



INTRODUCTION

The tertiary education sector is a diverse sector. Its scope ranges from informal non-assessed community courses in schools through to undergraduate degrees and advanced, research-based postgraduate degrees. It provides pathways for a diverse range of learners, from school leavers to workers, to the unemployed, to students from overseas, to those pursuing an interest or hobby or more social interaction. It has a diverse range of learning objectives. It is influenced by a most diverse set of people and factors.

Changes in participation and achievement in tertiary education are indicators of the extent to which New Zealanders are developing the skills needed for a modern knowledge economy. This chapter looks at the range of provision of tertiary education in New Zealand and provides some information on some 320,000 learners who were enrolled in formal tertiary education on 31 July 2002.

In 2002, the sector has seen the continuation of a period of renewed growth that began in 2000, following a period of low or negative growth from 1996 to 1999. Student numbers rose 11.3 percent (or 32,425) to reach nearly 320,000 at 31 July 2002. It is estimated that over 425,000 students were enrolled in formal study at any time during 2002.

Over one in ten (10.5 percent) of the population aged 15 and over were enrolled in formal tertiary education on 31 July 2002, the highest participation rate in New Zealand's history. It is estimated that during all of 2002, over 14 percent of the population aged 15 and over participated in some form of formal tertiary study.

The year 2002 saw a further year of significant growth of students at wānanga, and continued strong growth in international students. And while domestic student growth in universities and polytechnics was moderately strong also, college of education numbers declined and the effects of the funding moratorium saw no domestic student growth at private providers.

chapter four

SKILLS FOR A KNOWLEDGE ECONOMY

4

THE DIVERSITY OF THE SECTOR

TYPES OF PROVIDERS

In terms of providers of tertiary education, the sector includes:

- eight universities whose teaching activities focus largely on research-led, theoretically based qualifications at bachelors level or higher
- 20 polytechnics or institutes of technology that offer degrees and a large number of sub-degree, practically oriented qualifications and that have a particular focus on serving the interests of local communities and of business and industry
- four colleges of education that have a particular focus on educating people for careers as educators, and
- three wānanga whose mission is to provide iwi-based tertiary education at a variety of levels and with a variety of approaches, especially focused on meeting the needs of Māori learners.

In addition to the public tertiary education institutions described above, New Zealand has a dynamic and extremely diverse group of private training establishments (PTEs). There were 888 organisations registered as private training establishments with NZQA at 31 December 2002. Of these, around 497 provide learning towards formally assessed qualifications.

These providers serve a range of interests and receive their income from a variety of sources. At 31 July 2002, about 240 were receiving funding through EFTS-based student component tuition subsidies, or were approved for student loans and allowances. PTEs also receive government funding through such programmes as Training Opportunities, Youth Training, Skill Enhancement and Industry Training. Others are not Crown funded at all, raising their revenue entirely from learner fees. Of that latter group, the largest sub-group is the English language providers that focus on teaching international students English.

There are 13 other tertiary education providers (OTEPs) that are specially funded by the government to provide educational services of particular importance. They range from Te Whaea, National Dance and Drama Centre, the School of Drama that has a long tradition of training New Zealanders for careers in the theatre and film, to the National Association of ESOL Home Tutors Scheme and to groups that provide support and assistance to learners. OTEPs are funded through a mixture of grants, contracts and EFTS-based tuition subsidies. At July 2002, OTEPs received government funding for around 1,270 EFTS.

RECOGNISING SKILLS

The range of qualifications offered by the tertiary education sector has increased significantly over recent years, and over 10,000 programmes of study were available in the sector in 2002. There is a trend for major metropolitan institutions, including universities and large polytechnics, to offer a wide range of qualifications in both general and specialised subject areas.

Certificate programmes are offered in a wide range of contexts across all levels, and are often used to prepare candidates for both employment and further education and training. National certificates recognise skills and knowledge that meet nationally endorsed standards. Diplomas often prepare learners for the self-directed application of skills and knowledge. These qualifications recognise the capacity for initiative and judgement across a broad range of educational and vocational areas, often in technical, professional, and/or management roles. Many build on prior qualifications or experience.

Polytechnics are also the main providers of certificate and diploma courses, enrolling 46 percent of students studying below degree level at 31 July 2002, and 38 percent of all funded EFTS. PTEs provide certificate and diploma courses to about a quarter (24.9 percent) of all students below degree level, and to 30.9 percent of EFTS below degree level. The growth in wānanga in the last two years has seen their share of sub-degree level student numbers rise to 23.5 percent of students and 20.3 percent of EFTS.

Degrees have traditionally been the preserve of universities, and universities still offer the majority of undergraduate and postgraduate degrees (around 80 percent). However, other providers are increasingly offering programmes at the degree or postgraduate level. Polytechnics, colleges of education, wānanga and private training establishments now also teach degree programmes. In 2002, a total of 42 non-university providers had students studying at degree level, comprising 22.6 percent of all degree-level students and 20.3 percent of all degree-level EFTS. Around 7.0 percent of postgraduate students were studying with 20 non-university providers in 2002.

In July 2002, four PTEs were engaged in teaching at the postgraduate level, with some 300 students or an equivalent 75 postgraduate EFTS places. This represented 0.3 percent of funded PTE EFTS and 0.6 percent of all postgraduate EFTS. An additional 16 PTEs offered degree-level teaching. A total of 1,888 students and 776 funded PTE EFTS places were at the bachelors level in 2002. This represented 3.0 percent of all funded PTE EFTS, and 1.4 percent of all EFTS at degree level. The remaining 96.7 percent of funded places – plus all of the PTE teaching not funded through the EFTS-based tuition subsidies – were at the sub-degree level.

In addition to the types of providers described above, employers are also providers of a significant amount of work-based training. The government provides funding through the Industry Training Fund to enable students to work towards national qualifications in specific vocational areas, through on-job training, as well as through education delivered through PTEs and polytechnics. The Modern Apprenticeship scheme provides another vehicle for training in vocational areas in particular industries.

The National Qualifications Framework (NQF) plays a significant role in both course-based and work-based education and training in New Zealand. In some areas, national certificates and national diplomas have replaced previous qualifications.

In many fields (eg carpentry, plumbing and electrical engineering), trade certificates have been replaced by national certificates. Many tertiary qualifications on the NQF have been developed for new or growing industries. For example, there is significant uptake in computing, business administration, hospitality, seafood processing, agriculture, engineering and technology, manufacturing, forestry and fisheries, community and social services, and security.

In other areas, the NQF has enabled nationally recognised qualifications to be developed where none existed previously. National certificates in sport and recreation, te reo Māori, call centre operations, cleaning and caretaking, crane operations and film and television are examples.

Equally significant is the wide availability of NQF qualifications. The fact that NQF qualifications are acquired through credit accumulation has enabled learners and workers to gain credits towards qualifications outside traditional courses. Many mature workers have their existing competencies formally assessed on the job and subsequently receive national certificates. Industries in which this wider access to qualifications has been significant include forestry, seafood processing, cleaning and caretaking, dairy manufacturing, food handling, manufacturing and mechanical engineering, mental health, real estate, and support of the older person.

There is growing acceptance among tertiary providers that students can and should have access to assessment of their existing skills and knowledge before enrolling for a course of study.

TYPES OF LEARNING

The sector is also diverse in terms of the types of structured learning available. While the majority of learning is done in recognised tertiary education organisations, generally towards a formally assessed qualification, other types of learning are nonetheless significant in terms of numbers of learners and strategic importance. These include, in particular, all on-job work-based training, and all non-formal adult and community education.

Many of these key parts of the sector are covered by a range of learners, providers, outcomes and funding sources, and many of the learners overlap more than one of these groups.

As information is not collected at the student level for all parts of the sector, and because many of the groupings below overlap each other, a full count of participation in the tertiary education sector is difficult to estimate. However, broad estimates, where available, are provided below.

TABLE 4.1: PARTICIPATION IN DIFFERENT PARTS OF THE TERTIARY EDUCATION SECTOR

	Estimated Students
formal students (>0.03 EFTS) ¹	440,000
formal students (<=0.03 EFTS) ¹	13,000
Training Opportunities programme ²	19,200
Youth Training programme ²	12,500
Rangatahi Māia and Tupulaga Le Lumana'i Skill Enhancement programmes ³	1,200
Industry Training ³	107,000
Modern Apprenticeships ³	4,300
STAR programme ⁴	12,000
Gateway programme ⁵	1,200
workplace and community-based literacy programmes ⁶	<20,000
English for Migrants programme ⁷	1,000
English for Speakers of Other Languages (ESOL) ⁸	20,000
non-formal adult and community education ⁸	>200,000

Note: Students can be counted in more than one programme.

¹ Estimated total year 2002 students. These students are discussed further in this chapter.

² Total 2002 learners. These students are discussed further in chapter 3.

³ Total 2002 learners. These programmes are discussed later in this chapter.

⁴ STAR is discussed further in chapter 3.

⁵ Gateway is discussed further in chapter 3.

⁶ Estimate only. This is discussed further in chapter 3.

⁷ 2001 estimate. This is discussed further in chapter 3.

⁸ 2001 estimate. Includes provision in schools and tertiary providers. This is discussed further in chapter 3.

PARTICIPATION IN FORMAL TERTIARY EDUCATION TRENDS IN PARTICIPATION

In 2002, the sector has seen the continuation of a period of renewed growth that began in 2000, following a period of low or negative growth from 1996 to 1999.

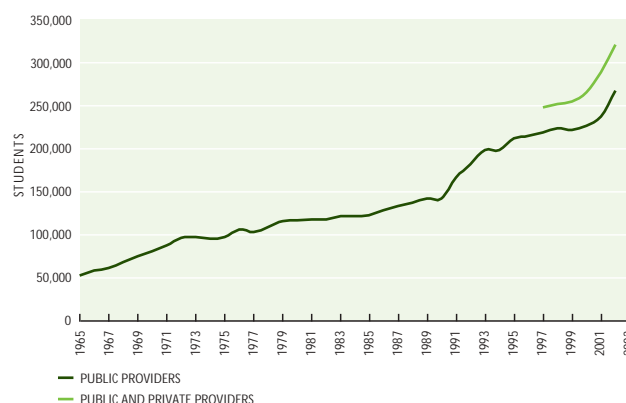
The success of the wānanga (Te Wānanga o Aotearoa, in particular) in attracting first-time Māori students into the sector has seen an explosion in Māori participation, especially at lower levels of the NQF. Total Māori participation is significantly higher than other groups, even after accounting for the younger age structure of Māori. At degree-level and above, however, Māori participation remains lower than non-Māori.

There was continued growth in the numbers of international students. International student numbers reached 26,878 at 31 July 2002. They now make up 8.4 percent of all students. In particular, there has been phenomenal growth in Chinese students (from 86 in 1997 to 13,679 at 31 July 2002)¹. There has been growth also in part-time study, reversing a trend toward full-time study in the mid to late 1990s.

Student numbers rose by 11.3 percent (or 32,425) to reach 319,886 students on 31 July 2002. It is estimated that over 425,000 students participated in some form of formal education at some time during 2002.

Over one in ten (10.5 percent) of the population aged 15 and over were enrolled in formal tertiary education on 31 July 2002, the highest level in New Zealand's history. It is estimated that over 14 percent of the population aged 15 and over participated in some form of formal tertiary study at some time in 2002.

FIGURE 4.1: STUDENTS IN FORMAL TERTIARY EDUCATION, JULY 1965-2002



¹ In 1999, the Government removed a number of restrictions on the granting of student visas and permits to Chinese students.

Like many developed countries in recent years, growth in participation rates, rather than growth in population, has predominantly driven increases in enrolment numbers. However, since 2001 the main tertiary age population (18-24) in New Zealand has begun increasing again after declining in the mid to late 1990s, and now contributes more to enrolment increases, in some parts of the sector, than increased rates of participation. Over the whole sector, population increases accounted for less than 20 percent of enrolment growth. Much of the rise in participation, however, is due to the success of Te Wānanga o Aotearoa in increasing participation. When Te Wānanga o Aotearoa and international students are excluded, the population growth contributed nearly all of the increase in enrolments.

Further trends are discussed below.

SUB-SECTOR

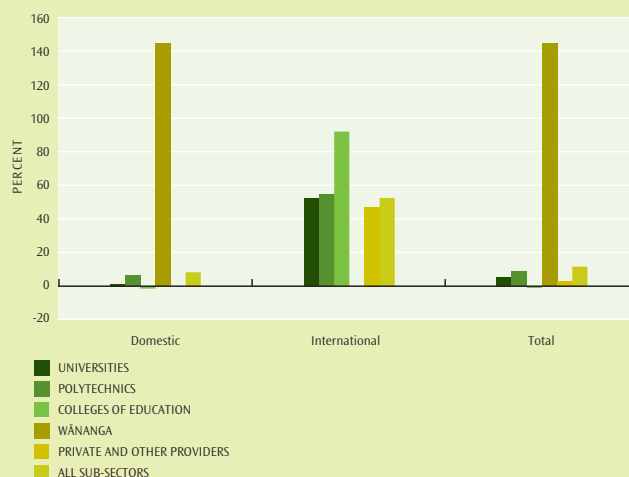
All sub-sectors, except colleges of education, had continued growth in 2002. University enrolments grew 5.4 percent to number 132,396 at 31 July 2002, with domestic university students increasing by nearly 1.4 percent. Polytechnic student numbers grew 8.9 percent to number 95,782 at 31 July 2002. Growth in the number of domestic students at polytechnics was 6.4 percent. Despite this growth, university and polytechnic shares of total students fell slightly to 40.1 percent and 30.3 percent respectively.

Wānanga continued their significant growth from 2001, increasing by over 16,250 to reach 27,535 at 31 July 2002. The vast majority of these students (96 percent) were enrolled at Te Wānanga o Aotearoa. By contrast, the remaining two wānanga grew by 630 students and accounted for 2,302 of the 27,535 students enrolled with wānanga on 31 July 2002. Wānanga now represent 8.6 percent of all students who were enrolled at tertiary institutions on 31 July 2002. Unlike other sub-sectors, wānanga students are virtually all domestic.

For the third consecutive year, colleges of education student numbers declined. They were down around 100 students (or 0.9 percent) to 10,788 at 31 July 2002. This group makes up about 3.4 percent of all tertiary students. Around 1.5 percent of students at colleges of education were international students at 31 July 2002.

With growth of 48 percent in 2000 and 32 percent in 2001, private providers have been growing rapidly since funding caps were removed in 1999. Their share of students rose from 10.7 percent of all students at 31 July 1999 to 18.0 percent of all students at 31 July 2001. However, the effects of the moratorium on funding new growth introduced in July 2001 can be seen in 2002, with growth of just 165 domestic students (0.3 percent). Virtually all growth was in international student numbers which grew by 1,550, giving a total growth for this sub-sector of 3.3 percent in 2002.

FIGURE 4.2: GROWTH IN STUDENT NUMBERS BY SUB-SECTOR AND RESIDENCY STATUS, JULY 2001-2002



ETHNICITY

Strong growth continued among Māori students in 2002, on the back of significant growth at Te Wānanga o Aotearoa. Of the 32,400 extra students at 31 July 2002, 37 percent, or just over 12,000 students, identified with Māori as one of their ethnic groups.

At 31 July 2002, there were 63,694 Māori students. The participation rate for the Māori population aged 15 and over at 31 July 2002 increased from 14 percent to 17 percent, compared with the sector-wide rate of 10 percent. Even after adjusting for the younger age profile of the Māori population, the propensity for Māori to engage in tertiary study continues to be higher than other groups except Asian students. However, at degree-level, Māori participation rates are around 87 percent of non-Māori rates, while at postgraduate level they are just 63 percent of non-Māori rates. Māori in tertiary education are discussed more fully in chapter 6.

There were 14,192 Pasifika students enrolled on 31 July 2002, up 1,112 (or 8.4 percent) from 31 July 2001. The rate of participation for students affiliating with Pasifika ethnic groups rose from 9.7 percent to 10.6 percent of Pasifika peoples aged 15 and over. Like Māori and Asian populations, the Pasifika population is a younger population. If these rates are adjusted for this age difference, the rate of participation was 8.1 percent, less than the sector average of 10.5 percent. The difference is more marked at higher levels of study; Pasifika students participate at 88 percent of the sector-wide degree-level rate, and just 53 percent of the sector-wide postgraduate rate. Pasifika in tertiary education are discussed more fully in chapter 7.

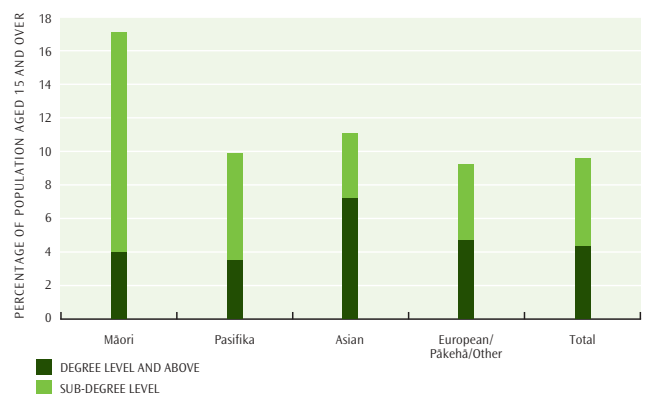
People identifying with Asian ethnic groups made up 8 percent of the population aged 15 and over in 2002, and around 9 percent of the domestic student body. When international students are included, Asian students make up nearly 16 percent of all students. About half (47 percent or 31,100) of the 66,400 Asian students in 2002 were international students. Of the total Asian population aged 15 and over, nearly 15 percent were domestic tertiary students in 2002, second to Māori participation only. If international students are counted, then the participation rate jumps to 28 percent and over twice the sector-wide rate of 14 percent. At degree level and above, Asian students (domestic or international) have by far the highest participation rates of any group.

The number of Asian students has grown 340 percent since 1994, and now makes up 16 percent of all students, up from 6 percent in 1994. Much of this growth has been from international students, but even if these are excluded, domestic Asian student numbers have increased over 200 percent, from 5 percent of the domestic student body in 1994 to 9 percent in 2002.

Much of the high participation of New Zealanders of Asian ethnicity is due to the younger age-structure of this group. Around 46 percent of domestic Asian students and 76 percent of international Asian students are aged 18 to 24. This compares with 37 percent and 72 percent respectively for non-Asian groups. If the younger age-structure of domestic Asian students was adjusted to match that of the total population, their rate of participation would be less than the overall rate (12 percent compared with 13 percent).

In contrast to other groups, a clear majority of Asian students (53 percent) studied at universities in 2002, with the remainder at polytechnics (28 percent) and private providers (20 percent).

FIGURE 4.3: PARTICIPATION RATES BY ETHNIC GROUP AND QUALIFICATION LEVEL, JULY 2002



AGE

Over two in five students (43.3 percent) were aged 18 to 24 at 31 July 2002, one in three (32.1 percent) were aged 25 to 39, one in five (20.3 percent) aged 40 and over, with the remaining four percent aged under 18.

The student population has been getting older. At 31 July 1994, students aged under 25 made up 57.1 percent of all formal students. By 2002, they made up 47.6 percent. In 1994, there were around 26,938 students aged 40 and over in tertiary education, about 2.0 percent of all people aged 40. By 31 July 2002 numbers had increased to 64,796 and the rate of participation had nearly doubled to 3.9 percent. Students aged 40 and over now represent 24.2 percent of all students, up from 13.7 percent in 1994. Over the same period, the whole 40 and over population has increased by 200,000 or 21 percent, around 2-3 percent a year. The growth in older Māori students has contributed about a third of the total growth in older student numbers. The growth of older student numbers has been across all levels of study.

The current baby boom population bulge is aged in their late 40s to mid-50s. The population blip that resulted from the children of the baby boomers is currently at secondary school, the main group of which is due to reach tertiary age around 2007 and 2008. The effects, however, can already be seen in the 15 to 17 age group, which began increasing again in 2000, and more recently the 18 to 24 year old group which began increasing in 2001, after being in decline since 1994. In fact, in 2002 there was a significant increase in the number of 18 to 24 year olds,

up over 15,000 or 4 percent from 2001. This increase is in part also due to migration, where the age group for the majority of international students is 18 to 24.

While the number of 18 to 24 year olds has been increasing since 2001 only, their propensity to study has always been increasing steadily. At 31 July 2002, 36.4 percent of 18 to 24 year olds were in tertiary study, compared with 26.4 percent in 1994.

By contrast, the population aged 25 to 39 has been declining in recent years, down 50,000 since 1998. However, the number of students in this age group increased by 29,831 between 31 July 1998 and 31 July 2002. The rate of participation for students in this age group has risen from 6.8 percent in 1994 to 12.1 percent in 2002.

University is the most popular place to study for 18 to 24 year olds, with 55.9 percent of all students aged 18 to 24. Polytechnics were more popular for older age groups, with 32.6 percent of 25 to 39 year old students, and 33.6 percent of all students aged 40 and over. The highest proportion of students aged under 18 was enrolled with private and other providers at 31 July 2002 (at 41.4 percent).

Students at wānanga were much older than in other sub-sectors (80.2 percent over 25, compared with 57.8 percent in polytechnics, 56.3 percent at private providers, and 40.0 percent in universities).

Māori make up about a quarter of all students outside the 18 to 24 year old group, but are under-represented in the 18 to 24 year old group. 13.8 percent of 18 to 24 year old students are Māori, compared with 18 percent Māori in the general population aged 18 to 24. When study below degree level is excluded, the difference is even more marked, with just 7 percent of 18 to 24 year olds who identify as Māori, studying at degree-level or higher.

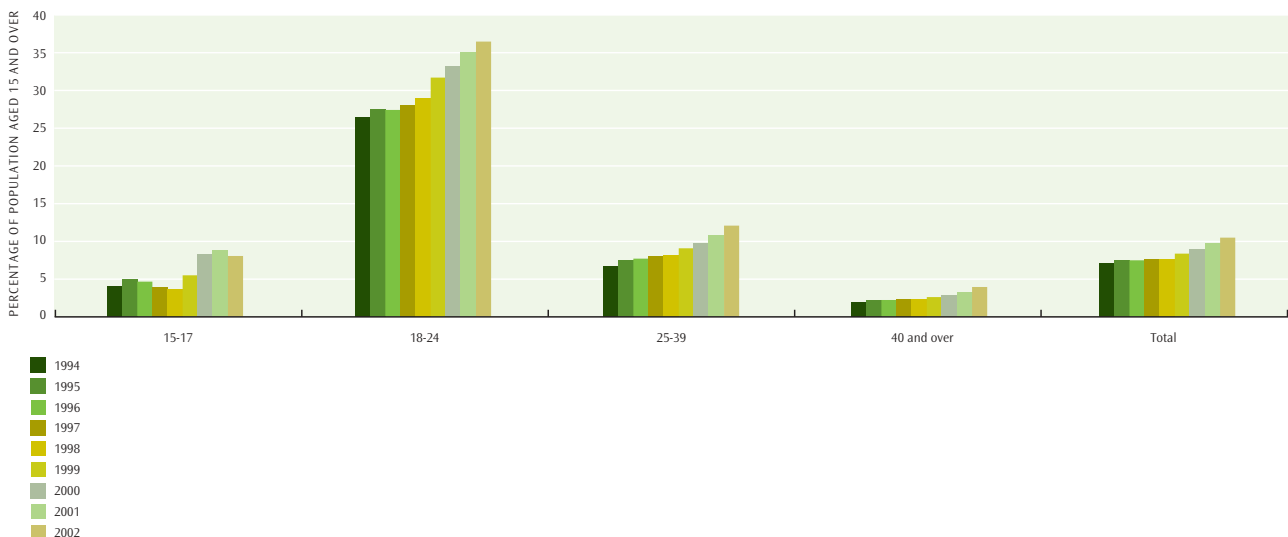
While Māori tertiary students are both older and younger than the core 18 to 24 age group, Asian students are significantly more likely to be aged 18 to 24. Around 63.3 percent of Asian students were aged 18 to 24 at 31 July 2002, compared with a sector-wide average of 43.3 percent.

International students are more likely to be between 18 and 24 (75.1 percent compared with 40.4 percent for domestic students).

GENDER

Participation by women continues to grow faster than that of men. 58.1 percent of students enrolled on 31 July 2002 were women, up from 53.0 percent at 31 July 1994. Around 11.8 percent of women aged 15 and over were enrolled in tertiary study at 31 July 2002 compared with 9.0 percent for men. The number of women students grew by 22,301 (or 13.6 percent) between July 2001 and July 2002, compared with 10,124 (or 8.2 percent) for men.

FIGURE 4.4: INCREASING PARTICIPATION RATES BY AGE, JULY 1994-2002



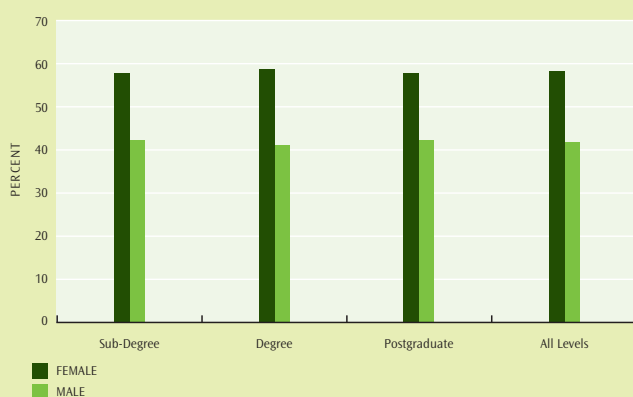
While females make up between 54 percent and 56 percent of university, polytechnic and private provider students, 79.2 percent of college of education students were female, and around 74.0 percent of wānanga students were female.

In fact, nearly a quarter (23.2 percent) of all female students were Māori. After adjusting for the younger age distribution of Māori women, over one in four Māori women (25.3 percent) aged 15 and over were enrolled in tertiary education at 31 July 2002.

However, just 23.2 percent of Māori women were studying at degree level or higher, compared with 52.9 percent for non-Māori women.

There are more women across all levels of study, but the proportions studying at each level were about the same at 31 July 2002. About 7.9 percent of women studied at postgraduate level, about the same proportion as for male students (8.0 percent). Māori women, however, who are two-thirds of all Māori students, are significantly more likely to be studying at lower levels, often part-time and/or extramurally.

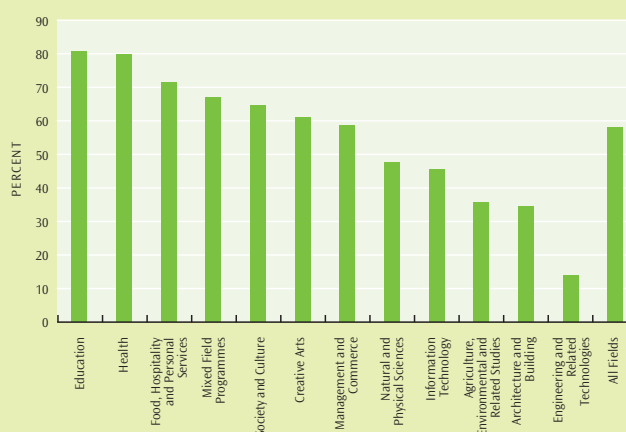
FIGURE 4.5: DISTRIBUTION OF STUDENTS BY GENDER AND HIGHEST QUALIFICATION LEVEL, JULY 2002



By contrast, international students were more likely to be male, with 50.9 percent male compared with 41.1 percent for domestic students.

There continues to be a marked difference in the gender split in some fields of study as shown in Figure 4.6.

FIGURE 4.6: DISTRIBUTION OF FEMALE STUDENTS BY FIELD OF STUDY, JULY 2002



HIGHEST LEVEL OF STUDY

Participation increased at all levels of tertiary study in 2002 and, in particular, at certificate and diploma level. Nearly 173,941 students were enrolled at this level at 31 July 2002, up 18.4 percent from 31 July 2001. Around 5.7 per 100 people aged 15 and over studied at this level in 2002, 54.4 percent of all participation.

Around 0.8 percent of the population aged 15 and over (25,415 students) studied at postgraduate level, up 635 (2.6 percent) from 31 July 2001. There were 120,530 students at degree level, up 4,803 or 4.2 percent from 31 July 2001.

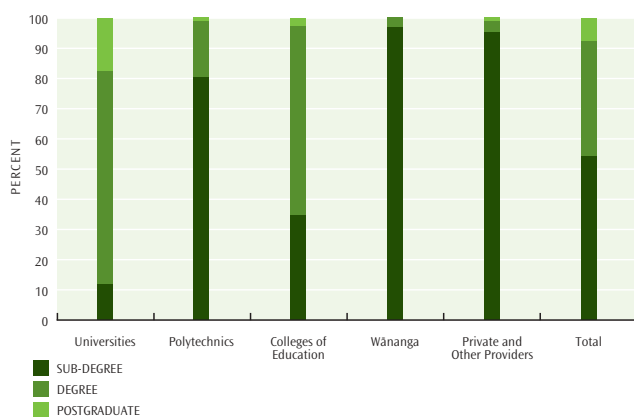
After a trend towards more degree-level study in the 1990s, recent growth in private providers and at wānanga has increased growth in enrolments at sub-degree level (certificate and diploma). This has seen the share of students at degree-level and above fall from 52.0 percent at 31 July 1994 to 45.6 percent at 31 July 2002. However, student numbers at degree-level and above have increased from 122,290 at July 1997 to 145,945 at 31 July 2002, an increase of 19.3 percent.

There has been a traditional difference in the types and levels of study offered by each sub-sector. Until recently only universities have offered degree level study and above. The universities continue to be more theoretical and research based and, thus, have a higher proportion of students at degree and above. The vast majority of postgraduate students study at universities.

At 31 July 2002, 3.9 percent of New Zealanders aged 15 and over were studying for a degree, 77 percent of these students at a university, and over 98 percent at a public provider. There were 1,840 students studying for degrees at private providers in 2002. 86.4 percent of university students were studying at degree level and above, and over three in five college of education students (65.5 percent) were studying at degree level or above.

Conversely, study offered by other parts of the sector has traditionally been more vocationally based. Just 3.0 percent of study at wānanga was at degree level or higher, and 4.5 percent of study at private providers was at degree level or higher, while 19.5 percent of polytechnic study was at degree level or higher.

FIGURE 4.7: DISTRIBUTION OF STUDENTS BY HIGHEST QUALIFICATION LEVEL AND SUB-SECTOR, JULY 2002



Consistent with the growth in wānanga at sub-degree level is the higher propensity of Māori to be studying at this level (70.3 percent). This is in contrast to Asian and European/Pākehā students, where 42.5 percent and 45.5 percent respectively were studying towards certificates or diplomas at 31 July 2002.

FIELD OF STUDY²

Study in society and culture-related and management and commerce-related fields were the most popular at 31 July 2002, with 21.8 percent and 21.6 percent respectively of all students. Study in the broad field of society and culture includes, amongst other things, law, economics, philosophy, sociology, history, language studies, human welfare support and services, and sport and recreation.

Study in those fields broadly grouped as mixed field programmes continues to grow. These programmes include a number of foundation-related programmes, including literacy and numeracy, employment-related skills training, and social and life skills-related training. At 31 July 2002, 13.1 percent of all students studied in this group of fields.

Other popular broad fields of study were education (7.2 percent), engineering and related technologies (6.7 percent) and health (6.3 percent).

All science and technology-related fields combined accounted for 29.6 percent of students, with the most popular of these being engineering and related technologies. 6.0 percent of students were in information technology and 5.5 percent in the natural and physical sciences.

As discussed earlier, there are marked gender differences in what fields are studied. Similarly, there are noticeable differences in where students study for different fields. For example, 90.2 percent of all students studying natural and physical sciences do so at a university, although these students make up just 12.0 percent of all university students.

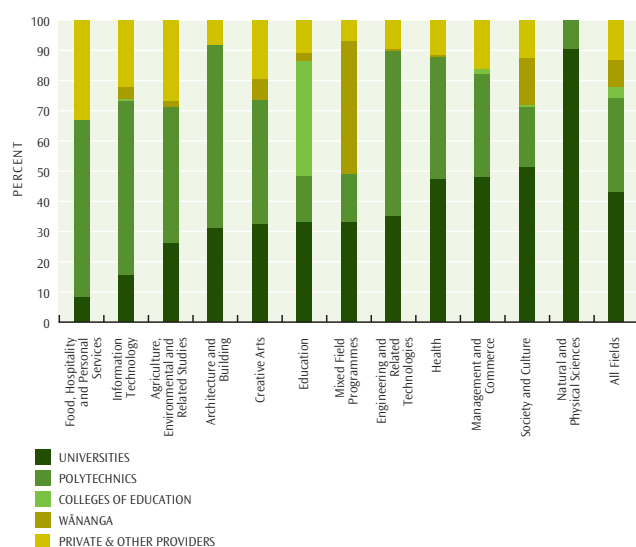
Not surprisingly, most study (81.4 percent) at colleges of education is in education-related fields, while study in the colleges of education makes up 38.0 percent of all tertiary study in education.

Private providers are popular for study in food, hospitality and personal services (with 32.9 percent of students), and in agriculture and related study (26.8 percent of students). Study in both these fields, however, is more common at polytechnics, which is also the most popular place to study architecture and building, information technology, engineering, and creative arts.

Wānanga provided for over half (50.2 percent) of the students studying in mixed field programmes including employment skills training, social and life skills training, literacy and numeracy, and general foundation education. Study in this broad group, plus study in society and culture-related fields accounted for over 88.6 percent of wānanga students.

² In this section, 'field of study' relates to the broad NZSCED field, first introduced in 2001, which corresponds to the student's highest level of study. NZSCED is principally assigned at a course level. Caution should be exercised in interpreting NZSCED data reported here, as the field of study relates to the student's highest level of study. The qualification, however, may actually cover a range of different fields of study.

FIGURE 4.8: DISTRIBUTION OF STUDENTS BY FIELD OF STUDY AND SUB-SECTOR, JULY 2002



NATURE OF ATTENDANCE

At 31 July 1994, part-time students made up 48.9 percent of all public provider students. At 31 July 1999, part-timers had fallen to 41.1 percent. A shift toward part-time study occurred after these years with annual growth of 7 percent, 14 percent and 12 percent in 2000, 2001 and 2002 respectively. At 31 July 2002, part-timers represented 44.3 percent of all students. In large measure, the recent increase in part-time study relates to the growth in wānanga.

The tendency for part-time study varies across sub-sector. Universities have more full-time students (68.0 percent at 31 July 2002), whereas 53.7 percent of students are part-time at private and other providers, 53.0 percent at colleges of education, 45.7 percent at polytechnics and 35.6 percent at wānanga.

Correspondingly, Māori are more likely to study part-time than non-Māori (50.4 percent at 31 July 2002, compared with 44.3 percent for the sector). By contrast, Pasifika students are more likely to study full-time (64.5 percent at 31 July 2002, compared with 55.7 percent for the sector). Asian students are predominantly in full-time study (76.0 percent). Even if international students are excluded, 72.2 percent of all domestic Asian students studied full-time. 52.7 percent of students of European/Pākehā and other ethnic groups studied full-time, compared with the sector-wide average of 55.7 percent at 31 July 2002.

There were 64,668 extramural students enrolled at 31 July 2002, an increase of over 10,740 or 19.9 percent from 31 July 2001. Around 21.0 percent of all students are extramural. The percentage of students who study extramurally has varied between 17.4 percent and 21.1 percent between 31 July 1994 and 31 July 2002.

There is significant growth in extramural enrolments occurring in wānanga, in particular at Te Wānanga o Aotearoa. In fact 85.3 percent of the 10,740 additional extramural students enrolled at 31 July 2002, and 52.7 percent of the 14,800 new extramural students in 2001 studied with this wānanga. Nearly half (49 percent) of the 45,500 wānanga students were studying extramurally in 2002 compared with 19 percent for all other students. Just over one in five extramural students (21.4 percent) was enrolled at a wānanga at 31 July 2002. A quarter (26.9 percent) of all extramural students were at university in 2002, and 14.1 percent at private providers.

Polytechnics are still the most popular place for extramural study, with 40.9 percent of all such students at 31 July 2002 (due in large part to The Open Polytechnic of New Zealand). However, unlike other parts of the sector, extramural study at polytechnics declined in the last two years.

FIRST-TIME STUDENTS AND PRIOR ACTIVITY

There were 87,413 students enrolled for the first time at 31 July 2002. This represented around one in four of all students (27.3 percent). This proportion has remained about the same since 1994.

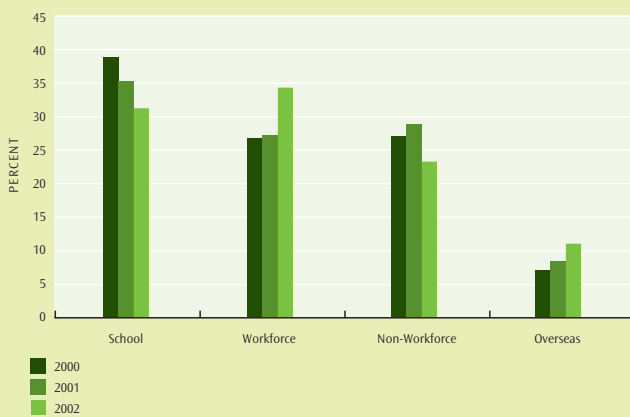
'Prior activity' refers to a student's main activity at 1 October in the previous year. Care is needed in interpreting trends, as many students' predominant activity in the previous year may be different from what they were doing at 1 October. Also, data on whether a student is new to tertiary study or not has traditionally been less reliable than other fields.

Of all first-time students enrolled at 31 July 2002, 31.1 percent came directly from school. 32.1 percent of first-time tertiary students were previously employed, and 22.3 percent were either non-employed, retired, or beneficiaries (26.7 percent). The growth in international students since 2000 has seen a growing minority (10.1 percent at 31 July 2002) state their prior activity as being overseas.



In recent years, there has been a shift away from first-time students coming directly from school, towards first-time students coming from overseas, or from being employed.

FIGURE 4.9: DISTRIBUTION OF FIRST-TIME STUDENTS BY PRIOR ACTIVITY, JULY 2000-2002



There is a marked difference in the percentage of first-time students across sub-sectors. 37.2 percent of students at wānanga and 37.8 percent of students at private providers were enrolled for the first time in 2002, compared with 19.4 percent at universities, 28.3 percent at polytechnics, and just 10.0 percent of college of education students.

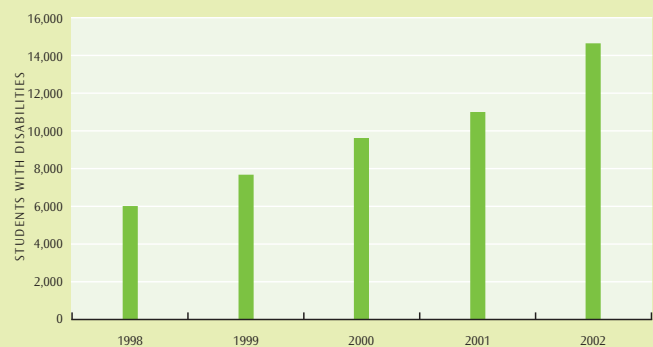
The average age of first year students has been increasing. The number of first year students aged 40 and over has increased by more than 100 percent since 1994, compared with 30-40 percent growth in other age groups over the same period.

39.6 percent of all students, whether first-time students or not, were in the workforce at 1 October in the previous year, and a further 17.2 percent came from the non-labour force (non-employment, beneficiary, retirement or house-person, etc). Of all students, 20.1 percent came directly from school, and 8.5 percent from overseas. The remaining 14.6 percent were continuing their tertiary study from the previous year.

STUDENTS WITH DISABILITIES

Students with disabilities are another growing part of the sector. Since information on disability was first collected in 1998, the number of students with disabilities has grown from 6,050 (excluding private providers) at 31 July 1998 to 114,613 (including private providers) at 31 July 2002. Students with disabilities now represent 4.8 percent of all students, up from 2.7 percent at 31 July 1998.

FIGURE 4.10: STUDENTS WITH DISABILITIES, JULY 1998-2002



Note: 1998 data relates to public providers (TEIs) only.

Disability is typically by self-identification. The 2001 Disability Survey, run by Statistics New Zealand, is the best source for information on the population with disabilities. This survey also asked a number of education-related questions including whether respondents were enrolled in formal education. However, for the table following, students by disability status refers to Ministry of Education collected information. Population numbers by disability status are from the Disability Survey. Because of the different survey instruments, the following rates are estimates only.

TABLE 4.2: ESTIMATED PARTICIPATION RATE OF STUDENTS WITH DISABILITIES, 2001

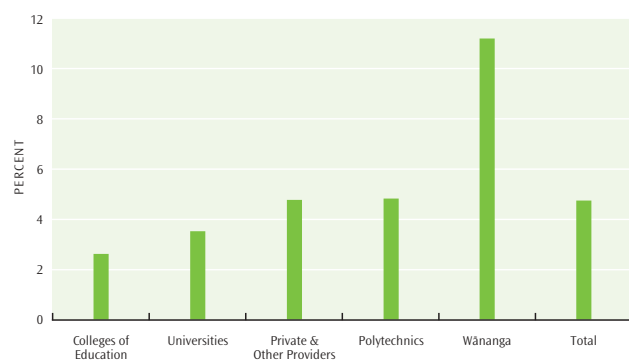
	WITH DISABILITIES			WITHOUT DISABILITIES		
	Students	Population	Participation Rate	Students	Population	Participation Rate
15-44	12,120	202,600	6.0%	323,910	1,364,900	23.7%
45-64	2,870	210,600	1.4%	41,590	629,400	6.6%
65 and over	170	240,600	0.1%	1,510	205,400	0.7%
Total 15 and over	15,160	653,800	2.3%	367,000	2,199,700	16.7%

Source for student information is Ministry of Education. The data relates to all students who studied in 2001.

Source for population information is Statistics New Zealand, 2001 Disability Survey.

The table above indicates a significant difference in participation rates, with people with disabilities participating at about a quarter of the rate of people without disabilities.

FIGURE 4.11: PERCENTAGE OF STUDENTS WHO HAVE DISABILITIES BY SUB-SECTOR, JULY 2002



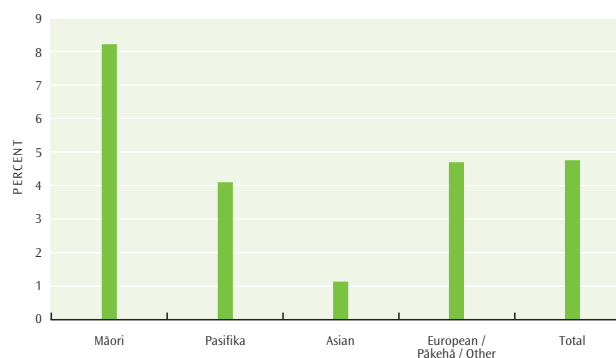
Students with disabilities were under-represented at universities and colleges of education. Although numerically nearly a third (32.0 percent) of students with a reported disability were at a university, these made up just 3.5 percent of all university students. There was a similar share (31.6 percent) at polytechnics, where students with disabilities made up 4.8 percent of all polytechnic students. There were 286 students with disabilities at colleges of education, making up 2.7 percent of all college of education students.

Wānanga have proven successful in attracting students with disabilities in recent years. At 31 July 2002, 21.1 percent of all students with disabilities (3,083) studied at a wānanga. 11.2 percent of all wānanga students had a disability (compared with 4.8 percent for the rest of the sector).

The success of wānanga in attracting students with disability is also reflected in ethnic comparisons, where Māori students make up 34.4 percent of all students with disabilities, compared with 19.2 percent of students with no disability. Similarly around 8.2 percent of all Māori students were reported as having a disability, compared with an average of 4.8 percent for the sector. There were 5,026 Māori students with disabilities in tertiary education at 31 July 2002.

By contrast, Asian students were far less likely to report having a disability. Only 1.1 percent (508) of all Asian students did so. There were 686 Pasifika students reported as having a disability at 31 July 2002, around 4.1 percent of all Pasifika students and 4.7 percent of all students with disabilities.

FIGURE 4.12: PERCENTAGE OF STUDENTS WHO HAVE DISABILITIES BY ETHNIC GROUP, JULY 2002



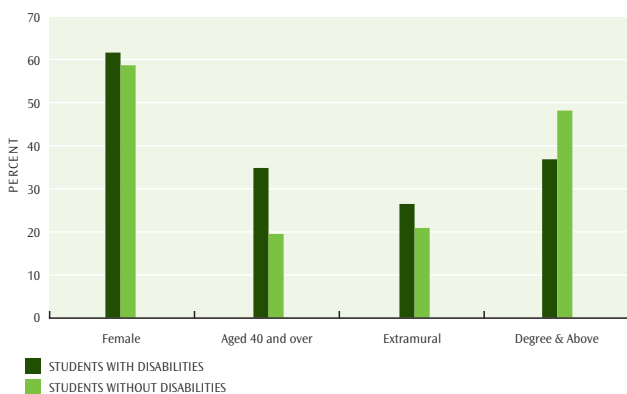
Given the increase in the incidence of disability with age, unsurprisingly students with disabilities are more likely to be older than the general student body. Around 34.6 percent of all students (5,063) with disabilities were aged 40 and over, compared with 19.5 percent for students with no disability. Correspondingly, students with disabilities were less represented at ages 18 to 24, with 3.2 percent of all students at this age reporting a disability, compared with the sector average of 4.8 percent.

Students with disabilities are also more likely to be female. Over 61.5 percent were female, compared with the non-disability share of 58.6 percent.

Students with disabilities are more likely to study part-time (49.4 percent compared with 44.0 percent at July 2002) and be studying extramurally (26.5 percent compared with 20.8 percent).

Students with disabilities are more likely to be studying at certificate or diploma level (63.3 percent compared with 52.0 percent), and noticeably more are enrolled in mixed field programmes. These include amongst other things foundation-related programmes, including literacy and numeracy, employment-related skills training, and social and life skills-related training. Study in these fields accounted for nearly 17.4 percent of all study for students with disabilities (as opposed to 13.1 percent of all students). Other popular fields of study were society and culture (28.6 percent), management and commerce (14.5 percent) and creative arts (5.1 percent).

FIGURE 4.13: SELECTED STUDENT COMPARISONS BY DISABILITY STATUS, 2002



INTERNATIONAL STUDENTS

There were 27,868 international students enrolled in tertiary education at 31 July 2002. The number of international students increased by 9,220 (52.2 percent) from 31 July 2001. This continues a trend of large growth in international student numbers that began in 2000. In the five years from July 1994 to July 1999, international student numbers doubled from 4,375 to 8,922. Between July 1999 and July 2002, the number of international students tripled again to reach 27,868. International students now form around 8.4 percent of all students, up from 2.2 percent at 31 July 1994.

Over half (14,960 or 55.7 percent) of international students were enrolled at a university at 31 July 2002, a further 6,899 (25.7 percent) studied at polytechnic, and 4,853 (18.1 percent) at private providers. Students at colleges of education and wānanga account for less than 1 percent of all international students.

International students are predominantly Asian. Of the 27,868 international students enrolled at 31 July 2002, 72.5 percent identified with an Asian ethnic group. International Asian students made up 42.4 percent of all Asian students enrolled at 31 July 2002.

The growth in Chinese student numbers has been the single dominating feature in recent years. Chinese students have grown in number from just 86 in 1997 (around 1.1 percent of all international students) to over 13,679 at 31 July 2002, and now make up over half (50.9 percent) of all international students.

Together, student numbers from Asian countries make up around four out of five international students. Other popular countries Asian students came from were South Korea (1,714 or 6.4 percent), Japan (1,345 or 5.0 percent), India (1,186 or 4.4 percent), and Malaysia (937, or 3.5 percent).

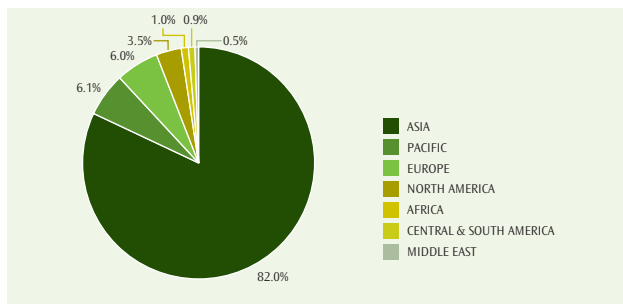
Although smaller numerically, the number of Indian students is also growing at a similar rate to students from China. In 1997, students from India numbered just 45 (around 0.6 percent of all international students). In 2002, their numbers had grown to 1,186, and now represent 4.4 percent of all international students, with India now ranking as the fourth highest number of international students to New Zealand.

Students from the Pacific region make up 6.1 percent of all international students (around 1,626 at 31 July 2002), mostly from Fiji, Tonga and Samoa.

Students from Europe made up the next largest group with 6.0 percent of the international student body (1,595 students). German students (at 502) make up the largest group from this region. Other well-represented countries were Britain, Sweden, Norway and France.

Students from the United States and Canada made up 3.5 percent of international students (over 943 students). In fact the USA was the sixth most common country for international students to have come from in 2002.

FIGURE 4.14: DISTRIBUTION OF INTERNATIONAL STUDENTS BY REGION, JULY 2002



International students are more likely to be aged 18 to 24 and studying full-time. Over 75.1 percent of international students were aged 18 to 24, compared with 40.4 percent for domestic students. International students are more likely to be male than female (50.9 percent male, compared with 41.1 percent for domestic students).

INTERNATIONAL COMPARISONS

In all OECD international comparisons, tertiary education is defined according to the International Standard Classification of Education level (ISCED). Tertiary levels include levels 5A (bachelors, honours, masters, postgraduate certificates and diplomas), 5B (diplomas, national diplomas) and level 6 (doctorates). ISCED levels 5A and 6 are grouped by the OECD as tertiary education type A. ISCED level 5B is grouped as Type B. In New Zealand, tertiary education has traditionally been measured as formal study at a tertiary education provider, regardless of the ISCED level.

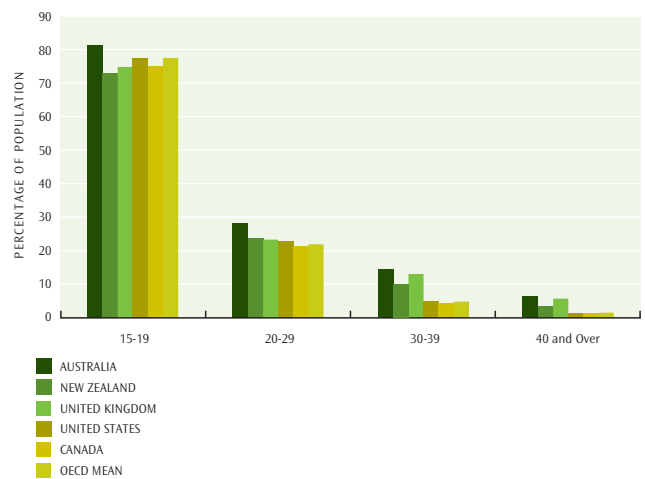
As such, the tertiary sector reported in OECD comparisons represents only about 50 percent of the students as measured in New Zealand education statistics, and reflects New Zealand's performance in the *higher* education part of the tertiary education sector only. The remainder of the sector is reported as *post-secondary, non-tertiary* in OECD comparisons. The difference is significant when looking to draw inferences from international comparisons about performance on access to tertiary education, especially in light of recent growth in new Māori students entering lower-level tertiary study.

New Zealand's current growth in participation is largely (over 90 percent) due to increases in the rate of enrolment rather than through population growth. This is particularly so at ages 25 and over. In two of the three OECD measures described below, this has a distorting effect, given the way these measures are defined. This distortion is described further below.

Three measures of participation in tertiary study are used in OECD comparisons – enrolment rates, expected years in tertiary education, and net entry rates.

The enrolment rate measure uses enrolments as a percentage of population for four age groups (15 to 19, 20 to 29, 30 to 39, and 40 and over), and is shown below for selected countries.

FIGURE 4.15: OECD PARTICIPATION RATES IN TERTIARY EDUCATION BY AGE, 2001



Source: OECD, *Education at a Glance: OECD Indicators 2003*, Table C1.2.

This is the best of the OECD measures for comparing participation. It shows that New Zealand participation rates, at ISCED levels 5 and 6 at least, are only average at core ages, but higher at older ages, although not as high as Australia and Britain.

'Expected years in tertiary education' represents the expected number of years for which a 17 year old will be in tertiary education. The graph below shows that, in this measure, New Zealand performs well. New Zealand is ranked third out of 28 OECD countries in terms of expected years in tertiary education (ISCED levels 5-6), and above average for post-secondary non-tertiary level education. Current high participation especially for part-time, part-year study at older ages will tend to overstate true expected years, and this will inflate this measure.

FIGURE 4.16: OECD EXPECTED YEARS IN TERTIARY EDUCATION, 2001

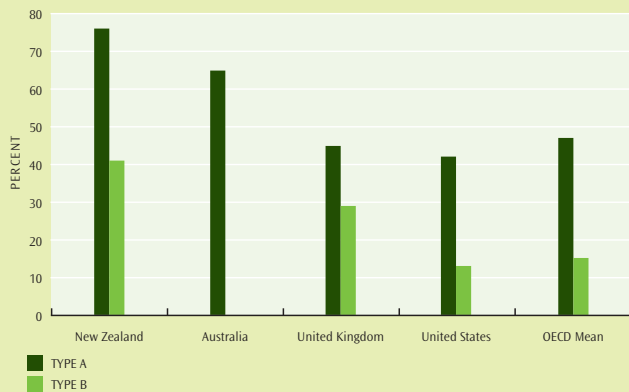


Source: OECD, *Education at a Glance: OECD Indicators 2003*, Table C1.1.

The OECD Net Entry Rate measure represents the proportion of the population that will enter tertiary education over their lifetime. This is estimated by aggregating first-time participation rates for every age.

New Zealand has the highest reported net entry rate for the OECD countries that report this (over 76 percent for type A and 41 percent for type B in 2001). However, care should be used in interpreting this measure, as current high first-time participation (especially at older ages) will tend to artificially inflate the true rate at which New Zealanders will participate in tertiary education over their lifetime.

FIGURE 4.17: OECD NET ENTRY RATES, 2001



Source: OECD, *Education at a Glance: OECD Indicators 2003*, Table C2.1.

ACHIEVEMENT IN FORMAL TERTIARY EDUCATION

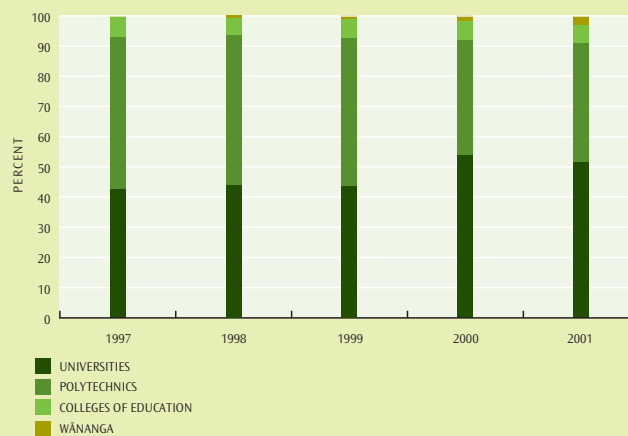
At the time of going to publication, formal completions data for 2002 was not available. The discussion below relates to trends up to 2001.

TRENDS IN COMPLETIONS

A total of 64,408 students completed 67,823 programmes of study within tertiary education institutions (TEIs) in 2001. This represents a 6.2 percent increase in the number of students who completed programmes over the previous year and a 19 percent increase since 1997.

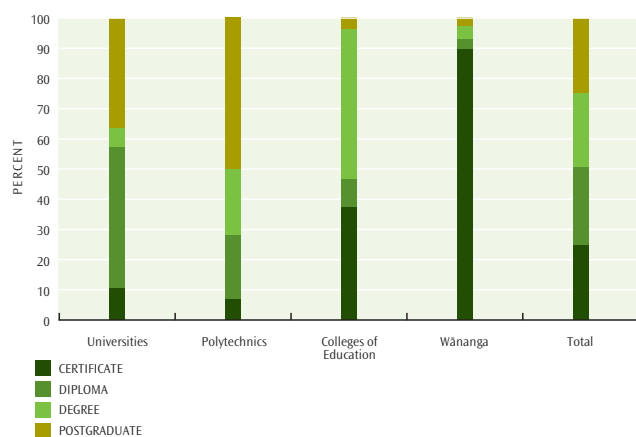
The rise in the number of TEI students completing qualifications has largely followed growth in student numbers, with increasing proportions of students completing at degree or postgraduate level. In 2001, over half (51 percent) of all higher-level qualification completions within TEIs were degree (37 percent) or postgraduate (14 percent) awards.

FIGURE 4.18: DISTRIBUTION OF STUDENTS COMPLETING QUALIFICATIONS AT TEIs BY SUB-SECTOR, 1997-2001



Graduates at universities and colleges of education are more likely to be awarded a higher-level qualification than in either polytechnics or wānanga. In 2001, 80 percent of students who graduated from a university and 73 percent from colleges of education achieved a higher-level qualification. By contrast, wānanga and polytechnics are more focused on lower-level qualifications such as diplomas and certificates. In 2001, 86 percent of polytechnic students and 94 percent of wānanga students completed lower-level qualifications.

FIGURE 4.19: DISTRIBUTION OF TEI GRADUATES BY SUB-SECTOR AND HIGHEST QUALIFICATION LEVEL, 2001



A total of 20,470 students completed 21,042 programmes of study at PTEs³ in 2001. This is a significant increase compared with the previous year, with 6,723 or 49 percent more students completing qualifications in PTEs. The increase in students gaining qualifications between 2000 and 2001 is not spread evenly between awards but concentrated at the lower-level qualifications of certificates and diplomas with increases of 5,376 and 1,189 students respectively.

In 2002, students achieved a record number of national certificates, national diplomas, and credits for recognised standards. The New Zealand Qualifications Authority awarded 26,221 national qualifications in 2002, an increase of 7 percent over 2001.

This brings the total awarded since the establishment of the NQF to over 91,800 national qualifications. The most popular subject areas at certificate and diploma level in 2002 were computing, information technology and the service sector (together accounting for 40 percent of all qualifications) and agriculture, forestry and fisheries.

There was significant growth in qualifications awarded in the service sector, manufacturing, agriculture, forestry and fisheries, and technology in 2002.

ETHNICITY

During 2001, 39,174 European/Pākehā students completed programmes at tertiary education institutions, representing nearly two-thirds (66 percent) of all domestic students completing qualifications, compared with 70 percent in 1997. In addition, there were 8,539 Māori completions (15 percent of domestic students), 2,409 Pasifika completions (four percent) and 6,223 Asian completions (11 percent). Qualification completions by domestic students represented 92 percent of all completions.

The number of Māori completing qualifications has risen by 8.7 percent since 2000 and by more than 30 percent since 1997. Since 1997, the proportion of completions by Māori at the certificate level has dropped slightly (from 54 percent of all Māori completions to 51 percent). The number of Pasifika students completing qualifications has risen by more than 20 percent since 2000 and by more than 40 percent over the last four years. Since 1997, the proportion of completions by Pasifika students at the certificate level has increased from 54 percent to 57 percent of all Pasifika completions.

Māori and Pasifika students were less likely in 2001 to complete postgraduate qualifications than qualifications at other levels. While 15 percent of all qualifications gained by domestic students were awarded to Māori in 2001, Māori received only seven percent of postgraduate qualifications awarded to domestic students by TEIs. By contrast, Māori received 21 percent of all certificate qualifications awarded to domestic students.

There was a similar pattern among Pasifika students. While Pasifika students received four percent of all qualifications awarded to domestic students, they received less than two percent of all postgraduate qualifications and seven percent of all certificate level qualifications. European/Pākehā completions, by contrast, were weighted towards the higher levels. Sixty-six percent of all completions by domestic students were by European/Pākehā; however, European/Pākehā made up 72 percent of postgraduate completions and 59 percent of certificate completions.

³ Only includes Ministry-funded and loans-and-allowances-approved PTEs that had formal students at the time of collection.

FIGURE 4.20A: DISTRIBUTION OF DOMESTIC STUDENTS COMPLETING QUALIFICATIONS AT TEIs BY ETHNIC GROUP, 1997

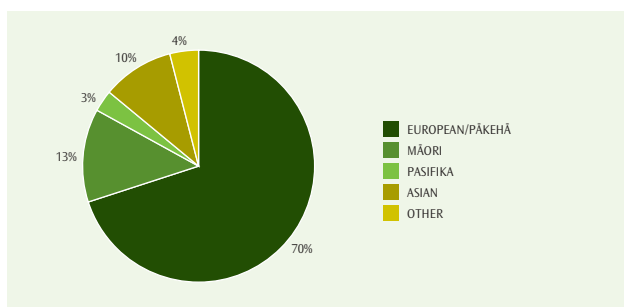
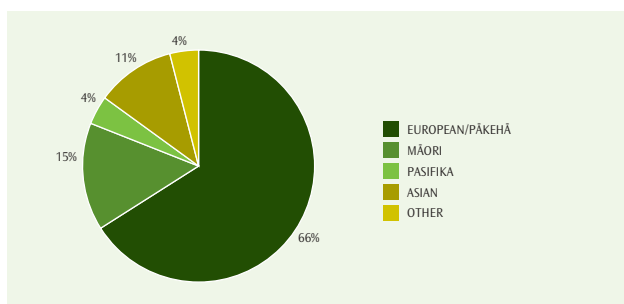


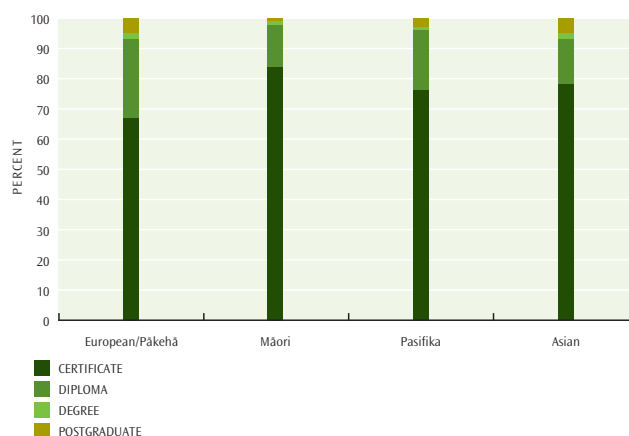
FIGURE 4.20B: DISTRIBUTION OF DOMESTIC STUDENTS COMPLETING QUALIFICATIONS AT TEIs BY ETHNIC GROUP, 2001



During 2001, 10,986 European/Pākehā students completed programmes at private training establishments, representing 58 percent of all New Zealand domestic students completing programmes. In addition, there were 4,200 Māori (22 percent), 1,392 domestic Pasifika students (seven percent) and 1,759 domestic Asian students (nine percent) completing an award at PTEs in 2001.

Certificates and diplomas were the most common awards obtained by PTE students overall in 2001 (72 percent and 22 percent respectively of all PTE completions in 2001). However, Māori and Pasifika students were more likely than either European/Pākehā or Asian students to obtain these qualifications. Both Māori and Pasifika students were less likely to receive higher-level awards (degrees and postgraduate awards) than European/Pākehā or Asian.

FIGURE 4.21: DISTRIBUTION OF PTE QUALIFICATION COMPLETIONS FOR DOMESTIC STUDENTS BY ETHNIC GROUP AND HIGHEST QUALIFICATION LEVEL, 2001



AGE

Forty-eight percent of students who completed qualifications within TEIs during 2001 were aged 16 to 24. Students in this age group accounted for 30 percent of those completing a postgraduate qualification, and 59 percent of all degrees, 37 percent of all diplomas and 46 percent of all students completing certificates in 2001.

Although 16 to 24 year olds form the core age group for tertiary study, a significant number will enrol and later obtain awards after their 24th birthday. Tertiary education providers are increasingly catering for mature students by offering programmes that appeal in terms of personal development or career enhancement.

Forty-five percent of all award completions within PTEs during 2001 were by students aged 16 to 24. Students in this age group accounted for 55 percent of all postgraduate completions, and 50 percent of all degrees, 51 percent of all diplomas and 43 percent of all certificates completed in 2001.

GENDER

Female students were awarded 60 percent of all qualifications in 2001, broadly equivalent to their share of the enrolments in tertiary education in the year (57 percent). While women were slightly under-represented⁴ in the postgraduate qualifications (58 percent) and the certificates (57 percent), they were awarded 63 percent of bachelors and diploma-level qualifications.

Since 1997, the number of female students who completed programmes has increased by 23 percent, while the number of male students has increased by 13 percent. Sixty percent of all students who completed TEI programmes in 2001 were female (38,638 in total).

HIGHEST LEVEL OF STUDY

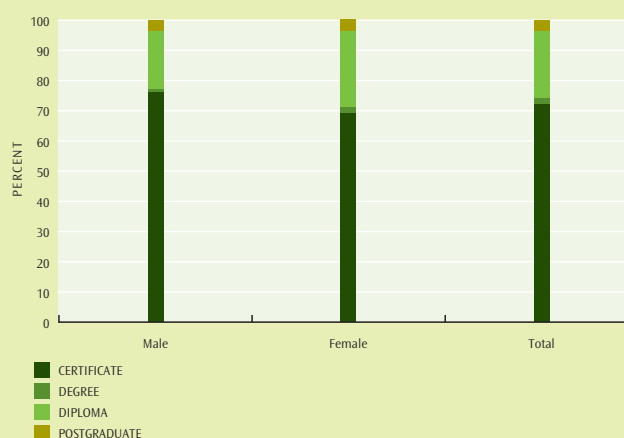
In 2001, over half (51 percent) of all higher-level qualification completions within TEIs were degree (37 percent) or postgraduate (14 percent) awards.

Graduates at universities and colleges of education are more likely to be awarded a higher-level qualification than in either polytechnics or wānanga. In 2001, 80 percent of students who graduated from a university and 73 percent from colleges of education achieved a higher-level qualification. By contrast, wānanga and polytechnics are more focused on lower-level qualifications such as diplomas and certificates. In 2001, 86 percent of polytechnic students and 94 percent of wānanga students completed lower-level qualifications.

The majority of qualification completions at PTEs were lower-level awards, with certificates and diplomas comprising 72 percent and 22 percent of awards respectively. Students graduating from PTEs in 2001 were significantly less likely to complete an upper-level qualification with only six percent gaining a postgraduate or degree qualification.

Fifty-five percent of all students who completed PTE programmes in 2001 were female (11,346 in total). Females are more likely than males to complete a diploma (62 percent of PTE students completing a diploma) or a degree (68 percent). While women were slightly under-represented⁵ in the postgraduate qualifications (58 percent) and the certificates (57 percent), they were awarded 63 percent of bachelors and diploma-level qualifications.

FIGURE 4.22: DISTRIBUTION OF PTE QUALIFICATION COMPLETIONS BY HIGHEST QUALIFICATION LEVEL AND GENDER, 2001



FIELD OF STUDY

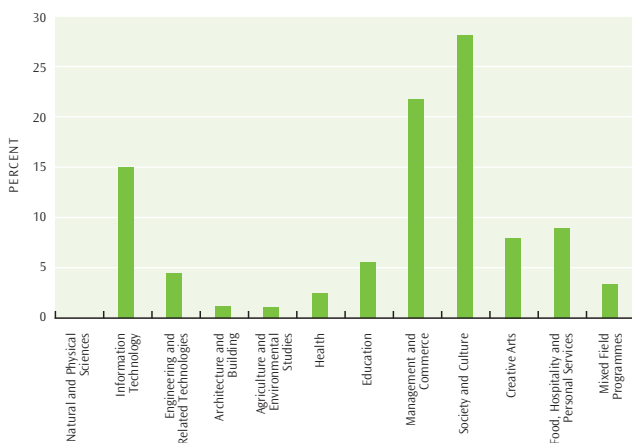
The TEI programmes in which most completions resulted in 2001 were in society and culture (20 percent), management and commerce (19 percent), and education (12 percent). Since 1997, growth in the number of graduates completing awards has been strongest in education and health (with around 1,730 and 1,700 more completions respectively since 1997). There have also been increases of over 1,000 completions in food, hospitality and personal services, mixed field programmes, information technology, creative arts, society and culture, and management and commerce.

In 2001, the most completions in PTE programmes were in the following fields of study – society and culture (5,767 completions) and management and commerce (4,464) comprising 28 percent and 22 percent of award completions respectively. Other popular fields of study were information technology (3,051 completions) and food, hospitality and personal services (1,835 completions), which comprised 15 and nine percent of all award completions respectively.

⁴ Under-represented in relation to their share of the qualifications completed.

⁵ Under-represented in relation to their share of the qualifications completed.

FIGURE 4.23: DISTRIBUTION OF PTE QUALIFICATION COMPLETIONS BY FIELD OF STUDY, 2001



OECD COMPARISON

New Zealand compares favourably with other OECD⁶ countries in the distribution of awards in many fields of study. New Zealand is above the OECD average in the proportion of graduates in higher-level awards (degrees and postgraduate) in fields such as humanities, arts and education, health and welfare, life science, physical science and agriculture. However, New Zealand has a lower proportion of graduates than the OECD average in fields such as engineering, manufacturing and construction and mathematics and computer science. In lower-level programmes (certificates and diplomas), New Zealand is above the OECD average in fields such as humanities, arts and education, social science, business, law and services. However, New Zealand is below the OECD average in fields such as engineering, manufacturing and construction, health and welfare, and mathematics and computer science.

INDUSTRY TRAINING

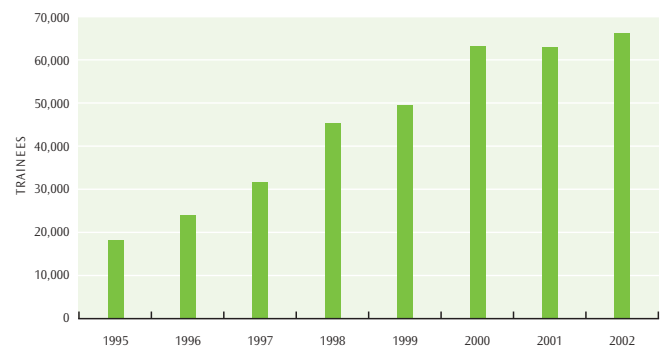
The Government's Industry Training Strategy is designed to increase the quality and quantity of industry training in New Zealand. The Strategy is industry-led and is designed to be responsive to the needs of enterprises and employees. It is funded through the Tertiary Education Commission and is administered by Industry Training Organisations (ITOs).

A goal of industry training is to extend the benefits of structured training to individuals, groups and industries that previously have had little or no access to systematic training.

In 2002, a record number of trainees – 106,997 – participated in industry training during the course of the year. This is an increase of 12 percent on the 95,263 trainees who participated during 2001. As at 31 December 2002 there were 83,456 trainees registered with ITOs – an increase of 26 percent on the 66,225 ITO registered trainees as at 1 January 2002. In 2002, nearly 76 percent of trainees were male.

These figures follow the trend of constant growth in trainee numbers since the programme's inception under the Industry Training Act 1992.

FIGURE 4.24: TRAINEES IN INDUSTRY TRAINING, 1995-2002



Note: Year 2000, 2001 and 2002 figures are based on the ITOs' returns under the performance measurement system. These figures may not be exactly compatible with previous years due to new systems for reporting. The total also includes Modern Apprenticeship numbers.

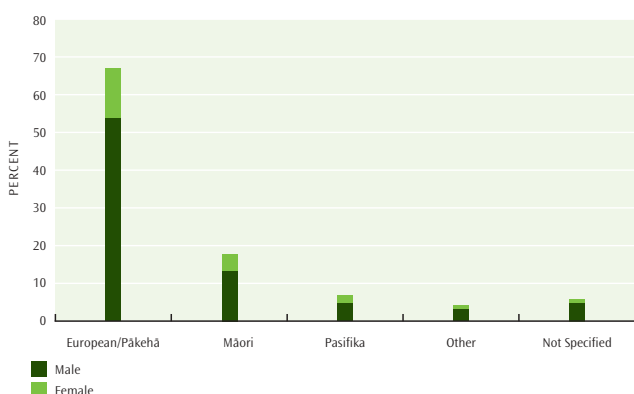
The characteristics of trainees in 2002 were similar to those in the 2001 calendar year, with some increases in the number of women and Pasifika trainees.

Māori, Pasifika and women have all achieved a steady growth in participation in recent years. Māori represented 17 percent of all industry trainees, compared with 11 percent in 1996. Pasifika trainees, represented six percent of all industry trainees, compared with five percent in 2001 and two percent in 1996.

Women made up 24 percent of all industry trainees, compared with 23 percent in 2001 and 13 percent in 1996.

⁶ Source: OECD (2001) *Education at a Glance, OECD Indicators*, Paris: OECD. Caution must be exercised in drawing conclusions. The comparability of results between New Zealand and other OECD countries depends on all countries classifying programmes in a similar fashion.

FIGURE 4.25: DISTRIBUTION OF INDUSTRY TRAINEES BY GENDER AND ETHNIC GROUP, 2002



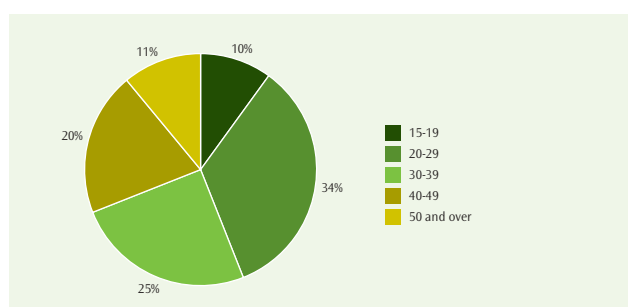
A key goal of industry training is to improve access to training and nationally recognised achievement for those most disadvantaged in terms of educational qualifications.

In the year 2002, of those participants whose previous qualification level is known⁷:

- 28 percent of all participating trainees had no previous qualifications
- 39 percent of participating Māori trainees had no previous qualifications, and
- 34 percent of participating Pasifika trainees had no previous qualifications.

In 2002, 9.7 percent of industry trainees were aged 15 to 19 years old, compared with 8.5 percent for this age group in 2001. This result shows the impact of the Government’s Modern Apprenticeships initiative, which was introduced during 2000 to facilitate increased access to industry training for young people.

FIGURE 4.26: DISTRIBUTION OF INDUSTRY TRAINEES BY AGE, 2002



Industry Training has a strong focus on levels 1 to 4 of the National Qualifications Framework. In the year 2002:

- 46 percent of all participating trainees were in level 4 or higher industry training programmes
- over 70 percent of Māori trainees were in level 3 or higher industry training programmes, and
- over 53 percent of Pasifika trainees were in level 3 or higher industry training programmes, up considerably from 45 percent in 2001.

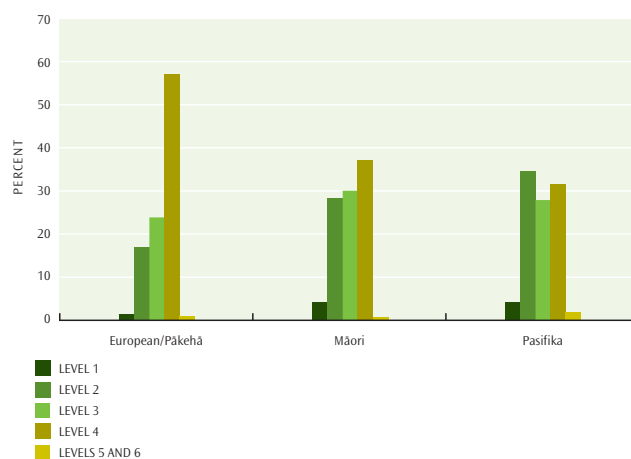
TRAINEE ACHIEVEMENT

In the year 2002, 9,761 National Certificates were completed by trainees. These were at the following levels:

- 154 at level 1
- 1,910 at level 2
- 2,485 at level 3
- 5,159 at level 4, and
- 82 at level 5 and above.

Seventy-nine percent of the National Certificates were completed at level 3 or above and 38 percent of the National Certificates completed by Māori were at level 4 or above. Thirty-four percent of the National Certificates completed by Pasifika trainees were at level 4 or above.

FIGURE 4.27: DISTRIBUTION OF NATIONAL CERTIFICATES GAINED THROUGH INDUSTRY TRAINING BY NQF LEVEL AND ETHNIC GROUP, 2002



⁷ Collection of previous educational qualification commenced from the beginning of 2000. Out of the 106,997 trainees, records are known for 59,185.

A significant feature of industry training in 2002 was the success of people with no or few previous certificates:

- 65 percent of the National Certificates achieved by trainees with no previous educational qualification were at level 3 or above.
- 75 percent of the National Certificates achieved by trainees with fifth form or equivalent previous educational qualifications were at level 3 or above.

In 2002, industry trainees achieved just over two million credits towards national qualifications:

- 71 percent of the total credits achieved were at level 3 of the National Qualifications Framework or higher.
- 68 percent of the credits achieved by Māori trainees were at level 3 of the NQF or higher.
- 58 percent of the credits achieved by Pasifika trainees were at level 3 of the NQF or higher.

Employer participation in Industry Training increased by 12.2 percent from 21,901 employers in 2001 to 24,576 in 2002. They provided training for their employees linked to the National Qualifications Framework under the auspices of the relevant ITO.

Employers who take part in Industry Training are supported by ITOs to:

- commit to a formal, signed training agreement for each trainee
- provide structured on-job training and provide access to off-job training
- facilitate access to appropriate on-job and off-job assessment. In some instances, this includes training their own employees to become workplace assessors
- ensure training meets national standards developed by their industry, and
- enable trainees to work towards, and obtain, portable national qualifications.

MODERN APPRENTICESHIPS

Introduced in 2000, the Modern Apprenticeships scheme, a work-based training initiative that encourages and helps young people, particularly those aged between 16 and 21 years, to take up and complete apprenticeship training.

Each young person undertaking a Modern Apprenticeship has an individual training plan that includes the range of specific and generic skills to be learnt.

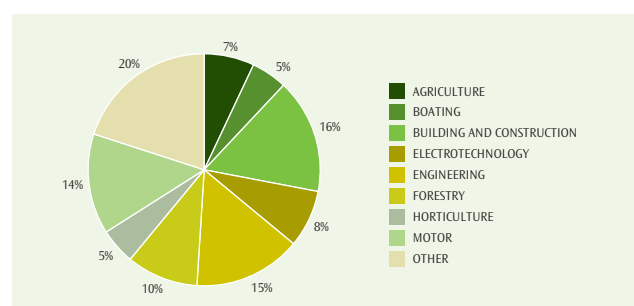
Modern Apprenticeships are administered by TEC and:

- provide systematic, high-quality, workplace learning
- are based on a training agreement and an individual training plan, signed off by both the employer and the apprentice
- lead to national qualifications in a wide range of industries at levels 3 and 4 of the National Qualifications Framework
- cover both industry-specific and generic skills
- develop the apprenticeship concept beyond the traditional industries, and
- complement existing tertiary education and industry training options.

Modern Apprenticeships are characterised by the new role of a Modern Apprenticeship Co-ordinator who acts as personal coach and mentor to the apprentice. Co-ordinators facilitate and support apprenticeship training, acting as the key link between employers and apprentices. They screen potential apprentices, arrange their employment and training, and work with employers and apprentices to produce individual training plans.

In 2002, Modern Apprenticeships were available in 27 industries. Two new industries, plumbing and tourism, were brought into the Modern Apprenticeships scheme during 2002, while another two industries, hospitality and retail, moved from being pilots to nationally offered apprenticeships.

FIGURE 4.28: DISTRIBUTION OF MODERN APPRENTICES FOR SELECTED INDUSTRIES, DECEMBER 2002

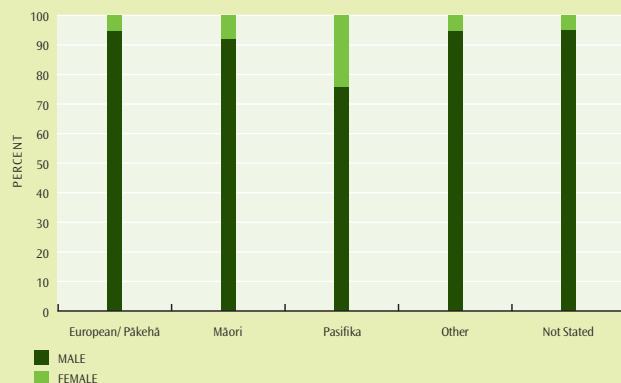


Note: There were 27 industries in which Modern Apprenticeships were available in 2002.

By the end of 2002, 4,344 modern apprentices were participating in industry training through Modern Apprenticeships across a range of industries from building and construction to telecommunications and hospitality. Only 6 percent of trainees were women.

In 2002, 79.6 percent of trainees were European/Pākehā, 15.4 percent were Māori and 2.1 percent were Pasifika trainees.

FIGURE 4.29: DISTRIBUTION OF MODERN APPRENTICESHIP TRAINEES BY GENDER AND ETHNIC GROUP, 2002

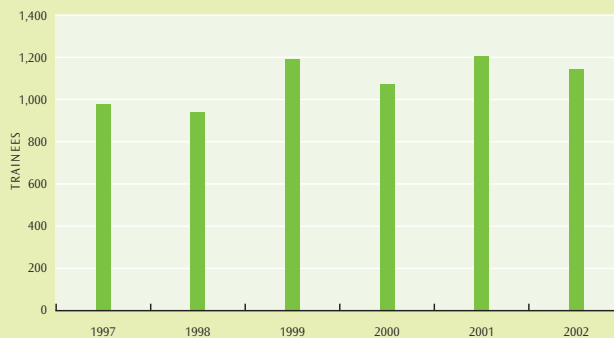


SKILL ENHANCEMENT – RANGATAHI MĀIA/TUPULAGA LE LUMANA'I

Rangatahi Māia/Tupulaga Le Lumana'i (Skill Enhancement) is a vocational training programme for young Māori and Pasifika peoples. Skill Enhancement provides a bridge between school and work or further tertiary education in a wide range of skills, including trades skills, at levels 3 and 4 on the National Qualifications Framework.

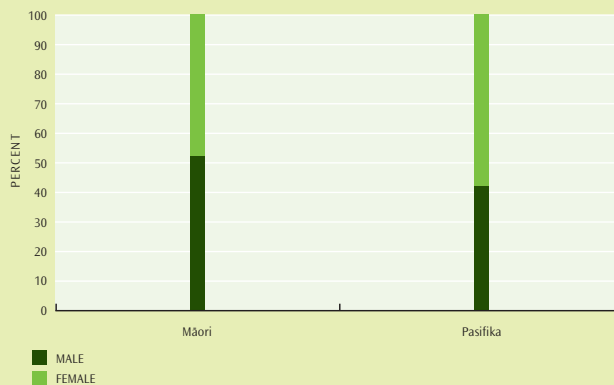
During 2002, 1,141 trainees participated in Skill Enhancement training, with 63 Skill Enhancement training providers, compared with 1,206 trainees and 70 providers in 2001 and 1,070 trainees and 64 providers in 2000.

FIGURE 4.30: SKILL ENHANCEMENT TRAINEES, 1997-2002



Of the 1,141 students in 2002, 81 percent were Māori and 19 percent were Pasifika students, compared with 83 percent and 17 percent respectively in 2001.

FIGURE 4.31: DISTRIBUTION OF SKILL ENHANCEMENT TRAINEES BY GENDER AND ETHNIC GROUP, 2002



Eighty-one percent of students who left Skill Enhancement training in 2002 achieved a positive outcome, with 40 percent progressing into further training and 41 percent moving into employment. Eighty-one percent of the Māori students and 82 percent of the Pasifika students on the programme moved into further training or employment. A total of 623 students achieved credits on the National Qualifications Framework.



INTRODUCTION

This chapter explores some of the outcomes of tertiary education. It looks at the evidence for the benefits that people hope to gain from tertiary education. In this sense, tertiary education sector outcomes are linked to the concept of 'human capital'. Human capital includes the set of skills that individuals maintain, enhance or develop, usually through education or training, and then offer in return for earnings in the labour market.

This chapter draws from the Statistics New Zealand report *Human Capital Statistics 2003*¹ and data from the Census and other surveys. It focuses on the following areas:

- educational qualifications attainment
- labour market outcomes, and
- income.

In addition the chapter touches on recent new information on living standards.

The educational attainment of the adult population highlights the qualifications achieved by individuals and is a measure of the supply of skills in different fields of study. The relationship between educational attainment and labour force participation is an indicator of the long-term outcomes of the tertiary education system. Earnings are also positively related to educational attainment, and the section in this chapter on income examines the earnings of workers with different educational attainments.

¹ Statistics New Zealand (2003) *Human Capital Statistics*.

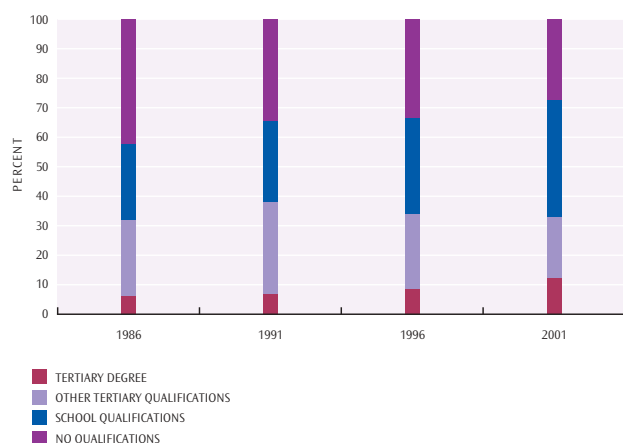
chapter five

TERTIARY EDUCATION OUTCOMES

EDUCATIONAL/QUALIFICATIONS ATTAINMENT

In 1986, the proportion of the population aged 15 years and over who reported having no qualification was 42.3 percent, and the proportion who reported having a bachelors or higher degree was 5.5 percent. By 2001, the proportion who reported having no qualification had fallen to 27.6 percent, while the proportion reporting having a bachelors or higher degree was 11.8 percent².

FIGURE 5.1: DISTRIBUTION OF POPULATION AGED 15 YEARS AND OVER BY HIGHEST QUALIFICATION, 1986-2001



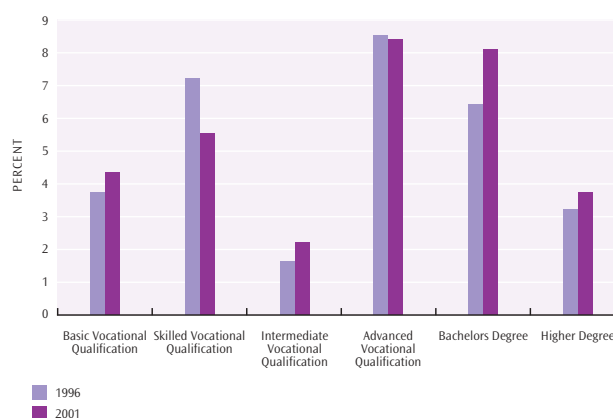
Source: Statistics New Zealand, *Census of Population and Dwellings, 1986-2001*.

In 2001, for those aged 15 and over, the level of educational attainment for males and females was very similar. For example, 28 percent of males had no qualification, and 12 percent had a bachelors degree or higher, while the comparable figures for females were 27 percent and 11 percent. However, in the same age groups, there are significant differences in the level of qualifications held by men and women.

The largest increases in the proportion of the population with post-school qualifications between the Census of 1996 and that of 2001 were for bachelors degree or higher qualifications. Skilled vocational qualifications (eg trade certificates and apprenticeships) decreased by 1.7 percent.

The most common level of attainment in the 1996 and 2001 Census populations was an advanced vocational qualification (eg undergraduate diploma or certificate, or a New Zealand diploma or certificate).

FIGURE 5.2: PERCENTAGE OF POPULATION AGED 15 AND OVER BY HIGHEST QUALIFICATION LEVEL, 1996 AND 2001



Source: Statistics New Zealand, *Census of Population and Dwellings, 2001*.

Those age groups with the highest proportion of people holding post-school qualifications were 25 to 29 years (42.2 percent) and 40 to 44 years (40.4 percent).

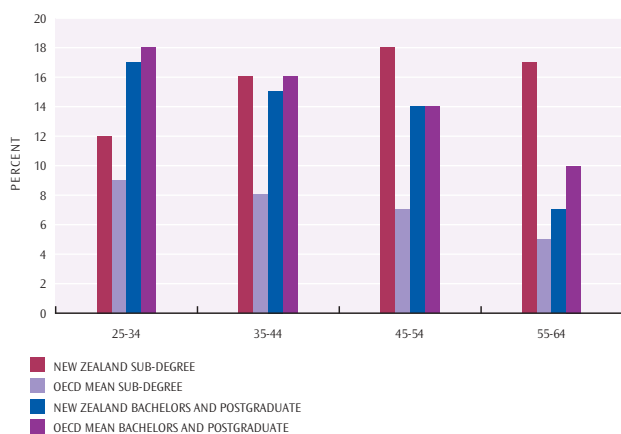
The Census illustrates improved attainment over time. In 2001, of those aged 55 to 64 years, nine percent had a bachelors or higher degree, while 40 percent had no qualification. For those aged 25 to 34 years, 18 percent had a bachelors or higher degree while only 18 percent had no qualification.

The pattern of increasing attainment over time is also observed in OECD data. The OECD's publication *Education at a Glance: OECD Indicators 2003*³ shows that in the younger age bands a significantly larger proportion of the New Zealand population holds tertiary qualifications.

² Note that 1986 and 2001 Census data on highest qualifications is not precisely comparable due to questionnaire changes.

³ OECD (2003) *Education at a Glance, OECD Indicators 2003*, OECD, Paris.

FIGURE 5.3: PERCENTAGE OF POPULATION WITH SUB-DEGREE AND BACHELORS OR ABOVE QUALIFICATIONS BY AGE, 2001

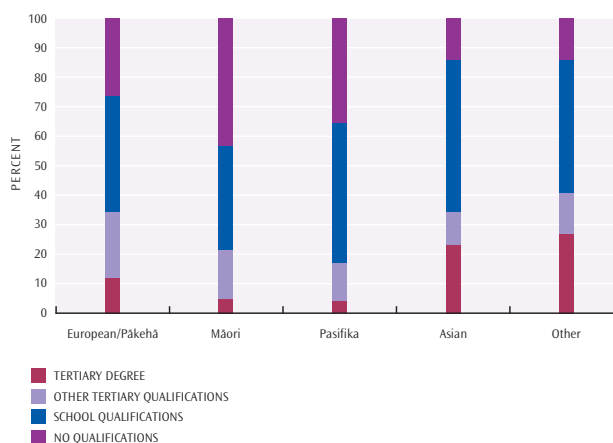


Source: OECD, *Education at a Glance, OECD Indicators 2003*, Table A2.3, page 53.

The proportion of New Zealanders who have completed diploma-level qualifications is higher than the OECD mean in every age group. The proportion holding a degree-level qualification is similar to the OECD mean.

The qualification distribution in the population also reflects ethnicity differences. In 2001, the proportion of adult New Zealand Europeans with no qualifications was 26 percent, for Māori it was 44 percent, for Pasifika it was 36 percent, and for Asians it was 14 percent. Likewise, the proportion of adult New Zealand Europeans who had a bachelors or higher degree was 12 percent, for Māori it was 5 percent, for Pasifika students it was 4 percent, and for Asians it was 23 percent.

FIGURE 5.4: DISTRIBUTION OF POPULATION AGED 15 AND OVER BY HIGHEST QUALIFICATION LEVEL AND ETHNIC GROUP, 2001



Note: Ethnicity is compiled on a total response basis. See www.statsnz.govt.nz for more on ethnic definitions.

Source: Statistics New Zealand, *Census of Population and Dwellings, 2001*.

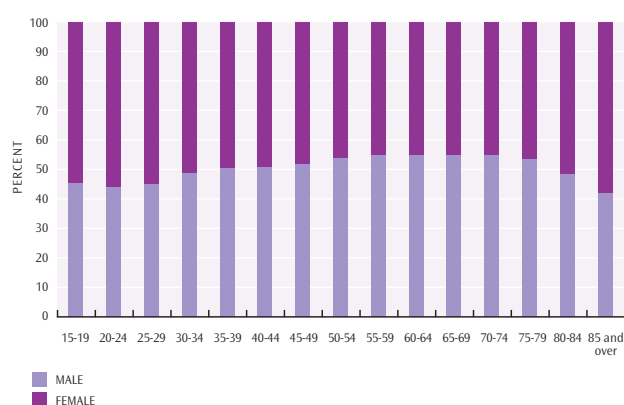
In terms of ethnicity, those most likely to have post-school qualifications were in the other ethnic group (40.8 percent). This compares with 34.1 percent of those with European/Pākehā ethnicity and 34.2 percent of those in the Asian ethnic groups. Those with Māori and Pasifika ethnicity were less likely to have post-school qualifications: 21.2 percent and 17.0 percent respectively.

There are significant differences in the educational attainment of men and women for different age groups. For instance, of those aged 55 to 64⁴, 11 percent of males had a bachelors or higher degree, compared with only 6 percent for similarly aged females. The comparable figures for those aged 25 to 34 years were 17 percent for males, and 19 percent for females.

Men were more likely than women to have a post-school qualification: 33.6 percent of men had a post-school qualification compared with 30.9 percent of women. As noted above, however, the distribution of qualifications between male and female varies with age group, reflecting the higher and rising participation of women in the tertiary education sector in the last decade. Women aged between 15 and 34 years are more likely to have post-school qualifications than men in this age group (32.1 percent of women, compared with 29.1 percent of men). Women in this age group are also more likely than men to hold a bachelors or higher degree (13.7 percent against 11.0 percent). From 35 years to 80 years of age, more men hold post-school qualifications than women.

⁴ Excluding those whose response to the Census highest qualification question was not stated or identifiable.

FIGURE 5.5: DISTRIBUTION OF POST-SCHOOL QUALIFICATIONS BY AGE AND GENDER, 2001



Source: Statistics New Zealand, *Census of Population and Dwellings, 2001*.

New Zealand females were more likely to complete tertiary qualifications. In 2001, for example, 62 percent of New Zealanders completing a first degree were female, compared with the mean for OECD countries of 55 percent. In the same year, 41 percent of New Zealanders completing advanced research programmes were female, compared with the OECD mean of 38 percent.

The 2001 Census shows there was an increase in the numbers holding qualifications in most fields of study between 1996 and 2001. The greatest percentage increase was in the field of information technology, where numbers almost doubled (up 97.7 percent), although numbers with qualifications in this field were still very low in comparison with other fields of study. There were also large percentage increases in qualifications in creative arts, and society and culture.

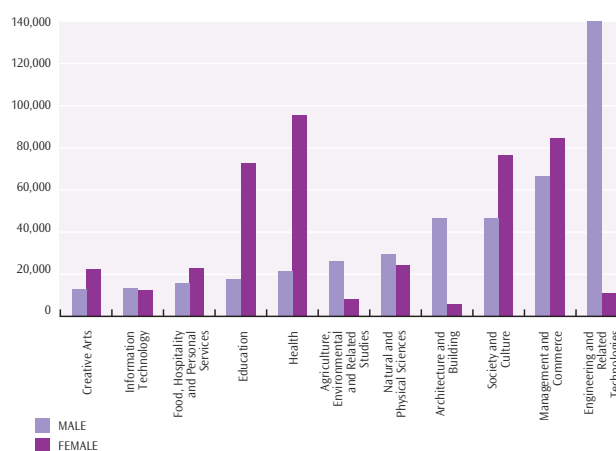
By contrast there were decreases in two fields of study: engineering and related technologies, and architecture and building.

Post-school qualifications in management and commerce and engineering and related technologies were most common in the 2001 Census. More than half (56.2 percent) of those with qualifications in management and commerce were women. Among those adults whose highest post-school qualification was a bachelors or higher degree, the most common field of study was society and culture, followed by management and commerce.

Qualifications in some fields of study are largely held by men, while others are dominated by women. For example, 82.7 percent of those with a post-school qualification in health were women while 93.5 percent of those with a post-school qualification in engineering and related technologies were men. The distribution of post-school qualifications by field for men and women reflects employment in occupations traditionally held by men and women.

The most common fields of study for Pasifika and Asians who had post-school qualifications was management and commerce. For New Zealand European/Pākehā and Māori, the most common fields of study were engineering and related technologies and society and culture.

FIGURE 5.6: POST-SCHOOL QUALIFICATIONS BY FIELD OF STUDY AND GENDER, 2001



Source: Statistics New Zealand, *Census of Population and Dwellings, 2001*.

Gender patterns across fields of study in New Zealand were also similar to those in other OECD countries in 2001. Across all fields of study, however, the proportion of female graduates was relatively higher than the OECD average. For example, 80 percent of New Zealanders completing a degree or advanced research programme in health and welfare were female, compared with the OECD country mean of 69 percent. Of those New Zealanders

who completed a degree or advanced research programme⁵ in engineering, manufacturing or construction, 32 percent were female, compared with the OECD mean of 22 percent.

The distribution by field of study of those completing vocational and sub-degree⁶ qualifications in New Zealand in 2001 is significantly different to OECD norms. For example, 38.3 percent of those completing tertiary vocational qualifications in New Zealand in 2001 had their field of study in humanities, arts and education, compared with the OECD country mean of 21.8 percent. Only 3.4 percent of those completing such qualifications did so in engineering, manufacturing and construction compared with an OECD average of 15.8 percent.

For graduates with first degrees, the differences were less marked between New Zealand and OECD 2001 field of study distributions. Even so, only 5.5 percent of New Zealand bachelors degree and higher graduates studied engineering, manufacturing and construction compared with an OECD average of 13.2 percent.

A comparison of countries in 1995 by the OECD, as part of the International Adult Literacy Survey, found that the likelihood of obtaining a tertiary qualification increased for those whose parents also had a tertiary education. For example, a New Zealander aged between 16 and 65 years in 1995 was 2.1 times as likely to have a tertiary qualification if his or her parents had completed tertiary education, compared with those whose parents had not completed secondary education. Interestingly, this increased likelihood for those with tertiary educated parents increased from 2.0 times for 46 to 55 year olds, to 2.8 times for 26 to 35 year olds.

For more information on qualification completions see chapter 4.

⁵ The OECD classifies qualifications into Tertiary-type A education and Tertiary-type B. Type A describes multi-year, theoretically oriented programmes designed to provide sufficient qualifications for entry to advanced research programmes and professions with high skill requirements. They have a minimum cumulative theoretical duration (at tertiary level) of three years' or more full-time equivalent study. Tertiary-type B qualifications are shorter, vocationally oriented tertiary qualifications and are focused on practical, technical or occupational skills for direct entry into the labour market. They have minimum duration of two years' full-time equivalent study at the tertiary level.

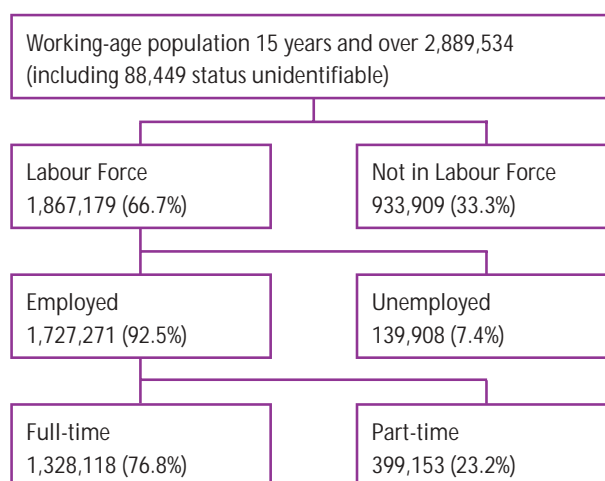
⁶ Some qualifications offered in the tertiary sector in New Zealand are classified by the OECD as post-secondary non-tertiary and so are not included in OECD tertiary comparisons. The comments in this paragraph relate to type B qualifications.

LABOUR MARKET OUTCOMES

One indicator of labour market outcomes is labour force status – whether someone is employed, unemployed or not in the labour force. One source of data on the relationship between the educational attainment of New Zealanders and their labour force status is the Census.

According to the 2001 Census data, the labour force participation rate, for those aged 15 and over, was 66.7 percent.

FIGURE 5.7: LABOUR MARKET STATUS OF WORKING-AGE POPULATION, 2001

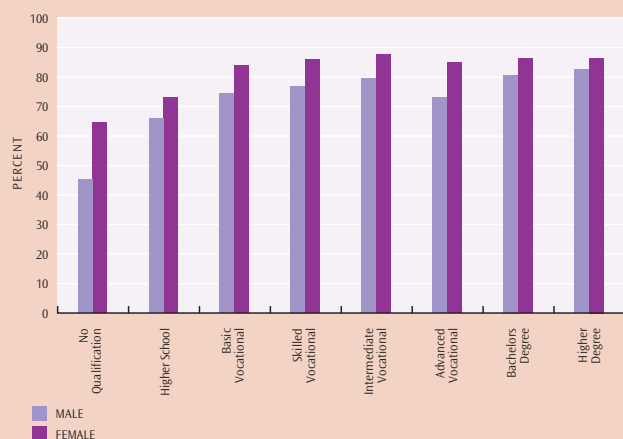


Source: Statistics New Zealand, *Census of Population and Dwellings, 2001*.

In general, those with qualifications were more likely to be in paid employment than those without. In other words, labour force participation increased with the level of the highest qualification. Those with no qualifications had a labour force participation rate of 55 percent, compared with a rate of 73 percent for those whose highest qualification was a fifth form qualification, and 85 percent of those with a higher degree.

In 2001, the labour force participation rate for males (73.8 percent) was significantly higher than that for females (60.1 percent). The male participation rate was also higher at each qualification level than the corresponding female rate. The increase in participation by qualification levels was more marked for females, meaning that the differences between men and women in labour force participation diminish at higher qualification levels.

FIGURE 5.8: LABOUR FORCE PARTICIPATION BY HIGHEST QUALIFICATION LEVEL AND GENDER, 2001



Source: Statistics New Zealand, *Census of Population and Dwellings, 2001*.

Generally, the unemployment rate fell as the qualification level rose. In the 2001 Census, those with no qualifications had an unemployment rate of 11.1 percent, those with school qualifications 7.0 percent, and those with higher degrees 3.6 percent.

FIGURE 5.9A: UNEMPLOYMENT RATE BY GENDER (MALE), AGE AND QUALIFICATION LEVEL, 2001

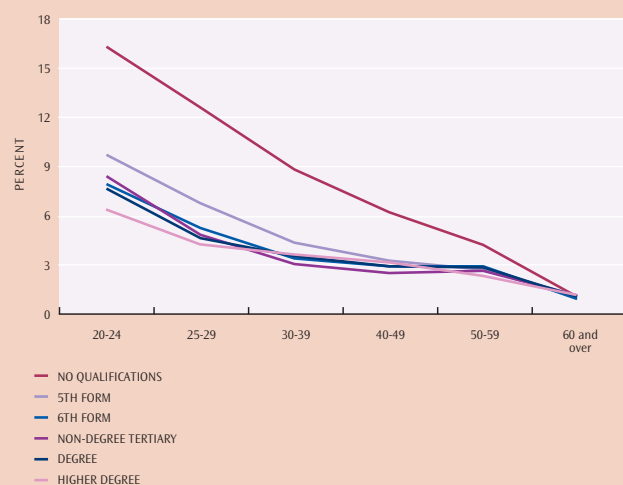
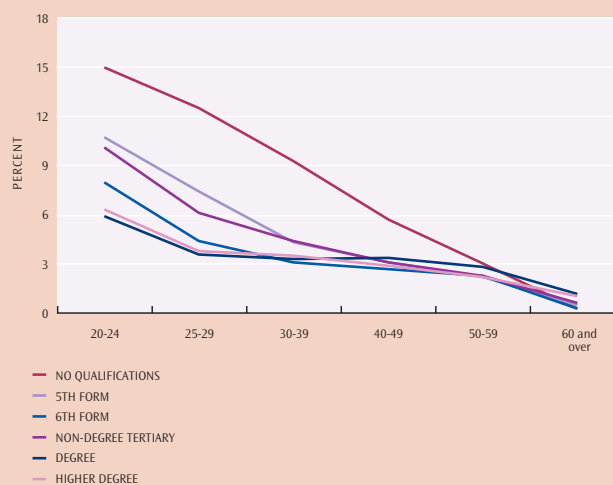


FIGURE 5.9B: UNEMPLOYMENT RATE BY GENDER (FEMALE), AGE AND QUALIFICATION LEVEL, 2001



Source: Ministry of Education, *What Can the Population Census Tell Us About Education?*, Unpublished Report, 2002. Using data from the *Census of Population and Dwellings, 2001* from Statistics New Zealand.

Over the age of 25, female unemployment rates were the same as or higher than those for males across all qualification levels.

When non-degree tertiary qualifications are examined in more detail, males with basic vocational qualifications are more likely to be unemployed than those with either a school qualification of at least sixth form level or another non-degree qualification, particularly for those aged 25 or above⁷. The same pattern does not hold for females.

For women, additional qualifications bring increases in the probability of being employed, especially for younger women. Although those with a tertiary qualification are a little more likely to be employed than those with a school qualification, the main differences seem to be between women with a qualification and those without any formal qualification.

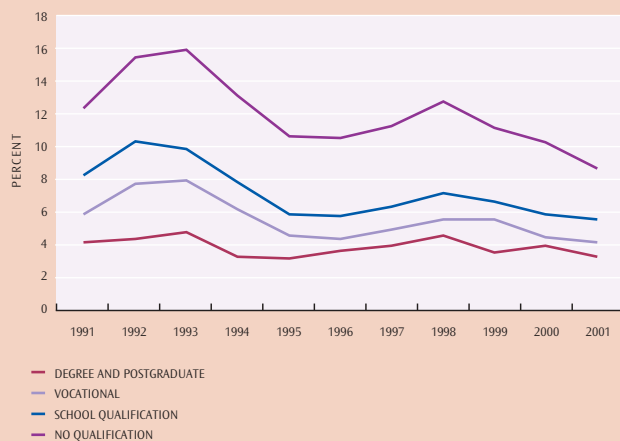
Those whose field of study was agriculture, environmental and related studies had the highest labour force participation rate at 86 percent, while those with health qualifications had the lowest participation rates. Interestingly, those with information technology qualifications had the highest unemployment rate at 14 percent. Those with health qualifications had the lowest unemployment rate at 2 percent.

⁷ This is not to say that there is no positive return to those qualifications.



Data from Statistics New Zealand's Household Labour Force Survey (HLFS) displays the high qualification/low unemployment rate relationship over time. It is also noticeable that the rate of unemployment for those with degrees or postgraduate qualifications was less variable over the economic cycle than for those with other qualifications and especially for those with no qualifications.

FIGURE 5.10: UNEMPLOYMENT RATE OF THE POPULATION AGED 15 AND OVER BY QUALIFICATION LEVEL, 1991-2001



Source: Statistics New Zealand, *Household Labour Force Survey*.

The OECD's publication *Education at a Glance 2003* reports that the rate of labour market participation for females in New Zealand for those aged between 25 and 64 years of age (71 percent) was higher than the OECD country mean (65 percent). The New Zealand male participation rate was slightly higher than the OECD mean rate (89 percent and 86 percent respectively). For both New Zealand and the OECD, participation rates were substantially lower for those with below upper secondary education than those with higher education levels. Disparities in unemployment rates between males and females in New Zealand are smaller than the OECD mean.

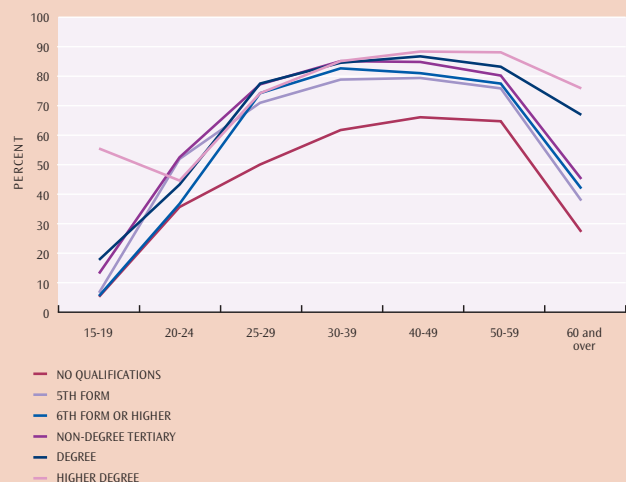
INCOME

In general, income levels increase with the level of qualification. However, the HLFS and the Census show that tertiary qualifications below degree level do not confer additional income over and above sixth or seventh form qualifications⁸. On average, university graduates in full-time employment receive about 70 percent more income than those with no more than School Certificate (now NCEA Level 1).

According to Census 2001, of those without qualifications, 8.2 percent received over \$40,000 in income in the year to March 2001, compared with 15.3 percent of those whose highest qualification was at school level. Those who took their educational attainment beyond school level were more likely to receive higher incomes: 34.2 percent of those with post-school qualifications received over \$40,000 in income. Men with post-school qualifications were more likely to receive higher incomes than women. Over two-fifths (45.2 percent) of men with post-school qualifications received over \$40,000 in income, compared with 23.0 percent of women.

The following graphs trace the probability of men and women with different qualifications in different age bands receiving income of \$20,000 or more and \$50,000 or more.

FIGURE 5.11A: PERCENTAGE OF POPULATION 15 AND OVER EARNING \$20,000 OR MORE BY GENDER (MALE) AND AGE, 2001



⁸ This does not mean that sub-degree tertiary qualifications have a low return. Many of those who complete degree qualifications in the tertiary sector have no school qualifications.

FIGURE 5.11B: PERCENTAGE OF POPULATION 15 AND OVER EARNING \$20,000 OR MORE BY GENDER (FEMALE) AND AGE, 2001

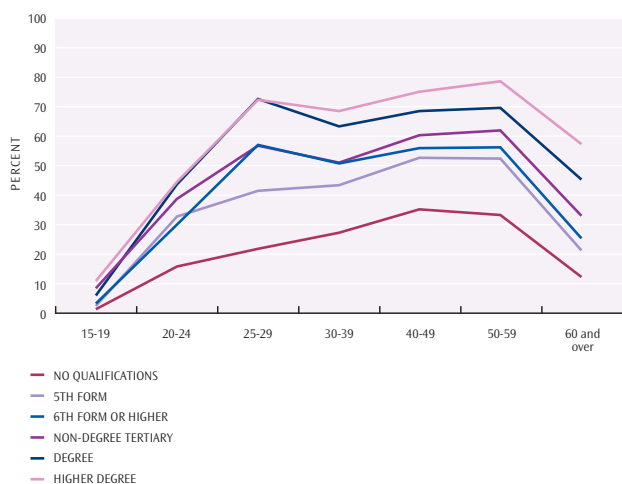


FIGURE 5.12B: PERCENTAGE OF POPULATION 15 AND OVER EARNING OVER \$50,000 BY GENDER (FEMALE) AND AGE, 2001

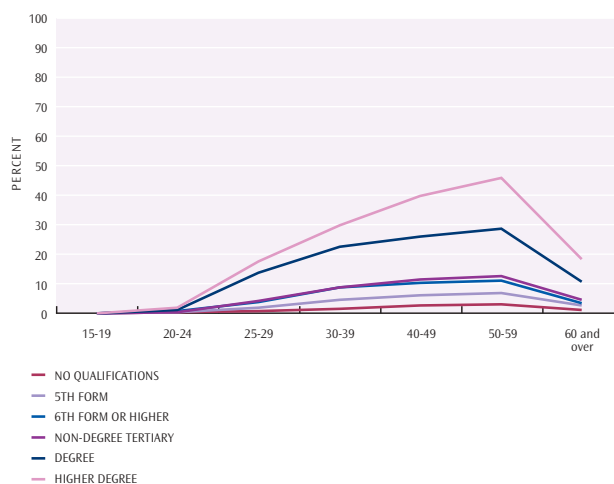
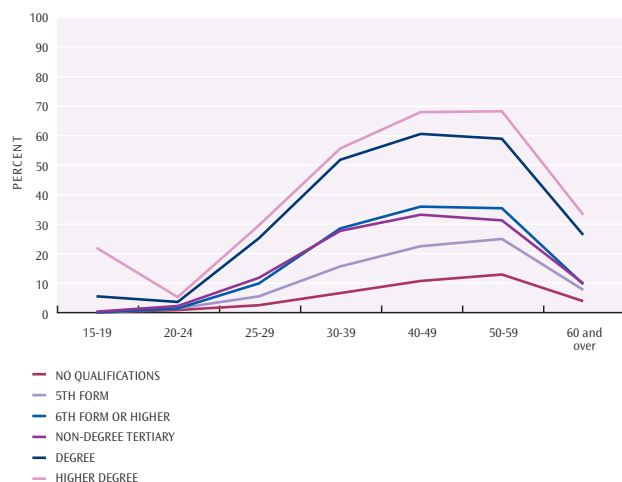


FIGURE 5.12A: PERCENTAGE OF POPULATION 15 AND OVER EARNING OVER \$50,000 BY GENDER (MALE) AND AGE, 2001



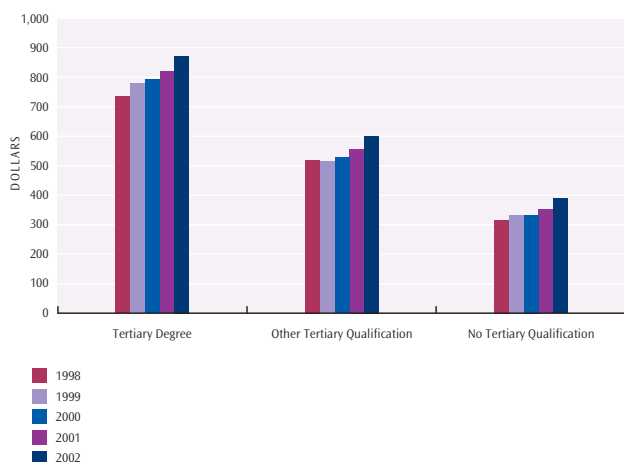
Source: Ministry of Education, *What Can the Population Census Tell Us About Education?*, Unpublished Report, 2002. Using data from the *Census of Population and Dwellings, 2001* from Statistics New Zealand.

Statistics New Zealand, *Census of Population and Dwellings, 2001*.

These findings are supported by data from the New Zealand Income Survey (NZIS)⁹. NZIS data shows that average weekly income increases as qualification levels increase. For example, in the June 2002 quarter, average weekly income for the total working-age population was \$494, whereas for those with no qualifications it was \$349, while for those with bachelors or higher degrees it was \$826.

⁹ New Zealand Income Survey (NZIS) is a supplement to the HLFS, which is run every June quarter.

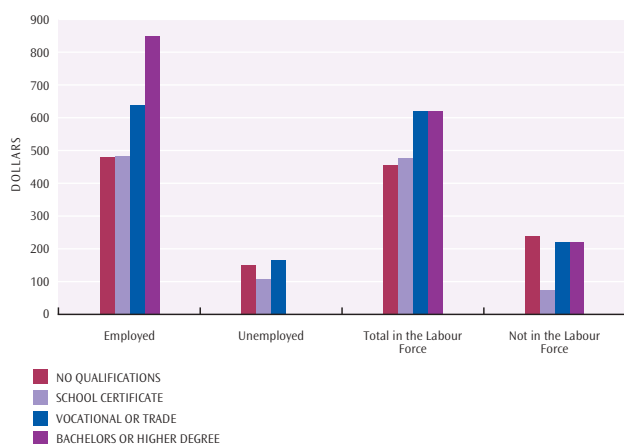
FIGURE 5.13: AVERAGE WEEKLY INCOME OF THE POPULATION AGED 15 AND OVER BY QUALIFICATION LEVEL, 1998-2002



Source: Statistics New Zealand, *New Zealand Income Survey, 2002*.

Median weekly incomes show that there are significant income differentials by level of qualification¹⁰. The median weekly income for the working-age population was \$375 in the June quarter of 2002. The median for those with no qualifications was \$288 while for those with bachelors or higher degrees the median was \$690.

FIGURE 5.14: MEDIAN INCOME BY HIGHEST QUALIFICATION, 2002



Source: Statistics New Zealand, *New Zealand Income Survey, 2002*.

¹⁰ The term 'median' income is the sum that is greater than half of all incomes and that is less than half of all incomes.

University of Auckland economist Sholeh Maani has conducted detailed analyses of data on income and qualifications for the Census years 1981 to 1996. Dr Maani's results have shown that investing in education has a positive and significant return. Moreover, market rewards to education have been significant and higher in 1996 compared to both 1981 and 1986¹¹.

Another significant finding from Maani's analysis relates to the difference in income for Māori and non-Māori. Maani found that in 1996 more than 60 percent of the Māori population remained without school qualifications. In addition, over the decade, average income levels of Māori relative to European income levels have deteriorated. Once educational attainment is controlled for, however, there are no significant differences in the incomes of Māori and non-Māori. In other words, Māori with higher qualifications have an equal probability of high income as non-Māori. The difference in income between Māori and non-Māori relates to the level of educational qualifications, not to ethnicity¹².

The report also suggests that investing in higher education provides important options for Māori in reducing the income gap. This is supported by findings that the income gap based on educational attainment within ethnic groups is far greater than the income gap across ethnic groups.

A further study by Maani in 2002 examined ethnic differences in the relationship between educational attainment and income in New Zealand over the period 1986 to 1996. Over this period, the gap between Māori and European incomes increased. This reflects lower Māori educational qualifications and the concentration of occupations and industries that experienced low employment growth at a time when returns to educational qualifications increased. Those with higher educational qualifications also experienced growth in hours of work, reflecting increasing demand for skills¹³.

¹¹ Maani, S.A. (1999) *Private and Public Returns to Investments in Secondary and Higher Education in New Zealand over Time: 1981-1996*. Research Report commissioned by the New Zealand Treasury. <http://www.treasury.govt.nz/workingpapers/default.htm>.

¹² Maani, S.A. (2000) *Secondary and Tertiary Educational Attainment and Income Levels for Māori and Non-Māori over Time*. Research Report commissioned by the New Zealand Treasury.

¹³ Maani, S.A. (2002) *Education and Māori Relative Income Levels over Time: The Mediating Effect of Occupation, Industry, Hours of Work and Locality*. NZ Treasury Working Paper. <http://www.treasury.govt.nz/workingpapers/2002/twp02-17>.

Income returns to qualifications were higher for Māori than for non-Māori. This reflected the particular and increasing disadvantage faced by Māori with no qualifications compared to Europeans with no qualifications and the fact that the gap between mean incomes of Māori and Europeans reduces as qualifications rise.

Controlling for a wide range of characteristics, Māori residing in rural areas are more disadvantaged than any other group.

The OECD publication *Education at a Glance 2003* also reported on returns to education. The OECD indicator is built from examining the earnings of workers with different educational attainment, and relates this to the cost of acquiring qualifications. Tertiary education enhances earnings relating to secondary education slightly more for females than for males in New Zealand. Thus, in the 25 to 64 age group, the relative earnings of males with any tertiary education is 130, compared with a standardised earnings score of 100 for males with upper secondary education. For females, this score is 136, also compared with a standardised score of 100 for females with upper secondary education¹⁴. The relative earnings of all the population with any tertiary education for age groups 25 to 64 in Australia is 136, compared with the United States 186, the United Kingdom 159 and Canada 136.

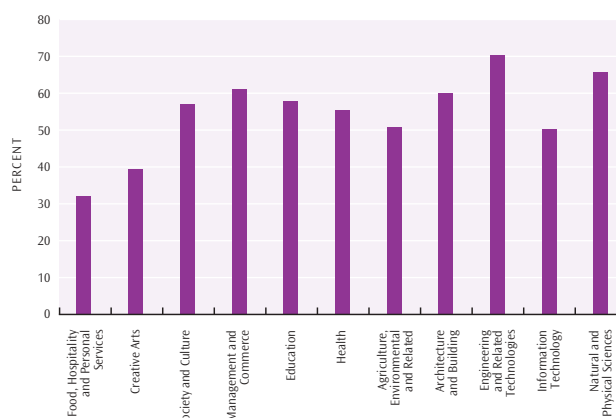
The OECD reports that, although males and females with higher education earn more, males still earn considerably more than females with the same educational attainment. In New Zealand, in the 30 to 44 age group, females' average annual earnings as a percentage of males' was 59 percent for people with an educational attainment level of less than upper secondary, 61 percent for upper secondary and post-secondary non-tertiary education and 68 percent for tertiary education. This reinforces the observation that the gender earnings gap diminishes with higher qualifications. Across all levels of educational attainment, females in New Zealand earn 62 percent of what males earn. In general, the differences are explained by career and occupational choices, the amount of time that males and females spend in the labour force, and the relatively high incidence of part-time work among females.

¹⁴ In the same age group, males educated to below upper secondary level earn comparatively less than males educated to upper secondary level (76 compared with 100). Females in the 25 to 64 age group, educated to below upper secondary level, have a relative earnings score of 72 compared with 100 for females educated to upper secondary level.

The fields of study that had the highest proportion of graduates earning income greater than \$50,000 were: natural and physical sciences (36.4 percent of those with post-school qualifications in this subject who completed the income question); management and commerce (32.8 percent) and engineering and related technologies (31.8 percent). The fields of study that had the highest proportion of graduates earning income of \$20,000 or less were: creative arts (40.9 percent); food, hospitality and personal services (40.0 percent) and information technology (31.6 percent) – the latter commonly assumed to be a field of study that will provide high levels of earnings.

The field of study that had the highest proportion of male graduates receiving an income greater than \$50,000 was health at 58.1 percent of those who specified an income. The equivalent figure for female graduates was 13.5 percent. The field of study that had the highest proportion of female graduates earning income greater than \$50,000 was natural and physical sciences at 20.4 percent. The equivalent figure for male graduates was 48.1 percent. The field of study that had the highest proportion of male graduates earning income of \$20,000 or less was creative arts at 32.4 percent. The equivalent figure for female graduates was 46.1 percent. The field of study that had the highest proportion of female graduates earning income of \$20,000 or less was food, hospitality and personal services at 52.1 percent. The equivalent figure for male graduates was 24.1 percent.

FIGURE 5.15: PERCENTAGE OF POPULATION AGED 15 AND OVER WITH A POST-SCHOOL QUALIFICATION BY FIELD OF STUDY EARNING MORE THAN \$30,000, 2001



Source: Statistics New Zealand, *Census of Population and Dwellings, 2001*.

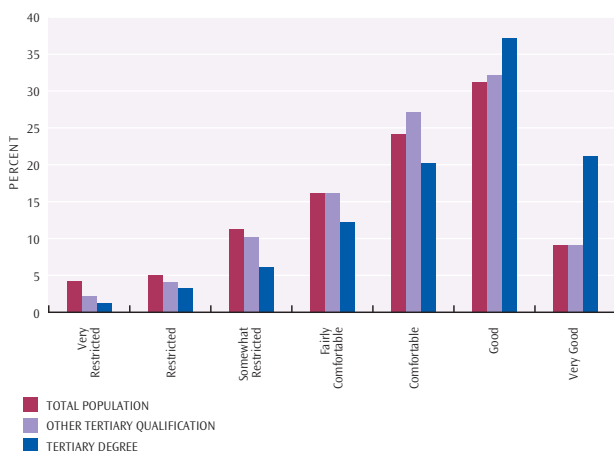
SOCIAL AND FAMILY OUTCOMES

In 2002, the Ministry of Social Development released a report called *New Zealand Living Standards 2000* which provides a broad description of the living standards of New Zealanders. A new social measurement tool, the Economic Living Standard Index (ELSI), was developed in order to consolidate large amounts of information about different aspects of economic well-being, into a single score.

The ELSI scale is made up of seven bands which describe the living standards of the New Zealand population from 'very restricted' to 'very good'. The following graph shows the percentage of all New Zealanders in each of these seven bands compared with the percentage for those with tertiary qualifications.

Analysis of the effects of education on the ELSI index clearly shows how increased education has a positive effect on living standards. Overall, 20 percent of the total population fell into the bottom three categories of 'very restricted', 'restricted', or 'somewhat restricted', compared with only 10 percent of those with tertiary degrees. Whilst 58 percent of those with tertiary degrees fell into the top two categories of 'good' or 'very good', only 40 percent of the total population were in these two categories.

FIGURE 5.16: LIVING STANDARDS OF NEW ZEALANDERS, 2000



Source: Ministry of Social Development, *New Zealand Living Standards, 2000*.





INTRODUCTION

Improving Māori involvement and improving achievement in tertiary education are two critically important goals for the development of New Zealand's knowledge society.

The composition of New Zealand's population is changing and Māori will make up an increasing proportion of our society (rising from 16 percent of the population in 2001 to 21 percent in 2050). It is therefore essential to develop strategies that address the learning needs of Māori and ensure their successful participation in the labour market and community.

During 2001 and 2002, a number of strategies to lift Māori participation and achievement rates were initiated. A landmark education hui was held to explore new directions and partnerships between Māori and Government. The hui's vision and goals later informed the Government's Māori Education Framework and *Tertiary Education Strategy 2002/07*.

Many tertiary education initiatives that focus on the needs of Māori learners and the provision of learning environments responsive to Māori are underway. For example, the three public wānanga provide a uniquely Māori path into tertiary education based on tikanga, Te Reo and Mātauranga Māori, while a quarter of PTEs cater in a specific way to the needs of Māori learners. Around one-fifth of publicly funded PTEs identify themselves as Māori providers.

Many Māori learners are also involved in vocational and workplace learning programmes or are enrolled in foundation and bridging programmes to assist them into entering tertiary learning.

Some examples of new directions in Māori tertiary learning are highlighted in this chapter.

chapter six

MĀORI IN TERTIARY EDUCATION
CONTRIBUTE TO THE ACHIEVEMENT OF
MĀORI DEVELOPMENT ASPIRATIONS

THE HUI TAUMATA MĀTAURANGA – A NEW VISION FOR MĀORI EDUCATION

In November 2001, Ngati Tuwharetoa Paramount Chief Tumu Te Heuheu hosted the Hui Taumata Mātauranga at Taupo. There were also various regional hui held throughout the country. Three hundred people attended the hui resulting in the identification of the congruence of the educational goals of Māori and the government. The hui led to a process for policy development as a shared enterprise between the two parties. Of equal significance is the enormous potential for Māori leadership in education and the high level of consensus amongst Māori around the broad directions for Māori education. Two further Hui Taumata Mātauranga have been held.

TE RAUTAKI MĀTAURANGA MĀORI – CONTRIBUTE TO THE ACHIEVEMENT OF MĀORI ASPIRATIONS

The Tertiary Education Strategy is an indication of how the Hui Taumata Mātauranga process has influenced government policy, particularly as it relates to tertiary education and the current tertiary reforms. A feature of the Strategy has been the ongoing development of the *Māori Tertiary Education Framework* by the Māori Tertiary Reference Group. The Framework summarises the themes put forward by Māori communities through oral and written submissions during the consultation on the Draft Tertiary Education Strategy. It then goes on to combine those themes with information from the Hui Taumata Mātauranga.

The Framework represents the first such initiative focused on Māori and tertiary education and seeks to improve the responsiveness of the tertiary system to Māori learners and their communities. The Framework breaks down into five guiding principles and seven priority areas. These are:

The five guiding principles:

- Whakanui – respect/inclusiveness
- Toi Te Mana – influence/empowerment
- Ngā Kawengā – responsibility
- Ahu Kāwanatanga – contribution/partnership, and
- Tino Rangatiratanga – authority/self-determination.

The seven priority areas:

- Lifelong learning pathways
- Kaupapa Māori provision
- Learning environments
- Advancement of whānau, hapū and iwi
- Māori-centred knowledge creation
- Māori leadership, and
- Māori as sustainable wealth creators.

It is intended that the Framework will be a valuable resource for a wide range of groups and for various purposes. In particular, the Framework has been designed to support:

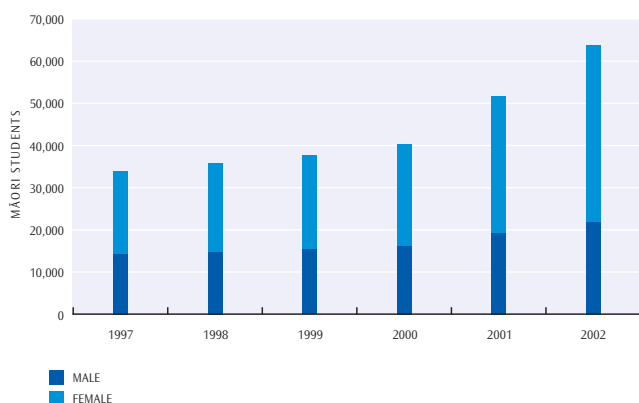
- tertiary education organisations, as the policies of the tertiary reforms are implemented
- Māori communities, to assist them in their interactions with local tertiary organisations and in the development of their own education plans
- government agencies, through offering strategic direction for future policy development, and
- industry and business, as they work to establish links between Māori communities, tertiary education organisations and themselves for the purposes of regional economic development.

MĀORI PARTICIPATION IN TERTIARY EDUCATION¹ RECENT TRENDS IN MĀORI PARTICIPATION

Since the late 1990s, there has been a steady growth in the number of Māori participating in tertiary education. This positive trend continued in 2002. Over the past six years, the number of Māori students in tertiary education has increased by 89.5 percent, from 33,616 in 1997 to 63,694 in 2002. The number of Māori tertiary enrolments constituted 19.9 percent of all enrolments on 31 July 2002, whereas Māori comprised 12.8 percent of the total population aged 15 and over.

¹ A fuller discussion of Māori participation in tertiary education can be found in Ministry of Education (2003) *Participation in Tertiary Education 2003*. This report may be found on the Ministry of Education website: www.minedu.govt.nz.

FIGURE 6.1: FORMALLY ENROLLED MĀORI STUDENTS BY GENDER, JULY 1997-2002

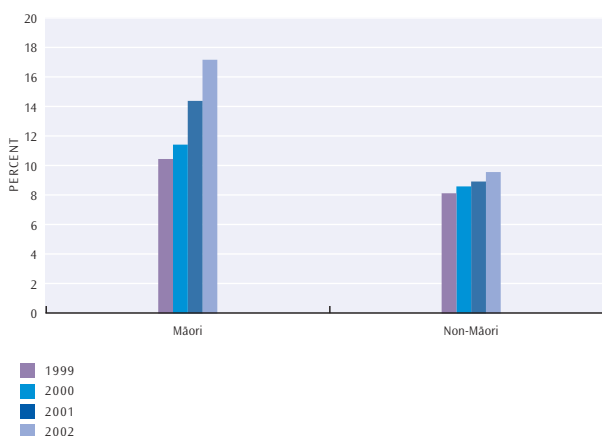


Māori enrolments have grown much faster than enrolments by other ethnic groups. In particular, the percentage growth in Māori enrolments at TEIs has surpassed that of European/Pākehā enrolments in each of the past six years. This growth has occurred both through natural population increases and through increases in the rate of Māori participation. In the future, projected growth in the Māori population base is likely to result in further growth in the proportion of Māori students in tertiary education providers. The annual growth rate for Māori between July 1997 and July 2002 has averaged more than 13 percent a year, compared with 4 percent a year for all domestic students, just under 8 percent for Pasifika and less than 1 percent a year for European/Pākehā.

Participation overall for Māori is significantly higher than for non-Māori. The Māori participation rate has increased from 14.4 percent of the population aged 15 and over on 31 July 2001 to 17.2 percent in 2002. The participation rate for non-Māori on 31 July 2002 was 9.5 percent.

Even after adjusting for the younger age profile of the Māori population, the propensity for Māori to engage in tertiary study continues to be higher than other groups except for people of Asian ethnicity. Age-adjusted Māori and non-Māori participation rates were 14.5 percent and 10.5 percent respectively at 31 July. On a full-year basis, age-adjusted Māori and non-Māori participation rates were 19.9 percent and 13.6 percent respectively².

FIGURE 6.2: TRENDS IN MĀORI AND NON-MĀORI STUDENTS' PARTICIPATION, JULY 1999-2002



Māori are younger than non-Māori in the general population, but older in the student population. In 2002, around 29 percent of the whole Māori population were aged between 15 and 25, compared to 19 percent of the non-Māori population. By contrast, 36 percent of Māori students were between 15 and 25, compared with 51 percent of non-Māori students.

There are now almost twice as many Māori women studying as Māori men. The proportion of women has increased from 58 percent of Māori students on 31 July 1997 to 66 percent in 2002. In the sector as a whole, women make up 57 percent of those studying. More information on participation by age and by gender can be found later in this chapter.

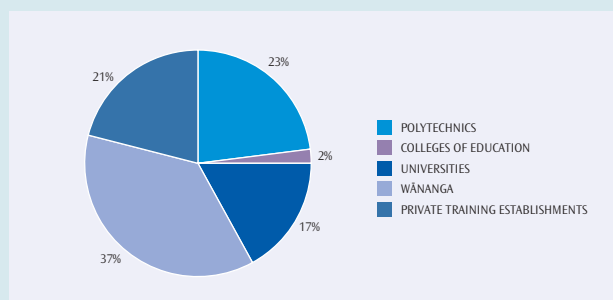
MĀORI TERTIARY EDUCATION ENROLMENTS BY SUB-SECTOR

Māori made up around 20 percent of the total number of domestic students in all providers. The percentage of Māori students studying at private training establishments (PTEs) is higher than at tertiary education institutions (TEIs). On 31 July 2002, there were 13,542 Māori students at PTEs, representing 25 percent of the total domestic student body in PTEs. Māori enrolment in PTEs, however, did fall by 12.8 percent between 31 July 2001 and 31 July 2002.

² An age-standardised participation rate answers questions such as, if Māori and non-Māori had the same age distribution how would their rate of participation in tertiary education compare? For example, if one group had 80 percent of people aged 18 to 24, while another group had only 20 percent aged 18 to 24, participation would be naturally higher in the first group, and could not be used to indicate a lack of participation from group two. If each group keeps their age-specific rate, but is given the same proportion of population for each age group, the resulting rate can be compared with the natural age differences removed.

As at 1 July 2002, Māori enrolments in TEs were as follows: 11,010 Māori were enrolled at universities (representing 17 percent of all Māori students), 22,775 at wānanga (36 percent of Māori students), 14,970 at polytechnics (33 percent of Māori students) and 1,397 (2 percent) at colleges of education. This means that Māori constituted 8.3 percent of all enrolments at universities, 15.6 percent of enrolments at polytechnics and 12.9 percent of those enrolled at colleges of education. Māori represented 82.7 percent of all enrolments at wānanga on 31 July 2002.

FIGURE 6.3: DISTRIBUTION OF MĀORI STUDENTS BY SUB-SECTOR, JULY 2002



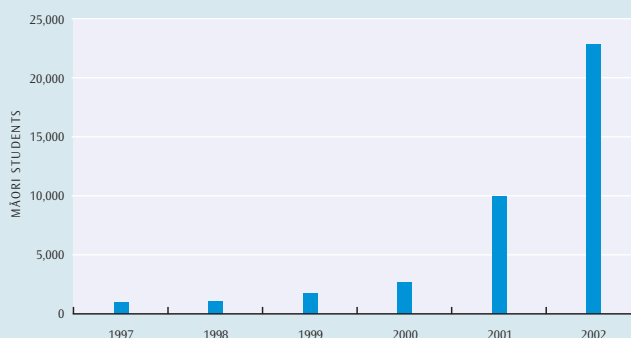
GROWTH IN PARTICIPATION AT PUBLIC WĀNANGA

Much of the recent growth in Māori tertiary participation can be attributed to increased participation at the three public wānanga – Te Wānanga o Raukawa, Te Whare Wānanga o Awanuiarangi, and Te Wānanga o Aotearoa. In particular, there was very strong growth in the number of enrolments at Te Wānanga o Aotearoa. In the 2002 academic year, this provider grew by over 73 percent while the other two wānanga grew by 29 percent.

Over the past four years, the number of Māori students attending wānanga has increased by 2,267.5 percent from 1,735 students in 1999 to 22,775 students in 2002. This total represents 35.7 percent of all Māori participating in tertiary study at 31 July 2002. On a full-year basis, 41.4 percent of Māori in tertiary study were enrolled in wānanga. Seventy-nine percent of students who attended wānanga during 2002 were Māori.

By July 2002, numbers of Māori enrolled at the public wānanga were double those enrolled at universities. On 31 July 2002, 6 percent of the Māori population aged 15 and over were enrolled at a wānanga compared with 3.2 percent at a university. For all of 2002, Māori participation at wānanga was 9.4 percent of the Māori population aged 15 and over, compared with 3.8 percent of the Māori population aged 15 and over at universities.

FIGURE 6.4: GROWTH IN MĀORI STUDENT NUMBERS AT WĀNANGA, 1997-2002

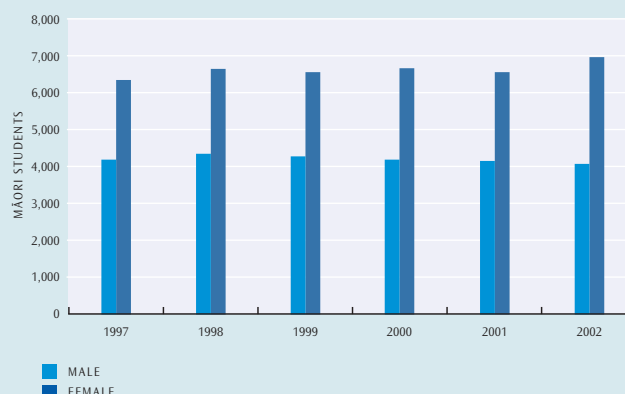


The popularity of wānanga as a study choice for Māori can be expected to increase as the wānanga utilise their increased capacity to develop more programmes to meet the educational needs of Māori. It is also expected that wānanga will increase accessibility to tertiary study for Māori learners.

MĀORI PARTICIPATION AT UNIVERSITY

Over the past six years, the number of Māori students enrolled at universities has increased by 4.7 percent, from 10,514 in 1997 to 11,010 in 2002. Male enrolments at universities have decreased by 2.9 percent between 1997 and 2002, whereas female enrolments have increased by 9.7 percent over the same period.

FIGURE 6.5: MĀORI STUDENTS AT UNIVERSITIES BY GENDER, 1997-2002



MÄORI TERTIARY PARTICIPATION BY GENDER

Over the past three years participation by Mäori women in tertiary education has grown considerably (by 73.6 percent). In 2002, 42,182 Mäori women enrolled at tertiary providers, compared with 21,512 Mäori men. The number of enrolments by Mäori women grew by 116.1 percent between July 1997 and July 2002, while the number of enrolments by Mäori men grew by 52.6 percent over the same period. Mäori women have a significantly higher rate of participation in part-time study than Mäori men.

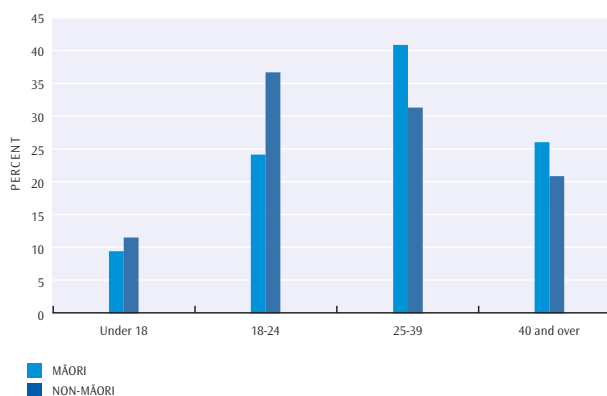
Females participate in tertiary education at a higher rate than males for Mäori and non-Mäori across all age groups and sub-sectors. During 2002, 21.9 percent of all Mäori females aged 15 and over participated in tertiary education, compared with 12.1 percent of males. However, just 17 percent of Mäori women are studying at degree-level or higher, compared with 45 percent for non-Mäori women.

MÄORI TERTIARY PARTICIPATION BY AGE

Mäori tend to participate in tertiary education at a later age, rather than enrolling directly from school. Nearly 67 percent of Mäori students enrolled in tertiary education are 25 years or older, compared with 52.1 percent of non-Mäori students. Participation by Mäori at older age groups has grown significantly since 1994, and partially reflects the success of wänanga and private providers in attracting Mäori with no previous tertiary education. In 2002, Mäori students at wänanga were much older than in other sub-sectors (80 percent were over 25 years or older, compared with 61 percent in polytechnics, 59 percent at private providers, and 43 percent in universities).

Mäori participation is higher than non-Mäori in all age groups except the 18 to 24 year old age group where participation is 27.6 percent and 38.4 percent respectively. However, Mäori are only a third as likely as non-Mäori to be in the core 18 to 24 age group at university.

FIGURE 6.6: PERCENTAGE OF MÄORI AND NON-MÄORI STUDENTS BY AGE, JULY 2002



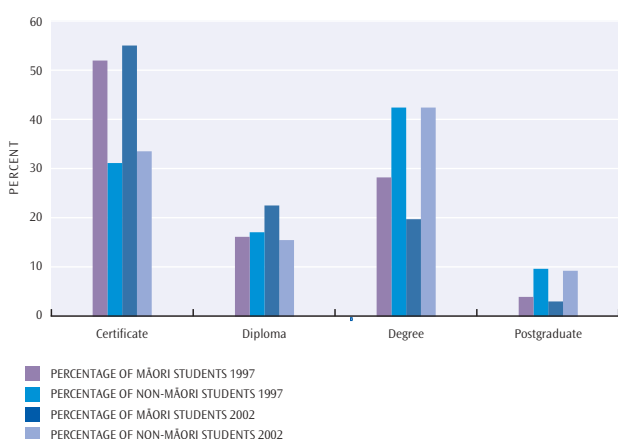
MÄORI TERTIARY PARTICIPATION BY LEVEL OF STUDY

Mäori are participating at sub-degree (certificate and diploma) level study at over twice the rate of non-Mäori. Participation at this level has been growing for Mäori in both public and private providers since 1997.

A total of 49,234 Mäori students were enrolled in sub-degree level study at tertiary providers on 31 July 2002. Sub-degree enrolments represented 77.3 percent of all formal enrolments by Mäori, whereas 56.3 percent of all enrolments in the sector were at the sub-degree level. While around 20 percent of all formal enrolments in tertiary education in 2002 were by Mäori, 30.3 percent of all sub-degree enrolments were by Mäori.

This pattern is inverted at postgraduate level study, with Mäori participation less than half of non-Mäori. 3.2 percent of all Mäori tertiary students are studying at postgraduate level, compared with 9.2 percent for non-Mäori. Whereas numbers have risen for both groups since 1997, the gap between the two has remained about the same. Females are more likely to be studying at postgraduate level and all other levels of study for both Mäori and non-Mäori.

FIGURE 6.7: PERCENTAGE OF MĀORI AND NON-MĀORI STUDENTS BY HIGHEST QUALIFICATION LEVEL, JULY 1997 AND 2002

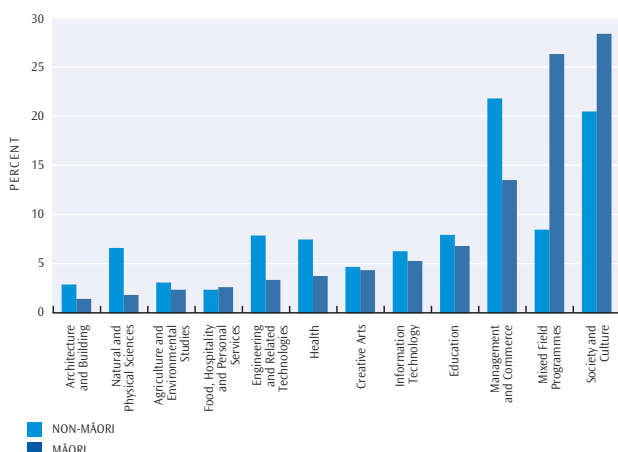


FIELD OF STUDY

The most popular fields of study for Māori over the past six years were management and commerce, society and culture, and mixed field programmes. In 2002, these fields comprised 68.5 percent of enrolments. Māori rates of participation were lower in the natural and physical sciences, engineering, architecture, agriculture, health, the arts, and hospitality.

Female Māori participation was generally higher overall than for males. However, Māori male participation was higher in the engineering and agriculture fields and Māori female participation was over three times that of Māori males in the fields of education, food and hospitality, and health.

FIGURE 6.8: PERCENTAGE OF MĀORI AND NON-MĀORI STUDENTS BY FIELD OF STUDY, JULY 2002



Māori studying at universities and polytechnics are more likely to participate in the fields of management and commerce, society and culture, education, and information technology, whereas Māori studying at wānanga and private training establishments are more likely to participate in areas such as society and culture, mixed field programmes, information technology, and management and commerce.

NATURE OF ATTENDANCE

Māori students are more likely to be studying part-time than non-Māori students. About half (50.4 percent) of Māori students enrolled on 31 July 2002 were studying part-time, compared with 44.3 percent for the sector. In particular, Māori women are more likely to be studying part-time than Māori men (53.1 percent of Māori women, compared with 41.4 percent of Māori men), and more likely to be studying part-time than women overall. By comparison, 46.7 percent of all female students were studying part-time.

The number of female Māori students in part-time study has grown by 198.1 percent between July 1999 and July 2002, compared with 118.3 percent for Māori males, and 36.9 percent for the sector as a whole. A large part of this growth has been due to Te Wānanga o Aotearoa.

Māori students are also more likely to be enrolled extramurally. Nearly a third of Māori students (32.6 percent or 19,954) were enrolled extramurally at 31 July 2002. This proportion is much higher than the sector rate of 21.0 percent. Most of this difference is again due to Te Wānanga o Aotearoa, where 54.7 percent of all enrolments at 31 July 2002 were extramural students. When this provider is excluded, around 20.2 percent of Māori were studying extramurally, compared with 18.0 percent for other groups.

ACTIVITY PRIOR TO STUDY

Māori were more likely than non-Māori to have been unemployed the year before being enrolled in study in 2002 and less likely to have come directly from school, or to have been overseas. The proportion who had come from unemployment, a benefit or not in the labour force was 34.2 percent, compared with 21.2 percent of Pasifika students and 17.2 percent for all students. Only 11.1 percent of Māori were in school in the year before enrolling in tertiary education, compared with 21.3 percent of Pasifika and 22.3 percent for non-Māori. Māori were more likely to enrol for study for the first time than non-Māori.

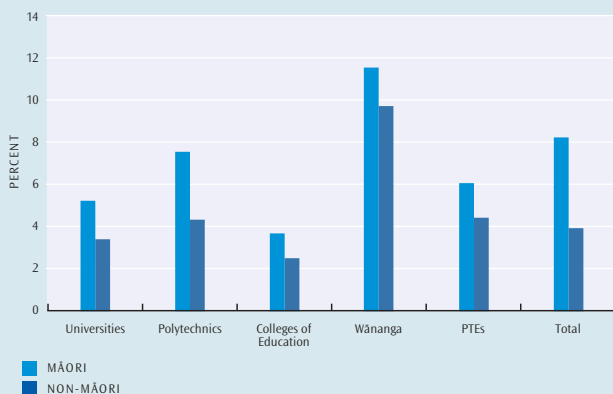


STUDENTS WITH DISABILITIES

There were an estimated 5,026 Māori students with a disability enrolled at 31 July 2002. These represent 8.2 percent of all Māori students, the highest proportion of any ethnic group, and higher than the sector average of 4.8 percent. Māori students make up 34.4 percent of all students with disabilities, compared with 19.2 percent of students with no disability.

The high participation of Māori students with disabilities has been partly due to the success of wānanga in attracting students with disability. At 31 July 2002, 21.1 percent of all students with disabilities (3,083) studied at a wānanga. 11.2 percent of all wānanga students had a disability (compared with 4.8 percent for the rest of the sector).

FIGURE 6.9: PERCENTAGE OF MĀORI AND NON-MĀORI STUDENTS WITH DISABILITIES BY SUB-SECTOR, JULY 2002



MĀORI PARTICIPATION IN WORKPLACE LEARNING AND FOUNDATION EDUCATION

MĀORI PARTICIPATION IN MODERN APPRENTICESHIPS

The Modern Apprenticeships programme began in July 2001 as part of the Government's Industry Training Strategy. It aims to address barriers to industry training faced by young people, as they have been under-represented in structured industry training. 15.4 percent of the 4,344 people in the Modern Apprenticeships programme in 2002 identified as Māori, compared with around 17 percent in 2001.

SKILL ENHANCEMENT – RANGATAHI MĀIA

Skill Enhancement – Rangatahi Māia provides vocational education and training for Māori youth aged 16 to 21 with low qualifications. During 2002, 81 percent of the 1,141 trainees who participated in Skill Enhancement training were Māori. All 81 percent of these students moved into further training or employment on completion of the programme.

POUNAMU PERFORMING ARTS – RANGATAHI MĀIA

Pounamu Performing Arts is a seven-member troupe, family owned and operated by the Wehi Whānau, known globally in the area of Māori Performing Arts. Pounamu has been involved with Training Opportunities, Youth Training and Rangatahi Māia programmes.

Pounamu was founded in 1986 when they recognised the need for Māori-based training for 'taurahere', or Māori who had moved to the city from rural areas. As part of their training, Pounamu has toured in many parts of New Zealand, performing in over 1,000 schools and other public arenas. They have travelled globally, the most recent trip being a 16-day tour of Taiwan. Next year they intend to take a production on the road to tour throughout Aotearoa. Pounamu has seen over 2,000 students come through their doors. Many of their former students are now some of the country's finest performers.

TRAINING OPPORTUNITIES AND YOUTH TRAINING PROGRAMMES

Training Opportunities and Youth Training are second-chance education programmes funded by the government. Twenty-six percent of providers delivering the programmes identify themselves as Māori providers.

During 2002, there were 315 providers offering Youth Training programmes and 12,530 Youth Training trainees. In 2002, 48 percent of trainees were Māori, compared with 46 percent in 2001. Forty-one percent of the Māori trainees moved into further employment within two months of completing training, while 25 percent progressed on to further training or education outside the programme. Māori learners are increasingly likely to move into employment after leaving the programme; progress into employment for Māori trainees was 31 percent in 1999 and 41 percent in 2002.

In 2002, more than 19,198 people participated in the Training Opportunities scheme. Of these, 8,063 were Māori. Sixty-four percent of Māori Training Opportunities trainees achieved 'positive outcomes' – employment or further education or training – within two months of leaving the programme in 2002, compared with 61 percent in 2001. Positive outcomes in Training Opportunities have been improving over time for Māori. The proportion of Māori learners achieving a positive outcome increased from 38 percent in 1993 to 64 percent in 2002.

On average, Māori learners in Training Opportunities achieved 18 credits on the National Qualifications Framework in 2002. This compares with an average of 21 credits achieved by non-Māori. Although Māori learners tend to achieve slightly fewer credits than other participants in Training Opportunities, this may be explained by differences in starting qualifications.

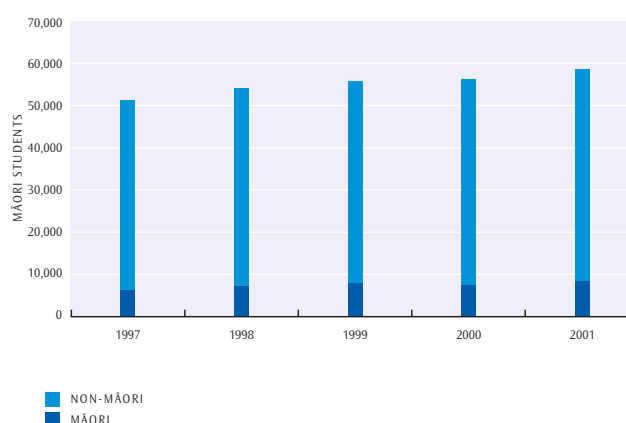
MĀORI ACHIEVEMENT IN TERTIARY EDUCATION

At the time of going to publication, formal completions data for 2002 was not available. The discussion below relates to trends up to 2001.

In 2001, 12,739 Māori students gained a tertiary qualification at a tertiary institution, comprising 15 percent of all qualification completions.

Overall, the number of Māori qualification completions has almost doubled from 6,491 in 1997 to 12,739 in 2001, an increase of 96 percent. By contrast, non-Māori completions increased by 45 percent over the same period. The proportion of qualifications completed by Māori has also increased from 11.9 percent of all completions in 1997 to 15 percent in 2001. The increase in the number and proportion of Māori students gaining qualifications is an encouraging indication of improved participation for Māori students.

FIGURE 6.10: MĀORI AND NON-MĀORI STUDENTS COMPLETING QUALIFICATIONS, 1997-2001



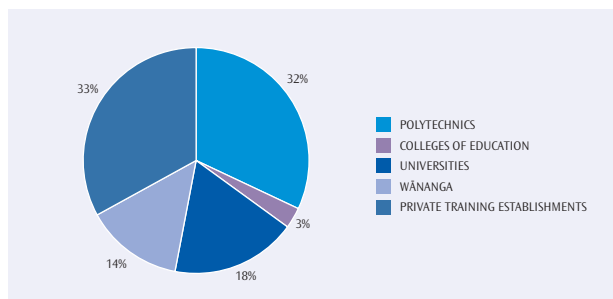
MĀORI TERTIARY ACHIEVEMENT BY SUB-SECTOR

In 2001, Māori were more likely to gain a tertiary qualification at either a polytechnic or a PTE, with 65 percent of all completions in these two types of provider. The higher proportion of qualifications awarded at these two provider types in part reflects the way in which these providers cater for the needs of Māori learners. Universities encompassed 18 percent of Māori qualification completions whilst colleges of education awarded 3 percent of completions. The remaining 14 percent of Māori qualification completions were at wānanga. These figures broadly follow the patterns of Māori enrolments by sub-sector.

Since 1997 the number of Māori students completing qualifications at TEIs has increased by 32 percent or nearly 2,050. A substantial share of this increase (44 percent) relates to the growth at wānanga. Wānanga have experienced significant growth over the last five years with the number of completions increasing by nearly 900 – from 247 in 1997 to 1,753 in 2001. PTEs have also experienced rapid growth in the number of Māori students completing qualifications. In 2001, 4,200 students completed programmes of study at PTEs, compared with 2,409 in 2000 – an increase of 74 percent.

Māori students represented 20.5 percent of those completing qualifications at PTEs, compared with 13 percent at TEIs.

FIGURE 6.11: DISTRIBUTION OF MĀORI STUDENTS COMPLETING QUALIFICATIONS BY SUB-SECTOR, 2001

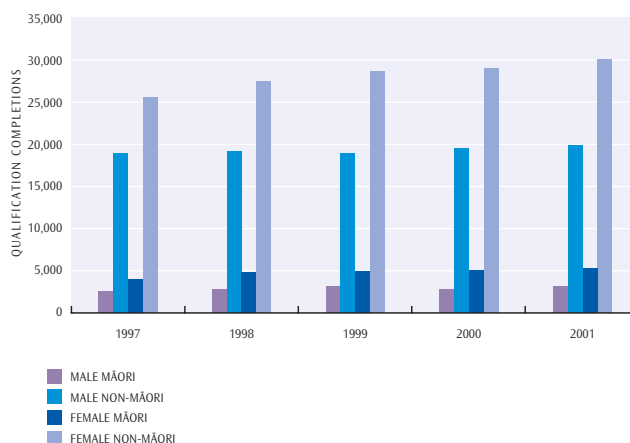


MĀORI TERTIARY ACHIEVEMENT BY GENDER

As with Māori enrolments, a clear majority of Māori completing qualifications are female, with the imbalance more apparent for TEIs than PTEs. In 2001, 63 percent of Māori completions in TEIs were female, compared with 55 percent in PTEs.

The number of higher qualifications completed by Māori women is likely to be greater than the number completed by Māori males. Overall, 23 percent of Māori completions by women were either at degree or postgraduate level in 2001, compared with 19 percent for Māori males. The imbalance noted here reflects similar imbalances in enrolments.

FIGURE 6.12: MĀORI AND NON-MĀORI STUDENTS COMPLETING QUALIFICATIONS AT TEIS BY GENDER, 1997-2001

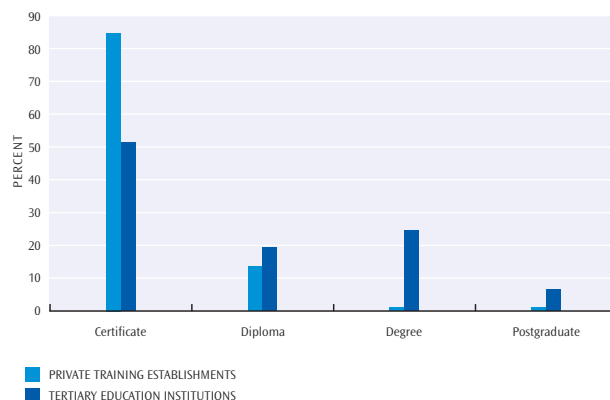


MĀORI ACHIEVEMENT BY LEVEL OF QUALIFICATION

In 2001, 79 percent of qualifications gained by Māori students were either certificates (62 percent) or diplomas (17 percent) while a further 21 percent completed a higher-level award such as a degree (16 percent) or a postgraduate qualification (five percent).

The tendency of Māori to complete sub-degree qualifications varies by sub-sector. In PTEs, the majority (97 percent) of Māori completed either certificates or diplomas. By contrast, 70 percent of Māori graduates gained either a certificate or diploma from a TEI.

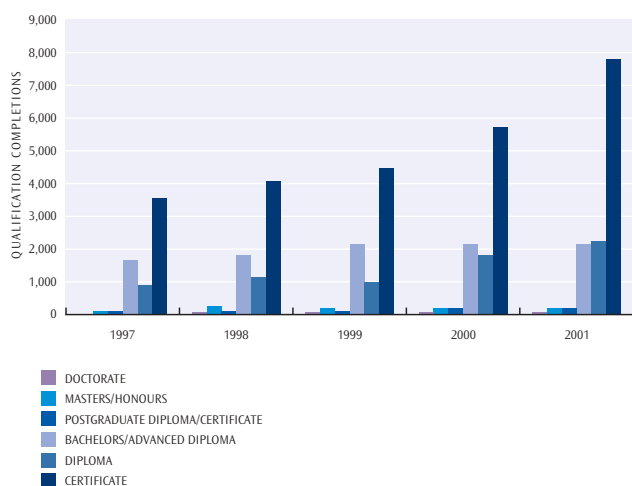
FIGURE 6.13: DISTRIBUTION OF MĀORI STUDENTS' QUALIFICATION COMPLETIONS AT TEIS AND PTEs BY QUALIFICATION LEVEL, 2001



At the other end of the spectrum, 24 percent of Māori students at a TEI graduated with a bachelors degree or equivalent and a further 6 percent achieved a postgraduate qualification. However, qualifications achieved by non-Māori students are more likely to be at a higher level than those achieved by Māori, with 41 percent of non-Māori gaining a bachelors degree or equivalent with a further 15 percent achieving postgraduate qualifications. Although there was a considerable increase in the number of Māori postgraduate students (75 percent) between 1997 and 2001, only 5 percent of total Māori completions were at the postgraduate level.

The increase in the number of sub-degree completions by Māori students was 124 percent.

FIGURE 6.14: MĀORI STUDENTS' QUALIFICATION COMPLETIONS AT TEIS BY QUALIFICATION LEVEL, 1997-2001

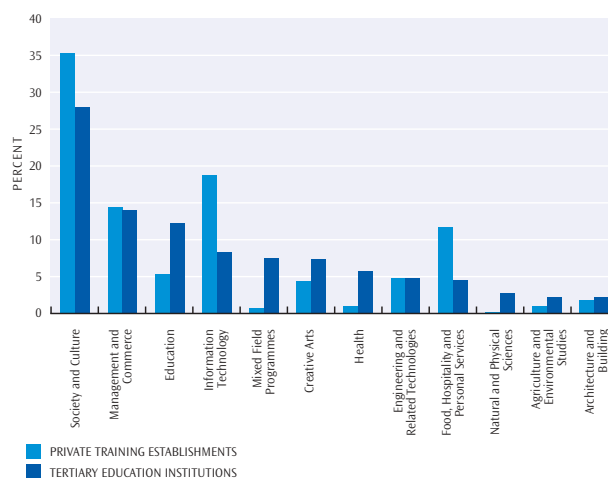


MĀORI TERTIARY ACHIEVEMENT BY FIELD OF STUDY

Overall in 2001, Māori students were more likely to complete a qualification in society and culture (31 percent) and management and commerce (14 percent). Other popular fields of study in 2001 were information technology (12 percent) and education (10 percent).

There are differing patterns of Māori qualification completions in TEIs and PTEs. Māori qualification completions in PTEs are typically focused on such fields of study as society and culture (35 percent) and information technology (19 percent). The proportions of the qualifications gained at TEIs by Māori students were: society and culture (28 percent), management and commerce (14 percent) and education (12 percent).

FIGURE 6.15: DISTRIBUTION OF MĀORI STUDENTS COMPLETING QUALIFICATIONS AT TEIS AND PTEs BY FIELD OF STUDY, 2001



MĀORI LEARNERS ON THE NATIONAL QUALIFICATIONS FRAMEWORK (NQF)

The New Zealand Qualifications Authority's (NZQA) Māori Provider Development and Support (MPDS) provides free 'one-on-one' support to all registered Māori tertiary education providers and wānanga across the country. NZQA recognises that Māori PTEs are a dynamic force within education and that Māori educational institutions have a critical role to play in increasing the participation and achievement levels of Māori in education. Around New Zealand there are more than 163 Māori organisations running training courses on marae, and rural and urban centres.

The MPDS team's regional facilitators can help Māori PTEs by:

- helping Māori providers review their management systems
- helping Māori providers implement their own review processes
- working either 'one-on-one' with local providers or facilitating regional workshops to work on common issues around improving quality management systems, and
- acting as an important communication point between Māori providers and NZQA's head office in Wellington.

The private training sector is a significant provider of training in NQF units for Māori. Overall in 2002, PTEs awarded 40 percent of all NQF qualifications. Māori gained 26 percent of NQF credits awarded by PTEs. Of all NQF qualifications gained by Māori in 2002, 75 percent were at NQF levels 1 to 3. NZQA and Māori have both identified achievements at higher levels as a high priority for the future.

In 2002, Māori learners gained 11 percent of their NQF credits in agriculture, forestry and fisheries (compared with 11 percent for non-Māori) and 19 percent in the service sector (26 percent for non-Māori). Of all Framework qualifications awarded to Māori, 24 percent were in computing and information technology (17 percent for non-Māori).

OTHER INITIATIVES TO IMPROVE MĀORI PARTICIPATION AND ACHIEVEMENT IN TERTIARY EDUCATION

INDUSTRY TRAINING

The Industry Training system review in 2001, considered the future shape, funding, focus and priorities of industry training in New Zealand. In particular, it looked at how well the system was working and what changes might improve its responsiveness and effectiveness. The strategies identified in the review are now being implemented.

The review found that there is a high level of Māori participation in industry training relative to the proportion of Māori in the labour force. In 2002, 10 percent of the labour force was Māori while 17 percent of industry trainees were Māori. Over 70 percent of Māori trainees were in level 3 or higher Industry Training programmes and more likely to participate in training managed through such Industry Training Organisations as Te Kaiawhina/Social Work, forestry, seafood and building services.

ADULT LITERACY

The New Zealand Adult Literacy Strategy, *More Than Words*, was released in May 2001, in response to the need to ensure that all New Zealanders have the reading, writing and broader communication skills to participate in work, family and the community.

A survey of adult literacy in New Zealand in 1996 found that the majority of Māori were functioning below the level of competence in literacy required to meet the demands of everyday life effectively. Literacy impacts on retention in senior secondary school and on labour force opportunities and income.

Opportunities for Māori will be increased through literacy programmes for job seekers, community-based literacy programmes, and family literacy programmes where the educational needs of both adults and children are addressed.

The Adult Literacy Innovation pool was established in 2002 to support provision of literacy education in adult literacy providers. In particular, new opportunities were created for family literacy projects, for Māori and Pasifika peoples and for refugee communities.

The final reports on the projects funded through this pool show that 40 percent of all learners were Māori.

In programmes run by Workbase, the National Centre for Workplace Language and Literacy, 25 percent of students were Māori learners. Twenty-eight percent of learners on Literacy in the Workplace funded programmes were Māori. The progress overall of learners on these programmes indicates that a third of learners were on the way to achieving 20 credits on the National Qualifications Framework while another third were working towards achieving 10 credits. The remaining learners were not working towards formal unit standards but had other tangible examples of learning progress.

SPECIALIST EDUCATION INITIATIVES

The Ministry of Education also manages a number of scholarship and study award programmes designed to improve the capability and capacity of the sector to provide specialist education services. Programmes have been designed specifically for Māori, including:

- scholarships to support training as a speech language therapist (eight of the 11 new scholarships provided each year are set aside for Māori), and
- scholarships to support the training of sign language interpreters who are fluent in te reo.

Other programmes, which are not specifically targeted, include study awards to support teachers to train as teachers of the deaf, Resource Teachers Vision, Resource Teachers Learning and Behaviour, teachers working with children and young people with high and very high learning needs, and early intervention teachers. In addition to providing these awards, the Ministry has supported the providers of the associated training programmes to deliver their programmes by distance, thereby ensuring that they are reasonably accessible throughout the country.

Study awards are also provided to support the training of educational psychologists and to Ministry of Education staff to access training relevant to their employment as an advisor on deaf children.

MĀORI AND ADULT AND COMMUNITY EDUCATION (ACE)

Adult and Community Education (ACE) offers a range of educational activities and opportunities within the community and supports the learning needs of individuals, groups, iwi, hapū and whānau. It provides an important pathway into tertiary education for people with few or no school-level qualifications, and promotes lifelong learning. It is particularly effective in areas such as adult literacy, self-development, computer skills, training for volunteers and Te Reo Māori.

The Adult Education and Community Learning Working Party included among its proposals in 2001 increasing the participation of Māori in ACE, and increasing Māori control over their own learning. The working party recommended:

- more resources for Māori adult and community learning initiatives
- the development of multiple pathways to learning to increase choices for Māori, to improve their access to learning and to ensure that learning is more effectively delivered to meet their needs through the ACE sector, and
- an integrated approach to Māori ACE that links up homes, schools, government departments, marae, runanga and other relevant groups.

The iwi-based Adult and Community Education Pilot Network aims to facilitate the identification of adult and community education needs in local communities, and act as the link between local communities, local ACE providers, other tertiary providers and central government agencies. This iwi-based pilot network is the first of its kind to be developed.

TAUMARUNUI – HE TANGATA HE MOHIO

A Māori adult education centre, run by Māori, for and with Māori, was the goal of Te Waka Pu Whenua in Taumarunui, set up in March 1999. Three years on, the centre is thriving as a popular base of culture and learning for the small North Island town's Māori.

Te Waka Pu Whenua is a self-funded centre that relies on contracts, activities fees, course revenue and donations. Funding proposals are an ongoing activity. As well as facilitating courses, it hosts a number of hui to support whānau and marae development. These include: issues impacting on Māori land, Māori language, traditional and contemporary weaving, treaties and negotiations, Māori art and design and approaches to Māori teaching and learning.

SUPPORTING MĀORI ACHIEVEMENT

A Special Supplementary Grant (SSG) to support the achievement of Māori and Pasifika in tertiary education was introduced in 2001. In 2002, a total of \$4.6 million was paid to TEIs under this grant. The grant provided additional funding to TEIs to assist them to:

- increase the retention and completion rates of Māori tertiary students, and
- encourage Māori tertiary students to enter higher education and into subject areas where they are under-represented.

While the uses to which the funding is put vary between TEIs, some real success is being reported by a number of institutions who are using this funding to increase the participation of Māori students in non-traditional subjects and to aid retention.

In 2002, TEIs implemented a wide range of initiatives to support Māori students, such as mentoring, careers advice, scholarships, tutorials and cultural events. Many of the initiatives are implemented as long-term initiatives in order to build a base from which to improve the educational outcomes for Māori.

An evaluation of the effectiveness of the SSG for Māori and Pasifika students has been completed. Some of the key findings of the evaluation are:

- The SSG has made an important difference within TEIs for Māori students, despite the limited amount of money provided.
- The targeting of a specific pool of money aimed at increasing the success of Māori students in TEIs was seen as one of the major benefits of the SSG.
- Further consideration should be given to whether the funding will continue to be allocated for Māori and Pasifika EFTS jointly, or whether it should be allocated and reported on separately.

FINANCIAL SUPPORT FOR MĀORI STUDENTS

A range of financial assistance measures is available for tertiary students:

- Targeted support is available through the student allowances scheme for students from low-income families. In 2002, 13,302³ full-time Māori students received an allowance, compared with 11,189 in 2001 and 8,457 in 2000. This represents an increase of 57.2 percent in Māori students receiving an allowance over the period 2000 to 2002.
- Student loans assist tertiary students to meet tuition fees, course-related costs and living costs. In 2002, 16.2 percent of borrowers with a declared ethnicity were Māori compared with 16.1 percent in 2001 and 13.2 percent in 2000. This represents an increase of 7,522 (44.2 percent) in Māori borrowers.
- In 2002, Māori students borrowed \$143.3 million, compared with \$140 million in 2001 and \$98.9 million in 2000. The average amount borrowed by Māori students was \$5,734 in 2002 compared with \$5,802 in 2001, a decrease of 1.1 percent.
- In 2002, 14,802 Māori females and 9,707 Māori males have borrowed, compared with 14,536 Māori females and 9,403 Māori males in 2001.
- A Training Incentive Allowance is also available to assist some beneficiaries gain access to education. In 2001, 37.5 percent of those receiving that allowance were Māori.

In addition, some financial assistance is available specifically for Māori. In 2002/03 this included:

- tertiary scholarships for Māori students including the Meri Mataira Scholarship, Te Maru Māori Trust Scholarships, Māori Education Trust Professions Scholarships, Eric Hall McCormick Scholarships, and
- TeachNZ scholarships of \$10,000 for training Māori (and Pasifika) early childhood and primary school teachers.

In addition, the Government funds three scholarship schemes targeted to Māori:

- Manaaki Taura
- Māori and Pacific Higher Education Scholarships, and
- Ngarimu VC and 28th Māori Battalion Memorial Fund Scholarships.

These awards are all administered on behalf of the Crown by the Māori Education Trust.

Manaaki Taura, introduced in 1991, offers tertiary students assistance with their tuition fees. The scheme was designed to offset the cost of their fees during a period when enrolments by Māori were beginning to rise and when fees were increasing. To qualify for a Manaaki Taura award, a student must demonstrate financial need, academic merit and a commitment to Māoritanga/Māori community development. Around 8,000 to 9,000 awards are made annually from a capped pool of \$4.3 million, meaning that the average award is around \$500.

Māori and Pacific Higher Education Scholarships are valued at \$10,000 per annum, normally for the duration of the scholar's qualification. Awards are made on academic grounds. Each year, 15 new awards are made, while a number of scholars continue. The total number of scholars at any one time is about 38. The awards are funded from a pool of \$526,000.

Ngarimu VC and 28th Māori Battalion Memorial Fund Scholarships are designed to promote academic excellence. The value of the awards is \$5,000. There are only 13 scholars at any one time.

³ The methodology used to record ethnicity has changed. Earlier reports used prioritised ethnicity reporting. The figures quoted in this section use the total response method of reporting ethnicity. In this method, the number recorded for each ethnicity includes those who cited that ethnicity as one of the ethnicities with which they identified as well as those who chose that ethnicity as a sole response.

WĀNANGA SETTLEMENT

In 1999, Te Tauihu o Ngā Wānanga o Aotearoa, on behalf of the three wānanga, took a claim to the Waitangi Tribunal that alleged that the Crown had failed to fund wānanga equitably when compared with other tertiary education institutions (TEIs). The position of the wānanga was that they had been prejudiced by the amendments made to the Education Act in 1989 by the Education Amendment Act 1990, which did not provide for capital establishment funding for any TEI established since 1990. The three wānanga were the only TEIs established since 1990. The Waitangi Tribunal found in favour of the three wānanga and, in 2000/01, \$14.2 million was allocated in part settlement of the wānanga capital claim.

In 2001, Te Wānanga o Aotearoa reached a full and final settlement with the Crown, while Te Whare Wānanga o Awanuiarangi negotiated a settlement in 2002⁴. Negotiation discussions still continue with Te Wānanga o Raukawa.

The settlements have provided the wānanga with the necessary resources to build the infrastructure they need to support the increased number of Māori seeking to gain tertiary qualifications through wānanga delivery.

Following Te Wānanga o Aotearoa's settlement, equivalent full-time student numbers at the wānanga have grown considerably and, by 31 December 2002 had reached 20,768 EFTS. Along with growth in student numbers have come several new campus establishments and the introduction of new programmes and styles of delivery. This investment has opened up access by Māori to tertiary education and directly led to a turnaround in Māori tertiary education participation.

⁴ The settlement with Te Whare Wānanga o Awanuiarangi was signed during 2003