities New Zealand submitted that 16% of students coming to university already have some credits at a similar or lower level in their field of study, although it also acknowledges that recognition of prior learning is rare.

Universities New Zealand submitted that "New Zealand currently lags somewhat behind many other countries by not having clear nationally agreed policies and standards" providing for credit transfer (sub. DR119), but notes risks from overly generous or highly prescriptive credit transfer arrangements, and from reduced focus on the integrity of qualifications. MBIE and the Ministry of Education, however, noted:

> Taken too far, this fails to acknowledge students' interests. It reduces providers' collective responsibility to maintain standards, and imposes costs on students and taxpayers by restricting mobility and forcing wasteful repetition of study. (sub. DR162, p. 17)

It is difficult to know whether students who shift providers or courses of study are aware of the opportunity to have credit recognised. If credit transfer is not working well, students can be locked into their choices.

COMET Auckland submitted that "competition between institutions for enrolments" was behind poor practice in credit recognition:

> If the tertiary system was truly student-centred, learners would be able to build up qualifications across several providers, learning from the best teachers and experts in each subject area they wanted to explore, with their learning in each case recognised across institutions. Learners would also be able to integrate academic learning and on-the-job skill building, and be recognised and attested for both.
>
> The Qualifications Framework makes this theoretically possible, but competition between institutions for enrolments, recognition in league tables, and even reporting systems make it unattractive for tertiary organisations to offer such flexibility to learners. (COMET Auckland, sub. 50, p. 9)

However, many institutions do not have to compete for enrolments. Funded places are capped and, although there may be competition for top students, many institutions fill their quota without much effort. Given these policy settings, providers have little incentive to recognise prior learning. By contrast, in Australia, where institutions can grow (because funded places are not capped, and funding follows students), providers seem far more willing to recognise prior learning because they are competing to attract new students.

The University of Auckland (sub. DR118) submitted that, in most markets, switching costs are typically imposed by current providers (such as banks, or power companies) rather than those consumers wish to join. In each of the markets mentioned, however, firms can increase their number of customers. In a rationed system, where the number of customers a provider can serve is capped (as in the New Zealand tertiary education system), both current and prospective suppliers can have incentives to impose switching costs.

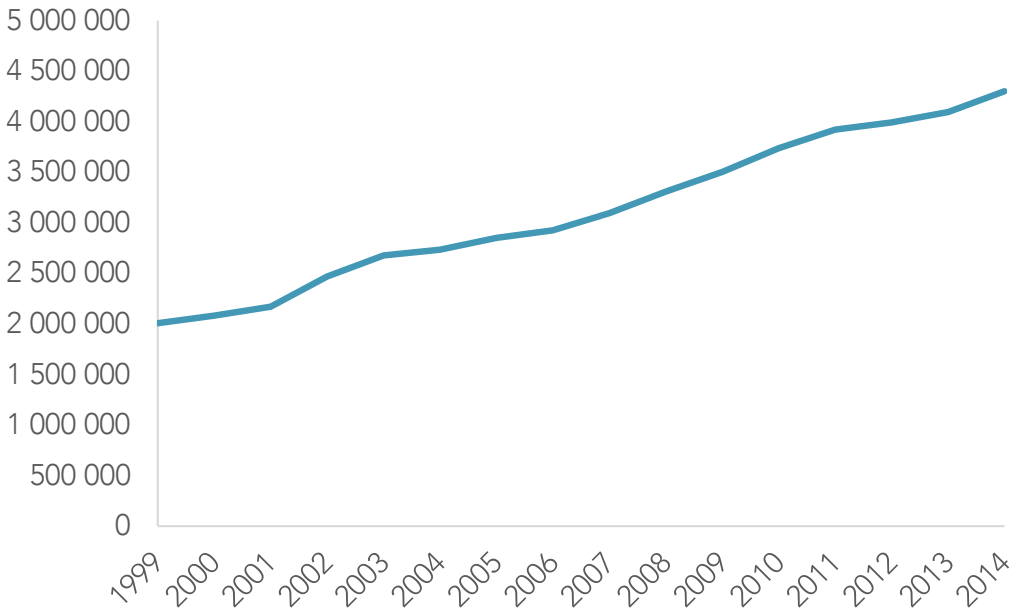
Recent US research shows students who switch majors do not harm their likelihood of graduating, or the time taken to do so. Students who never switch majors are less likely to graduate (even taking into account the effect of attrition). The research concludes, "we should be investing in structures, such as meta majors, that encourage exploration while still ensuring that common early requirements are satisfied and the student is making progress" (EAB, 2016, p. 7).

Recommendations to improve student mobility are in Chapter 13.

3.5 International students

The number of students enrolled outside their country of origin has been growing for some time (Figure 3.30).

Figure 3.30 Students enrolled outside of their country of origin, 1999–2014



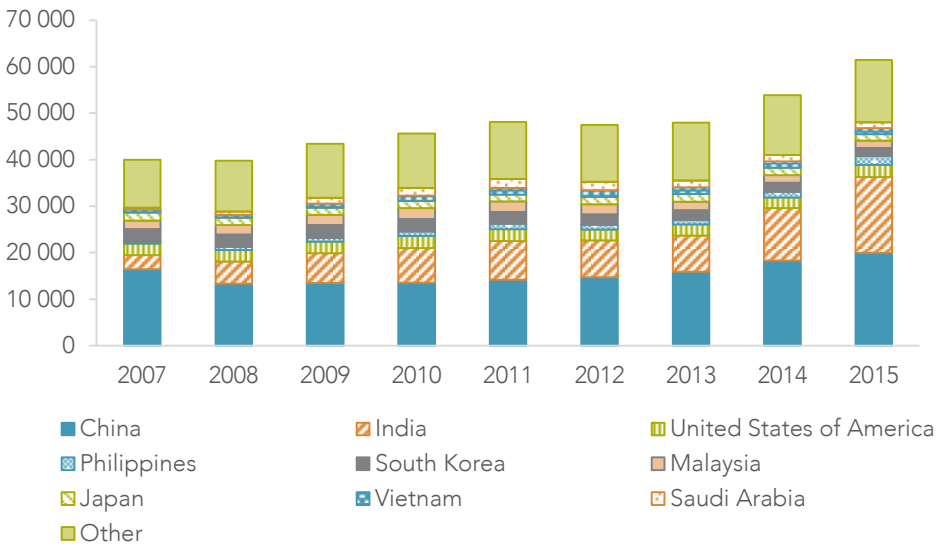
Source: UNESCO Institute for Statistics

Many of the source countries for international students are now investing heavily in their domestic systems as part of their own "catch-up" massification projects. Marginson (2011) predicts that "[o]n present trends the level of education and research infrastructure across the whole of East Asia … will reach that of Western Europe within a generation" (p. 609). South Korea is well on the way to a massified system, whereas India and China have some way yet to go.

Who comes to New Zealand?

In 2014, more than 54 000 international students were enrolled at New Zealand tertiary providers. Students with citizenship of 167 foreign countries studied in New Zealand. But two countries, China and India, contributed 59% of the international students studying in New Zealand, with students from India having grown significantly over the last decade. Seven other countries had more than 1 000 nationals enrolled in New Zealand – together, 19% of international enrolments. The remaining 22% of enrolments came from 123 other countries – from Afghanistan to Zimbabwe (Figure 3.31).

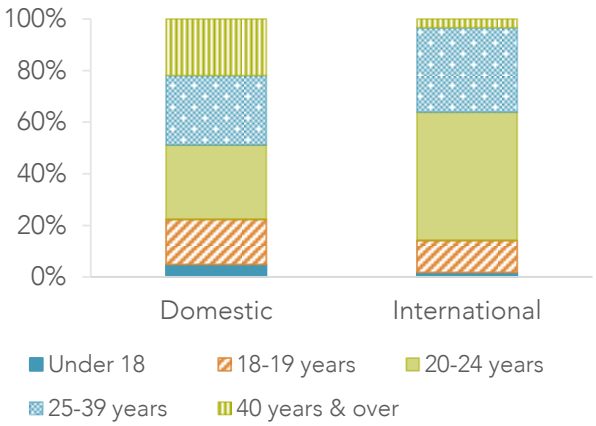
Figure 3.31 International students studying in New Zealand by country of citizenship, 2007–15



Source: MoE, 2016a.

International students are less likely to be aged over 40 than domestic students (Figure 3.32).

Figure 3.32 Domestic and international students by age, 2015



Source: MoE, 2016a.

What do they study?

Students from China and India have different enrolment patters, with more than half of Chinese students enrolled at a university, and more than half of Indian students enrolled in a PTE (Table 3.6). In addition, while Chinese students are evenly split by gender, 77% of students from India were male in 2014/15 (MBIE, 2015a[17]).

Table 3.6 International students from China and India, by subsector and level of study, 2014

Country	Subsector	Certs 1–4	Dips 5–7	Bachelor's degrees	Graduate certs/dips	Honours & postgrad. cert/dips	Master's	Doctorates	Total
China	University	1 598	94	5738	268	793	1 551	550	9 966
	ITP	1 657	1 465	2 441	318	86	41	1	5 310
	PTE	627	2 536	184	147	77	70	0	3 426
	Total	3 862	4 080	8 330	732	956	1 662	551	18 294
India	University	7	7	157	79	326	382	312	1 239
	ITP	339	1 426	456	1 438	488	25	0	4 028
	PTE	286	5 035	123	227	380	93	0	6 088
	Total	631	6 429	735	1 744	1 194	500	312	11 282

Source: MoE, 2016b.

In 2015, more than three-fifths of international students who specified a region of study were studying in Auckland (MBIE, 2015a).

For universities, the number of fee-paying international students peaked in 2004 and declined between 2005 and 2008, but has been relatively stable since. The number of international doctoral students has increased over the last decade. Doctoral students pay the same fees as domestic students because of New Zealand government subsidies.

Some 17% of new international fee-paying students in 2009/10 had gained residence in New Zealand within five years (ie, by 2014/15). This percentage was higher for students from India (34% by 2014/15).

[17] MBIE (2015a) analyses visa data and does not distinguish between international students in school and tertiary education.

Around 3 000 international students enrolled with New Zealand providers are studying offshore rather than in New Zealand. In 2014, 1 222 were enrolled in universities. However, no reliable information is available on who these students are.

International student decision making

Universities New Zealand submitted that "[International] Students will typically choose a country first, then select between universities (sub. 17, p. 25)". In fact, Hobsons' research says that students typically choose a course of study first, then a country, and then an institution (some students decide based on a different order).

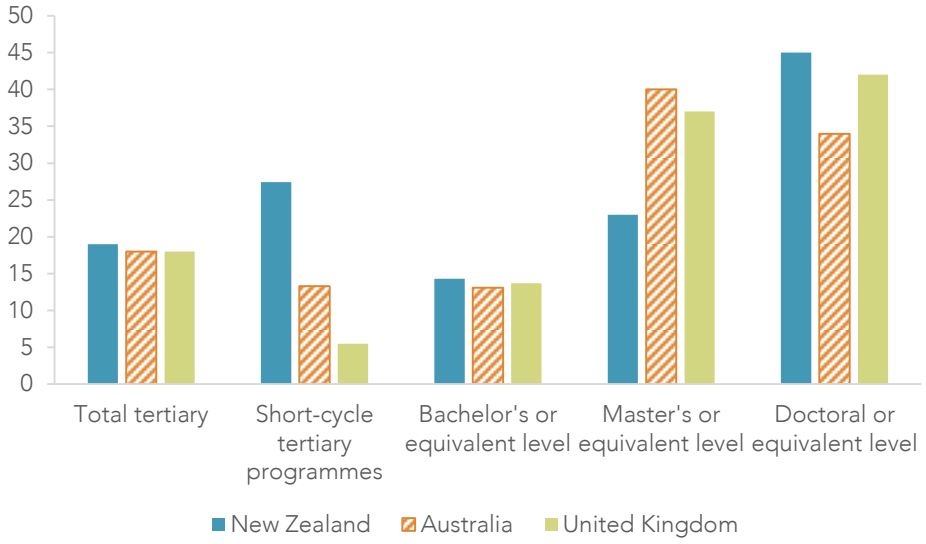
Quoting Hobsons' (2014) survey of international students, Universities New Zealand submitted:

> The five most important factors for international students when considering study abroad are consistent regardless of where they intend to study. These five factors in order of importance are (1) quality of education (compared to their home country), (2) international recognition of qualifications, (3) the country's attitude to international students, (4) safety, and (5) ease of getting a visa. (sub. 17, p. 77)

Programme choice

While New Zealand has a comparable proportion of international students in the tertiary education system as Australia and the United Kingdom, a significantly higher proportion of these students are in "short-cycle tertiary programmes" (approximately levels 4–6 on the NZQF), and a much smaller proportion are in postgraduate study (except for doctoral level, where international students pay domestic fees) (Figure 3.33).

Figure 3.33 International students as share of tertiary students by level of study, selected countries, 2014



Source: OECD, 2016a.

One explanation for the relatively low number of international students at Master's level is that, until 2013, a Master's required 240 credits, or the equivalent of two years' study. Subsequent changes to allow 180 credit Master's degrees are expected to be more attractive to international students. Allowing shorter Master's degrees was supported by universities and the New Zealand Union of Students' Associations, but opposed by the Tertiary Education Union (Gerritsen, 2012).

One submitter argued that this pattern of enrolments had consequences for the revenue generated by international students:

> The relatively high proportion of international students studying in New Zealand tertiary institutions does raise the question as to why the revenues reported are so low. Clearly the relative level of fees being charged is also a significant factor, However, part of the explanation for the lower revenues attracted by New Zealand universities can be found in the type of tertiary qualification being sought, with students undertaking proportionately more shorter vocational qualifications at New Zealand (31%

> of the total; OECD, 2014, Table C4.1) compared to Australia (11% of their international students). (Marshall, sub. 73, p. 8)

Country choice

The Hobsons survey found that New Zealand was fifth in the list of countries that international students considered as potential study destinations, with 9% considering university here – some way behind the 42% reported for Australia and the United Kingdom. A 2011 survey placed New Zealand sixth, with 14% of students considering study here.

One of the advantages New Zealand has as a destination is that it is an English-speaking country:

> Recruitment of international students at degree-level depends on market advantages derived from reputation, distinctiveness, quality of delivery, student experience and learning, and employability outcomes. For students whose first language is not English, overseas study in an English-language environment provides an invaluable means of developing sophisticated language skills which will enhance their future life prospects. (University of Auckland, sub. 85, p. 10)

New Zealand has some natural and cultural advantages:

> ENZ has also found that New Zealand is an attractive proposition for some international students to study for a semester (for example, US students – under the Generation Study Abroad initiative) as well as to experience New Zealand's setting, culture, and lifestyle. Many students are attracted to our outdoor adventure, quality universities, and learning about our Maori and Pacific cultures. (ENZ, sub. 52, p. 8)

An organisation representing English language schools told the Commission they tried hard to combine English-language training with facilitating enjoyable experiences of the country, because it was these "tourist" experiences that brought many English-language learners to New Zealand.

Some submitters to the inquiry emphasised the importance of a New Zealand brand in influencing international students to choose to study in New Zealand:

> New Zealand universities are all well known within New Zealand, but their names are not necessarily well known in the countries where they source international students. There, the brand of New Zealand as an education destination, combined with brand-linked factors (such as international ranking) are used to differentiate our universities for marketing purposes. …
>
> An NZ-Inc approach is necessary to ensure that the overall experience of international students in New Zealand align with in market messaging. (UNZ, sub. 17, pp. 22, 77)

Others argued that a national brand was not always a dominant consideration:

> Survey research undertaken with current international students shows that Brand New Zealand is not the most significant driver for destination choice for all international students. UC's [University of Canterbury] analysis of the International Student Barometer (ISB) data reveals that while half of undergraduates came to UC because of Brand New Zealand, around two-thirds of postgraduates came because of the particular institution, presumably to access certain sets of expertise or personnel. Therefore, we must exercise caution in the management and validation of offshore franchise activity because of the potential risk of damaging an individual institution's brand in addition to Brand New Zealand. (Sampson et al., sub. 14, p. 4)

Reliance on a national brand also had risks. Australian tertiary education administrators the Commission spoke to noted incidents of violence against Indian students had undermined Australia's attractiveness as a destination for Indian students.

> However, even the best promotion of Brand NZ in market cannot compete with unwelcoming immigration policies, impediments to being able to work, or most crucially, incidents of crime against international students and racial prejudice. (UNZ, sub. 17, p. 77)
>
> Around ten or more years ago, there was a series of failures of private training establishments (PTEs), particularly the ones focused on international students. They were found to be issuing qualifications improperly and to be operating illegally. There was a relatively weak regulatory system in place at the time. The result was a loss of confidence in New Zealand education in overseas education markets, and considerable national reputational and economic damage that has taken many years to rebuild. (New Zealand Federation of Graduate Women, sub. 47, pp. 4–5)

The interaction between demand for international education and demand for immigration to New Zealand is complex. For many students, the right to work during and after study is extremely important:

> Immigration New Zealand data indicates that 40% of immigrants coming through the skilled migrant category are former international students. (ENZ, sub. 52, p. 4)

Many students reported that personal recommendations and "word of mouth" are important:

> International students become brand ambassadors for New Zealand when they return to their home country, and have a strong influence on their peers' education country destination, which in turn has the ability to increase the number of international students studying in New Zealand. (UNZ, sub. 17, pp. 75–76)

> International students who return home can also be our greatest advocates. They can share stories of their time in New Zealand and thus influence friends, family and others to choose to undertake study in New Zealand. (ENZ, sub. 52, p. 4)

Provider choice

Universities New Zealand submitted that if universities cannot remain highly ranked, "they will lose both domestic and international students" (sub. 17, p. 26).

> Additionally, the importance of rankings as a tool for recruiting international students, and the model's high level of emphasis on QS [world university] rankings and other performance-based mechanisms, can stifle "blue skies" initiatives and quality research, as staff increasingly substitute research quality for quantity to meet this new ranking driven goal. (Sampson et al., sub. 14, p. 11)

A 2014 survey of international students by Hobsons found that "students do consider rankings important, but they typically care more about subject ranking or a course's academic reputation than that of the institution" (p. 6).

The survey also found that students categorise both institutional and discipline-level rankings into three groups – those in the top quintile, those in the middle three quintiles (between whom students did not discriminate), and those in the bottom quintile. In other words, students are sensitive to rankings only at the top and bottom ends.