MINISTRY OF EDUCATION
Te Tāhuhu o te Mātauranga

PROFILE & TRENDS 2006

New Zealand's Tertiary Education Sector

CONTENTS

Notes:

1. More detailed contents are provided at the start of each section.
2. Unless otherwise stated, the data in this publication is for the year ended 31 December 2006 and has been sourced from the Ministry of Education.
3. The information in this report and the analytical tables on the Education Counts website need to be used in conjunction with the technical notes in chapter 18.

FOREWORD BY THE SECRETARY FOR EDUCATION

I am pleased to introduce *Profile & Trends 2006: New Zealand's Tertiary Education Sector*, the ninth annual publication in this series released by the Ministry of Education. Profile & Trends gives a summary of the overall performance and key characteristics of the tertiary education system. This issue describes the system as it was in 2006, while also foreshadowing the implementation of the current tertiary reforms that will take effect from 2008. Throughout the report, brief forward-looking commentary is provided.

The report reveals a tertiary education sector that is responding to many of the challenges it faces. In 2006 and 2007, tertiary education organisations and government have made considerable commitment in the reforms of the systems that steer and fund New Zealand's tertiary education system. A system more closely connected to national goals and to the communities it serves is emerging. The new funding system is centred on 'investing in a plan'. The new approach will provide more certainty for tertiary education organisations, allowing the sector to continue to make an enduring contribution to New Zealand's economic transformation; families – young and old; and national identity.

Dovetailing with the tertiary reforms is New Zealand's second tertiary education strategy, released in December 2006. The *Tertiary Education Strategy 2007-12* has a sharper focus on the contribution the tertiary education system is expected to make to New Zealand's development. In 2007, the Tertiary Education Commission worked with tertiary education organisations on the first investment plans, which set how they will contribute to meeting the government's priorities for tertiary education and the needs of their stakeholders for the period from 2008 to 2009.

The system and what it provides are described in the first part of this report. This is followed by a survey of the outcomes of tertiary education. This analysis shows that the tertiary qualified earn more than those without qualifications and that this earnings advantage persists over time. The report then covers where students are studying, what qualifications they are taking, their field of study and other important characteristics of people undertaking tertiary study, as well as information on the financial support for students. The report looks at the financial performance of providers, government funding for tertiary education and the human resources in the system. The research capability of the sector is discussed together with the funding of research in tertiary education.

While the statistics provided in this report and on Education Counts – the Ministry of Education's research and statistics website – are derived mainly from reports provided to the ministry by tertiary education organisations, a considerable amount of information in this report has also come from different agencies and organisations with responsibilities for tertiary education outside the ministry. I would like to thank all contributors for the data and assistance they have provided in preparing this report.

I trust that you will find the information presented this year to be relevant and useful to your understanding of the tertiary education system.

Karen Sewell
SECRETARY FOR EDUCATION

CHAPTER ONE

AN OVERVIEW

The *Tertiary Education Strategy 2007-12* was released in December 2006. This second strategy continued the broad and inclusive approach taken by the first strategy. It has a sharper focus on the expected contribution of the tertiary education system to government's national goals. The strategy describes how the tertiary education system is expected to contribute to the success of all New Zealanders through lifelong learning; creating and applying knowledge to drive innovation; and strong connections between tertiary education organisations and the communities they serve.

The new strategy is complemented by a set of reforms of the funding, steering and quality systems that drive our system.

New Zealand's Census of Population and Dwellings was held in 2006. Its findings confirm not only that those with tertiary qualifications earn more than those without qualifications but that differences in earnings between men and women and among ethnic groups decrease as their qualification level increases. The census information also showed that those with higher-level tertiary qualifications earn more, on average.

Another census finding showed that younger adults – those under 35 years – held proportionately more higher-level qualifications than people in older age groups. One in seven New Zealanders now has a bachelors or higher qualification – our knowledge and skills base showed steady growth in recent years.

After rising rapidly for many years, the number of students in provider-based education fell in 2006, while the number of learners in industry training continued to increase. Fewer domestic students completed formally recognised qualifications in 2006. On the other hand, a low unemployment rate attracted some young people into employment, lowering the first-year retention rate of students in 2006. Forty-two percent of domestic students studied at bachelors level. The number of people studying doctorates increased, principally because of the government's decision to treat international doctoral students as domestic for funding purposes – meaning lower fees for doctoral students from other countries. The proportion of Māori and Pasifika students with tertiary qualifications and higher-level tertiary qualifications showed the strongest growth from 2001 to 2006 among all the ethnic groups.

THE 2007 YEAR

In 2007, tertiary education organisations and the government have worked on the implementation of the reforms to the systems that steer and fund New Zealand's tertiary education system. They have also spent time on developing the approach to quality assurance and monitoring.

The new system for tertiary education is built around 'investing in a plan'. Investment in most tertiary education organisations is to be on the basis of a plan from 2008 onwards with some private training establishments moving to the new system in 2009. The Tertiary Education Commission carried out discussions in 2007 with stakeholders and tertiary education organisations on the detail of their expected contribution to the new system. These negotiations were also based on the government's priority outcomes for tertiary education as set out in the strategy for the years 2008 to 2010.

More information about the development of the new tertiary education system is outlined in the postscript to this report and in the forward-looking commentaries included in the chapters that follow.

Statistics and research

Profile & Trends 2006 has an associated set of statistical tables available on the Education Counts website. These statistics are used to inform the analysis contained in this report. These tables provide comprehensive coverage of the key trends in the sector's performance. The topics covered are: resourcing, financials, human resources, research, student support, targeted training programmes, the Secondary-Tertiary Alignment Resource, adult and community education, industry training, enrolments, equivalent full-time student units, participation rates, completion rates, retention rates, progression rates, and outcomes.

More information on tertiary education providers and students can be found on the Education Counts website and on the websites of the Ministry of Education and the Tertiary Education Commission.

The statistics in Profile & Trends 2006 are for the year ended 31 December 2006 and have been sourced from the Ministry of Education, unless otherwise stated.

Tertiary education in New Zealand

New Zealand's tertiary education sector makes a wide range of learning available, from foundation skills to doctoral studies. The sector is a major contributor to the nation's innovation through its research activities. More than 60 percent of all New Zealand's research papers come from the tertiary education sector.

A key feature of the New Zealand system is the integration of funding and provision across vocational education and training, higher education, workplace training, adult and community education, and tertiary education that takes place within the senior secondary school.

A large proportion of tertiary education in 2006 was funded through the Student Component Fund, covering all levels of tertiary education, from second-chance education to doctoral studies. Industry training provides workforce skills to a significant number of people. This training is designed by, and delivered in conjunction with, industry and leads to nationally recognised qualifications. There are also targeted training funds that provide fully subsidised education and training to disadvantaged groups.

The government also funds such learning as foundation education, adult literacy and English for speakers of other languages. It also provides funding to adult and community education organisations to support their work and development.

The results of learning through tertiary education can be viewed in terms of improving competencies and attainment, or progress towards attainment, of recognised qualifications. A competency includes the skills, knowledge, attitudes and values needed to perform important tasks. The Ministry of Education has developed a New Zealand framework for key competencies for the tertiary education sector. The government has also established a Learning for Living programme to build adults' fluency, independence and range in language, literacy and numeracy so that they can use these competencies to participate effectively in all aspects of their lives.

The New Zealand Register of Quality Assured Qualifications incorporates all tertiary qualifications. It provides a standard structure for naming and describing qualifications across levels and types of provision. It includes 10 levels of qualification from entry-level certificates to doctorates.

ENROLMENTS IN 2006

In 2006, there were 491,000 students enrolled in study programmes at tertiary education providers. Forty-three thousand of these were international students. In addition, over 176,000 trainees were engaged in industry-based training, including 9,470 modern apprentices. There were also 65,800 enrolments in short courses in 2006. Non-formal education such as adult and community education attracted an estimated 260,000 enrolments. It is estimated that approximately 19 percent of the population aged 15 years or over participated in some form of tertiary learning with a tertiary education provider during 2006, including 5 percent undertaking formal learning in the workplace.

After rising rapidly for many years, the number of formally enrolled students fell by 2.5 percent in 2006. There was a decline of 4.7 percent when the numbers enrolled at tertiary education providers are converted to equivalent full-time student terms. A major factor contributing to the strong growth in enrolments over the period from 2000 to 2004 was the increase in international students. This count trebled from 16,600 in 2000 to 50,500 in 2004. But in 2005 and 2006, the number of international students fell by 3,080 and 4,170, respectively. Domestic enrolments actually increased by 20,600 in 2005 while they fell by 7,770 in 2006. In contrast, the number of industry trainees increased by 8.1 percent in 2006.

In 2006, 274,000 domestic students, or 56 percent, enrolled in government-funded tertiary education organisations participated in certificate-level study. This compared to 58 percent of domestic enrolments at the certificate level in 2005. The number enrolled in diplomas was 72,600, or 15 percent of enrolments, while 149,000, or 30 percent, undertook bachelors-level study, and 35,600, or 7 percent, were enrolled for postgraduate study. However, when converted to equivalent full-time student units, then bachelors-level study had the highest proportion at 42 percent.

In 2006, 110,000 domestic students completed 114,000 formally recognised qualifications. This represented a 7.6 percent decrease on the previous year in the number of completed qualifications. An estimated 44 percent of domestic students who had started a qualification in 2002 had completed it by the end of 2006. The first-year attrition rate of students in government-funded tertiary education organisations who started a qualification in 2004 was 34 percent, up from 29 percent in the previous year. The relatively low unemployment rate was a contributing factor to the lower retention rate of students.

OUTCOMES OF TERTIARY EDUCATION

The number of people in the New Zealand population with a tertiary qualification is rising. In 2006, more than one in three New Zealanders was tertiary qualified, while the proportion without a qualification has fallen significantly. The proportion of people with a bachelors or higher qualification has increased in all ethnic groups, although in some groups the proportion has increased more than in others. The proportion of women who are tertiary qualified is increasing.

A strong economy, coupled with a tighter labour market, has significantly reduced unemployment at all qualification levels. Nevertheless, the tertiary qualified have a higher level of participation in the labour force. As more women become tertiary qualified, their participation in the labour market is likely to increase.

The earnings premium for those with a tertiary qualification decreased in 2006, compared with those with no qualification. This fall in the tertiary qualification premium reflects the strength of the labour market which currently is providing greater access to employment for those with no or lower-level qualifications. Despite the strong labour market, a significant earnings advantage continued to exist in 2006 for those with tertiary qualifications.

The findings of studies using the integrated dataset for *Student Loan Scheme Borrowers* suggest that participation in tertiary education can lead to a significant earnings advantage in the years following study. In particular, completion of a qualification increased earnings. Recent studies showed that the earnings advantage persisted over time. A summary of these studies is included in chapter 4.

Information from New Zealand's latest population census confirms that an increasing proportion of people hold a tertiary qualification. The higher knowledge and skill levels of the New Zealand population in 2006 – reflecting an increase in the human capital of the economy – was due to a higher participation rate in tertiary education over the last decade, coupled with higher levels of migration. The census data showed that younger adults – those under 35 years – hold more higher-level tertiary qualifications than people in older age groups. One in every two people aged 25 to 34 years in 2006 held a tertiary qualification. Proportionately, there were also more women than men with a tertiary qualification in this age group in 2006. Also, proportionately more women than men held a higher-level tertiary qualification in this age group. In all the ethnic groups, younger people were also more qualified than those in older age groups.

The unemployment rate in the population with higher-level tertiary qualifications has fallen to below 3 percent. The 2006 census data showed that earnings disparities between ethnicities and between men and women decrease as their qualification levels increase. A summary of the 2006 census information is provided in chapter 4.

WORKPLACE-BASED LEARNING

The number of learners in industry training has continued to increase at a steady rate in recent years, even while the increase in the numbers in provider-based education has been slowing. One driver of the rise has been funding increases from both government and industry, reflecting a shared commitment to solve long-term skills shortages in key New Zealand industries and improve workplace productivity.

The number of learners in industry training increased significantly between 2005 and 2006, while there was a decline in student enrolments in provider-based study at equivalent levels over the same period. This growth also surpassed the rate of increase in workers in the labour force, so that the proportion of workers involved in industry training was higher in 2006 than in 2005.

The significant growth in participation in the Modern Apprenticeships scheme, a part of industry training, can be attributed to government funding increases and to its popularity with both industry and young people. Gateway, established in 2001 to broaden educational options for senior school students by offering them workplace-based learning, has also continued to expand. Over 6,700 secondary school students participated in Gateway in 2006. There are prospects for further growth in Gateway because the programme will be expanded to all decile 7 to 10 integrated and state secondary schools from 1 January 2008.

Industry training, Modern Apprenticeships and Gateway programmes are all linked to the National Qualifications Framework. This means that participants can earn credits towards national qualifications. In the case of Modern Apprenticeships and the majority of industry training programmes, participation is linked to the completion of national certificates and diplomas. Learners in industry training can gain credits through flexible, limited and supplementary credit programmes, or study towards qualifications such as national certificates, national diplomas and, less frequently these days, trade certificates. All three programmes saw significant increases in credit achievement over 2006, while national certificate and other qualifications attainment also grew at a steady rate.

LEVEL 1 TO 3 PROVIDER-BASED QUALIFICATIONS

Enrolments in level 1 to 3 qualifications have peaked. After rising strongly in recent years, enrolments in levels 1 to 3 decreased significantly in 2006. The number of students in foundation education has been decreasing since 2004. Student numbers in level 1 to 3 vocational education qualifications have started to decrease. The numbers in short courses also decreased in 2006. Youth training numbers have continued to decline. However, training opportunity numbers have increased for the first time in several years.

The improved labour market is one of the reasons for the decrease in student numbers. Most students coming into study at these levels were employed in the previous year. Students are less likely now to complete or continue in study after a year and, of those who do complete their study, fewer are going on to higher-level studies. These trends are likely to be influenced by the improved employment opportunities that make employment a more attractive option than study. The stronger labour market also tends to reduce the need to complete a qualification once a student has attained the skills or knowledge sought from study.

The Tertiary Education Commission conducted several reviews of provision in 2005 which resulted in reductions and/or reallocations of provision in 2006. The largest in terms of the amount of provision affected was the review of A1 and J1 classified courses. This review resulted in a reduction in the number of students in A1 and J1 courses and an increase in the numbers enrolled in courses in other classifications. A third of private training provider provision was also reviewed, with the aim of strengthening quality provision within this sub-sector. Dive-related courses were also reviewed. An article on *Improving the relevance of tertiary education provision* is included in chapter 7.

Provision at levels 1 to 3 was also affected by policy changes to restrict funding available for short awards. This resulted in a significant drop in the number of students taking courses of one week or less.

The large number of students who participated at this level over the last five years provides an opportunity to look in more depth at their pathways and progression to further education. Students enter study from a range of different backgrounds, including school, other tertiary study, employment and unemployment. Most just study towards one certificate. About a third of these go on to further study and most of them end up studying at a higher level. Different subjects lead to different levels of study, with trade-related subjects feeding into level 4 certificates and more professionally oriented subjects leading to diplomas and degrees. A study of the pathways and progression to further education of students in level 1 to 3 certificates is included in chapter 7.

NON-DEGREE LEVEL 4 TO 7 PROVIDER-BASED QUALIFICATIONS

After five years of significant growth in the number of students enrolled in level 4 to 7 non-degree study, there was a decrease in 2006 of students enrolled in both level 4 certificates and level 5 to 7 certificates and diplomas. While international student numbers have been declining since 2003, the number of domestic students decreased for the first time in recent years in 2006.

There were decreases in the number of domestic students enrolled in level 4 to 7 non-degree study across all types of providers in 2006, except private training establishments. Despite a decrease in domestic students enrolled in polytechnics in 2006, a significant increase in numbers between 2003 and 2005 has resulted in polytechnics providing more than half of all level 4 to 7 non-degree study. The number of domestic students aged 25 years and over declined in 2006; however this age group continued to dominate this level of study with two-thirds of all domestic students aged 25 years and over.

The number of domestic students completing a level 4 certificate decreased significantly in 2006. While the number of domestic students completing a level 5 to 7 certificate or diploma also decreased, the rate of decrease was less than that for level 4 certificates. The five-year completion rates increased, with almost two in five domestic students who had started a level 4 to 7 non-degree qualification in 2002 completing that qualification by 2006.

BACHELORS AND POSTGRADUATE QUALIFICATIONS

For the first time in recent years, there was a decline in students enrolled in bachelors-level and higher study in 2006. While numbers in bachelors and masters-level study decreased, there was a significant increase in doctorate students. The main contributor to the overall decline in numbers was a decrease in international students, particularly from Asia, for the first time since 1998. In comparison, domestic student numbers remained relatively unchanged in 2006.

Universities continued to dominate bachelors-level and higher provision in 2006, with four in every five students studying at a university. Universities and private training establishments were the only types of providers to experience an increase in students in 2006. There was a continued decline in domestic students aged 25 years and over enrolled in bachelors-level and higher study in 2006. In comparison, the number of domestic students aged under 25 years continued to rise.

The number of students completing a bachelors-level or higher qualification increased slightly in 2006. This was due in part to an increase in the five-year completion rate for those domestic students who started study in 2002. Level 8 qualifications[1] experienced the largest increase in domestic students completing qualifications. The five-year completion rates were highest for European and Asian domestic students in 2006.

The University of Auckland economist Dr Sholeh Maani recently explored the relationship between parental income during adolescent years and the tertiary education choices of New Zealand youth at age 18 years. The study by Maani showed that while parental income did not have a statistically significant influence on participation in tertiary education overall, it did significantly influence participation at university. Academic performance at school and peer influence were the most important influences on participation in tertiary education. A summary of Dr Maani's study is provided in chapter 9.

STUDENT SUPPORT

In 2006, student allowances uptake increased, after several years of decline. Between 2001 and 2005, the number of recipients fell each year – largely because, for most students, eligibility for allowances depends on their parents' incomes. As incomes have risen, the number of students whose parents' income fell below the thresholds was declining. From the beginning of 2005, the government began a series of increases in the parental income thresholds. These thresholds are now indexed – they move each year with inflation. In addition, in 2006, there was an increase in the personal income limit – the amount a student can earn from part-time work while still retaining eligibility for an allowance. These policy changes led to a 4.6 percent increase in the number of allowances recipients in 2006. The total paid out on allowances also rose in 2006 – by 8 percent – again, the first rise after several years of reductions.

The uptake of student loans increased in 2006 – the first full year of the interest-free student loans policy. The number of borrowers rose by 8.4 percent on 2005. Around 5.2 percent of the New Zealand population aged 15 and over borrowed from the loan scheme in 2006. The uptake rate – the proportion of eligible students who choose to use the loan scheme was 56 percent, up from 49 percent in 2005.

Another consequence of interest-free student loans is a change in repayment patterns. Loan repayments for the year to 30 June 2007 were no higher than in the previous year, despite there being a larger number of borrowers. The amount repaid – $487 million – was about 5 percent below the amount collected in the year to 30 June 2005. While it will take some time for new repayment trends to emerge, the expectation is that repayments will start to increase from 2008 and that they will rise steadily from then.

RESEARCH CONTRIBUTION

The research performance of the tertiary sector improved in several areas in 2006. In the area of research training, enrolments in doctoral degrees increased substantially. This was driven by a significant rise in international enrolments which occurred in response to a change in government funding policy that funds international doctoral students on the same basis as domestic students. The number of people completing a doctoral degree decreased slightly in 2006, with men and international students especially showing a noticeable decline.

In the area of research output, the universities showed improvement in a number of areas. The external research contract income earned by the universities per academic staff member rose in real terms between 2004 and 2005. Total research output increased at four out of the six universities that reported research outputs in 2006. The academic impact of research by the New Zealand universities, relative to the world average, increased between 2000-2004 and 2001-2005 in four out of ten broad subject areas monitored. Two subject areas, 'health' and 'medicine and public health', had an academic impact above the world average in 2001-2005.

SECTOR CAPABILITY

The collective financial performance of the public tertiary education institutions has declined since 2004 as the operating environment has changed. The aggregate operating surplus fell to 1.9 percent of revenue – below the benchmark of 3 percent. At the same time, while the indicators of liquidity and cash flow remained above the benchmark set for prudent operation of a tertiary education institution, both worsened in 2006, for the second year in a row.

In large part, this decline in financial performance reflected factors such as the continued reduction in international student enrolments, increases

1. This category covers bachelors degrees with honours, postgraduate certificates and postgraduate diplomas.

in the costs faced by institutions and the slowdown in the growth of enrolments in the wānanga. These were all factors that made the operating environment more difficult.

There was considerable variation among the tertiary education institutions, with some recording strong performance, while 12 of the 33 institutions had an operating deficit in 2006, compared to nine in 2005, six in 2004 and none in 2003.

Overall, the universities performed more strongly than the other sub-sectors. They experienced a relatively smaller decline in international students and their income was more diversified than that of the other sub-sectors. The universities' collective surplus – 3.3 percent of revenue – was above the benchmark.

By contrast, the polytechnics experienced a fall in income as international enrolments dropped, as they experienced the effects of changes made to community education funding in 2005 and 2006 and as they moved to reposition their provision. While income fell, the polytechnics' costs continued to rise, with cost per student increasing by 14 percent as they shifted out of shorter courses and as they experienced the effects of the reduction in international students. Their combined operating surplus in 2006 was less than 1 percent of revenue, compared to 1.6 percent in 2005, 4.4 percent in 2004 and 7.7 percent in 2003. Seven of the 20 polytechnics recorded an operating deficit.

Capital expenditure in the tertiary education institutions exceeded the operating cash surplus generated from operations for the second year running, leading to a reduction of cash reserves.

The number of staff employed by tertiary education institutions fell in 2006 after having risen for several years. In private training establishments staff numbers also decreased.

The decrease in the number of academic staff was greater than that for the non-academic staff in the public tertiary education institutions. In private training establishments this situation was reversed with the fall in number of non-academic staff significantly exceeding the fall in the number of teaching staff.

The latest fall in student numbers exceeded the fall in the number of teaching staff, lowering the 2006 student to academic staff ratio in the polytechnics and wānanga. However, the number of students per academic staff member remained higher in 2006 in these sub-sectors than five years earlier. The universities' student to academic staff ratio has remained at a very similar level over the past five years.

The number of university staff eligible for research funding from the Performance-Based Research Fund increased from 2003 to 2006 and the average age of the eligible researchers also increased in 2006.

Total expenditure on personnel in public tertiary education institutions rose in 2006 and personnel costs also increased as a percentage of total expenditure.

Information from the 2006 Population and Dwellings Census confirmed some of the trends facing the tertiary education workforce identified in 2005 by the Strategic Review of the Tertiary Education Workforce. For example, the number of people with postgraduate qualifications in the academic workforce has increased more rapidly than that in New Zealand's other industries. And, as expected, there were proportionally twice as many postgraduate qualified people in the technical and higher education academic workforce in 2006 than in all other industries. An important finding confirmed by the census data is that New Zealand's academic workforce is ageing. An in-depth analysis of the 2006 census information on the tertiary education workforce is included in chapter 15.

INVESTING IN KNOWLEDGE AND SKILLS

Government spending on tertiary education increased by 8.5 percent in the year ended June 2007. Total government spending on tertiary education, including operational costs and capital expenditure, was $4.2 billion in 2007, compared to $4.1 billion in 2006. As a percentage of gross domestic product, total expenditure increased slightly while operating expenditure remained unchanged in 2007. Total tertiary education expenditure accounted for 2.7 percent of gross domestic product while operating expenditure accounted for 1.9 percent. The main difference between the operating and total expenditure was the amount of Student Loan Scheme lending that was treated as a capital expense.

The number of equivalent full-time student places funded by the government continued to decrease in 2006. Despite the decrease in student numbers, government spending on tuition subsidies continued to increase in 2006, due to an increase in the base funding rates.

In 2006, the average domestic fee per full-time equivalent student at the public tertiary education institutions increased by 10 percent. This increase largely reflects a continued move away from enrolments in low-cost courses or zero fee courses. In the universities, where there has not been widespread fee discounting, average fees rose by 4.6 percent. The number of international students continued to fall in 2006 and as a result total international fees revenue also continued to fall in 2006.

THE YEAR 2006 IN BRIEF

January

The government announces the appointment of Dr Karen Poutasi as the New Zealand Qualifications Authority chief executive. Dr Poutasi, the current Director-General of Health, will take up her new role at the beginning of May.

A consortium of industry representatives and associations, professional bodies, and tertiary education institutions, with funding from the Tertiary Education Commission, develops a new Postgraduate Certificate in Professional Development (Electronics and ICT).

The Tertiary Education Commission allocates $6 million from the Business Links Fund to the institutes of technology and polytechnics to help them build closer ties with business.

February

The Tertiary Education Commission awards a total of $6 million in the latest round of the Bright Future Scholarship Scheme. Seventy-two graduate and postgraduate students receive Enterprise Scholarships and 47 students are awarded Top Achiever Doctoral Scholarships.

The government announces its review of funding for medical and dental study is under way.

The government announces a further $15 million will be spent in the next financial year on 21 projects to improve e-learning and foster innovative ideas in the tertiary sector, as part of the Innovation and Development Fund and the e-learning Collaborative Development Fund.

The Tertiary Education Commission is to phase in a new funding system for adult and community education over a three-year period. The new system will support the Tertiary Education Commission's work with the sector to ensure high-standard adult and community education.

Thirty new schools join the Gateway programme, taking the total to 206. The programme provides learning opportunities in the workplace for senior school students.

The Strategic Review of the Tertiary Education Workforce seeks feedback on the major projects that should be carried out in Phase 2 of the review. The two-phase review, announced by the government in 2003, includes a stock-take of the tertiary education workforce and current issues; provides advice on major supply and demand trends of the tertiary education workforce over the next 20 years; and provides advice on a framework for describing and understanding future workforce requirements.

The Tertiary Education Commission announces a new project called Foundation Learning Progressions that will help New Zealand adults improve their literacy and numeracy skills.

March

The student loan interest rate for the 2006/07 tax year – for those who still have to pay interest – is set at 6.9 percent, down from 7.0 percent.

The government is to award almost $11 million over the next three years to 12 tertiary sector-based projects aimed at commercialising new ideas. The projects have been funded from the Tertiary Education Commission's Growth Pilot Initiatives.

The New Zealand Vice-Chancellors' Committee and the Association of University Staff release *University staff remuneration and resourcing: a comparison of New Zealand and selected international data*, a report on university funding and salaries prepared by accounting firm Deloitte.

Leading tertiary education experts from six countries attend a three-day forum in Wellington to discuss current trends and issues in tertiary education policy. The forum is hosted by the Tertiary Education Commission.

The Tertiary Education Commission announces the process for private training establishments to apply for additional student component funding for 2007 under their reinvestment process.

The Tertiary Education Commission makes further funding available from the Foundation Learning Pool for projects to build learners' skills in literacy, numeracy and language.

April

Changes to student loans take effect from 1 April, with no further interest to be charged on student loans for those who live in New Zealand. Students who borrow from that date will only have to repay what they borrow. Those with existing loans will not be charged any further interest. All the interest charged after 1 April 2006 will be written off under interest-free student loans. The new legislation does not cover interest charged before this time. The first interest write-offs will happen in April 2007.

The government announces the next steps in the tertiary education sector reforms. They include a move to a differentiated system that defines the distinctive contributions of tertiary organisations and better aligns funding with government priorities and stakeholder needs, changing to multi-year funding, and developing a better quality assurance and monitoring system that focuses on outcomes.

The National Centre of Excellence in Wood Manufacturing (the Radi Centre), based at Rotorua's Waiariki Institute of Technology, receives a $5 million boost to develop its training and research programmes.

The government renews its education cooperation arrangement with China.

The Tertiary Education Commission reports that more than 161,000 people participated in industry training in 2005 (up 16 percent on 2004) and the total number of Modern Apprentices increased 17 percent to 8,390. Latest figures, as at 31 March 2006, show that the number of modern apprentices has risen further to 8,840. As at December 2005, around 2,000 apprentices had completed their Modern Apprenticeships training.

The Institutes of Technology and Polytechnics of New Zealand announce that Martin Eadie, a group manager with the New Zealand Qualifications Authority, will be its new executive director. He will take up the position in May.

A research report is published by the Ministry of Education on the *Engagement of key stakeholder groups with tertiary education providers*. This research looks at the level of contact between New Zealand's tertiary education providers and their stakeholders and the quality of that contact.

May

A Ministry of Education report shows that people with higher levels of student debt are more likely to go overseas post-study, but student loans and their size are not the only factors associated with the decision to live overseas. The report *Do student loans drive people overseas – what is the evidence?* finds that factors such as level and field of study, age, ethnic group and citizenship status also influence the likelihood of people living overseas.

The government announces the start of public consultation on mergers of the two remaining colleges of education, in Christchurch and Dunedin, with the University of Canterbury and the University of Otago, respectively.

Budget 2006 provides new funding for several tertiary education initiatives. It includes:

- $50.0 million over four years for industry training, including $34.4 million to increase the number of Modern Apprenticeships to 14,000 by 2008 and $15.6 million to increase participation in industry training
- $8.1 million to expand the Gateway programme to all state and integrated secondary schools in 2007
- $47.3 million over the next five years to improve research capability and research and development linkages between tertiary education institutions and industry, including $7 million to increase research capability in areas identified as important to New Zealand's social and economic growth, and $40.3 million to fund six projects as part of the government's Partnerships for Excellence initiative
- $23.7 million over four years to increase the size of the Performance-Based Research Fund
- $33.5 million over four years for a range of initiatives to improve the literacy, numeracy and language skills of the workforce
- $31 million over four years for a range of student support initiatives
- $12.7 million over four years to further establish Career Services as the authority for trade training and career information, and
- aligning existing student loans and student allowances with government-funded qualifications.

The New Zealand Education Consortium signs a five-year deal with Oman to provide course content to universities in that country. The consortium will be providing content for several business and information technology degrees and English language courses. Consortium members include the Academic Colleges Group, the Auckland University of Technology, the University of Waikato, Victoria University of Wellington, the University of Otago, and Polytechnics International New Zealand Limited.

June

The New Zealand Qualifications Authority is to extend the 'approved subjects' list for university entrance, following consultation with universities and the New Zealand Vice-Chancellors' Committee. Changes include the addition of health education, technology and dance to the list, and modifications to music studies and computing.

Education counsellors are to be appointed to Chile and South Korea. The positions will be the sixth and seventh in a network of counsellors who operate from New Zealand embassies and high commissions around the world.

The government confirms it will support the centres of research excellence beyond 2008, the term for which they are currently funded. There are seven centres, hosted by Massey, Auckland, Victoria and Lincoln universities.

The 2006 tertiary teaching excellence awards are announced. Karl Dodds, principal lecturer in mathematics, physics and computing at the Christchurch Polytechnic Institute of Technology, took the Prime Minister's Supreme Award.

The government announces universities will get a funding boost of $26 million over the coming year. The announcement follows the tripartite forum discussions between the government, university vice-chancellors, and unions over the past year, and a report on university funding prepared earlier this year by the accounting firm Deloitte.

July

The government announces the outcome of an independent review into relationships in the plumbing, gasfitting and drainlaying industries. A key recommendation from the review was the establishment of a working group, led by the Tertiary Education Commission, to better align the training and

registration systems to enhance outcomes for learners, industry and government.

The government announces that the Ministry of Education's Tertiary Advisory Monitoring Unit (TAMU) will transfer to the Tertiary Education Commission on 1 September 2006. The decision to move the unit to the commission follows last year's Education Sector Review.

The government announces the details of key decisions on the tertiary education reform package. Under a package of measures aimed at improving quality in the sector, tertiary institutions will be funded on the basis of three-year plans outlining how they will meet the education and training needs of students, employers and communities. The changes are the first part of reforms that will see the new system introduced incrementally across the sector from 1 January 2008.

August

The Tertiary Education Commission lifts the current moratorium on the approval of new short awards. The moratorium was placed on short awards last year while the commission investigated how these qualifications should be funded in a way that will meet industry and government objectives.

The Tertiary Education Commission announces it will hold an assessment process this year for funding for providers affected by the recent student loans and allowances policy change. This will allow the 43 non-student-component-funded private training establishments, whose access to student loans and allowances is to be withdrawn from January 2007, to apply for government funding.

Centres of research excellence are to receive extra funding and up to two further centres are to be established. The government decided in June that the centres would be supported beyond 2008. An additional $10 million in operating funding and a one-off capital funding of $20 million from 2007/08 have now been allocated.

Twenty-four scholars are awarded Top Achiever Doctoral Scholarships. In total, the scholars will get almost $2.8 million over the next three years of their study.

A Massey University-led consortium wins the contract to establish the new National Centre for Tertiary Teaching Excellence. The government will spend $4 million a year on the centre, which will be hosted by Massey University in collaboration with the Auckland University of Technology, the University of Canterbury, Christchurch College of Education, the Universal College of Learning and Manukau Institute of Technology.

The government outlines a new direction for the international education sector. The four goals that form the basis of the new agenda are: New Zealand students will be equipped to thrive in an inter-connected world; education providers will be strengthened academically and financially through international links; international students will be enriched by their educational and living experiences in New Zealand; and the direct economic and social benefits to New Zealand from international education activities must grow to their full potential.

The government approves the merger of the two remaining colleges of education. The Dunedin College of Education will become part of Otago University while Christchurch College of Education will merge with the University of Canterbury.

The Tertiary Education Commission approves an increase to base rates for Training Opportunities, Youth Training, and Skill Enhancement programmes from 1 January 2007.

The government releases a discussion document for *Developing the second tertiary education strategy*. The consultation will contribute to the new Tertiary Education Strategy 2007-12. Detailed priorities will be published in the next Statement of Tertiary Education Priorities 2008-10 in December. The consultation document is accompanied by four new Ministry of Education analytical reports – the *Tertiary Education Strategy 2002-07 monitoring report 2005*, a report on the progress towards the goals of the first tertiary education strategy; two studies evaluating the first strategy, *Lining up* and *Making use*; and a synthesis of evidence on the *Outcomes of the tertiary education system*.

A further 92 schools are to join the Gateway programme next year. The programme provides senior school students with workplace learning opportunities.

The government launches the Kiwi Advanced Research and Education Network (KAREN), a next generation telecommunications link for New Zealand educators, researchers and innovators. It provides high-capacity, ultra high-speed connectivity among New Zealand's tertiary institutions, research organisations, libraries, wānanga, schools and museums, and the rest of the world.

Up to 100 Turkish students will be eligible for places in New Zealand tertiary education institutions under a new Turkish government sponsorship programme.

September

The Ministry of Education's Tertiary Advisory Monitoring Unit (TAMU) becomes part of the Tertiary Education Commission. All government monitoring of tertiary education institutions will now be carried out by one government agency, with educational outcomes monitored alongside financial, governance and leadership indicators.

The Royal Society announces the results of the 2006 Marsden Fund round. A total of $39.1 million is awarded to 78 new

projects, 26 of which are Fast-Start grants for outstanding new researchers.

The research assessment process begins for the 2006 Performance-Based Research Fund quality evaluation.

The government decides that, in certain circumstances, it will reimburse some course fees of domestic students following the failure of private training establishments.

October

The Tertiary Education Commission publishes the draft report *Foundation learning progressions for listening, speaking, reading, writing, and numeracy*, as part of the government's Learning for Living project. The learning progressions are designed to help tutors shape teaching programmes that will meet the learning needs of their students.

The most recent industry training figures are published. They show that as at 30 June 2006 there were 9,170 modern apprentices, almost 13 percent more than in June 2005. Total industry trainees numbered 123,000, just over 11 percent up on June 2005.

The *Student Loan Scheme Annual Report* is tabled in Parliament. It shows student loan borrowing was $971 million in 2005, and 154,000 students took out a student loan in 2005.

The government awards 40 International Doctoral Scholarships to students, from a diverse range of countries, who will be carrying out doctoral studies in New Zealand. The scholarships will provide full funding for course and living costs for up to three years.

The Ministry of Education publishes an analytical report *Getting started: report on stage 1 of the evaluation of the Tertiary Education Strategy 2002-07*. The evaluation focuses on how effective the strategy has been in creating change in the tertiary education system.

November

Education projects focusing on opportunities in Asia and the Middle East receive extra funding from the latest funding round of the Export Education Innovation Programme. The projects will help provide medical training in the Middle East, new ways of delivering education in India and Vietnam, and aviation management courses in South East Asia.

The government announces new rules for student loan borrowers who are overseas. The changes, effective from 1 April 2007, include an extension to the amnesty for non-resident borrowers who are in arrears, a repayment holiday of up to three years for borrowers going overseas, basing repayment obligations for overseas borrowers who are not on a repayment holiday on the size of their loan balances, and other simplification and fine-tuning of rules.

Sir Paul Reeves will chair the 2006/07 contestable funding round for the centres of research excellence.

The Court of Appeal overturns a High Court decision that the government acted unlawfully in its treatment of Unitec New Zealand's bid for university status.

The government announces tertiary education sector legislation changes to reduce compliance costs within the sector and streamline planning and reporting requirements. Any changes will be made in a new Education (Tertiary Reforms) Amendment Bill and are intended to come into effect from 1 January 2008.

Two research reports are published by the Ministry of Education, *Passing courses* and *A changing population and the New Zealand tertiary education sector*. The first report finds that many students pass all of their courses without necessarily gaining a qualification, suggesting that many people have course-related rather than qualification-related study goals. The second report notes the implications of demographic change for the size and make-up of the tertiary student population and the network of providers.

December

The government announces that undergraduate medicine and dentistry education and training will get $24.6 million of additional annual funding from 2007.

Almost $16 million is awarded to about 90 foundation learning providers through the 2007 round of Foundation Learning Pool funding, the Tertiary Education Commission announces. The funding is for 240 programmes to be delivered throughout the country.

The Tertiary Education Commission approves an exemption for Massey University to increase its fees above the standard maxima.

The government announced that a Crown Commissioner is to be appointed to run the New Plymouth-based Western Institute of Technology in Taranaki.

The government publishes its second tertiary education strategy, which sets the government's expectations and priorities for the sector for the years 2007 to 2012. Incorporated into the strategy is the Statement of Tertiary Education Priorities 2008-10. The priority outcomes include more people achieving qualifications at level 4 and above by age 25; increasing literacy and numeracy levels for the workforce; increasing the achievement of advanced trade, technical and professional qualifications to meet regional and industry needs; and improving research connections and linkages to create economic opportunities. From 2008, the new system will include three-year plans which will be agreed between individual tertiary education organisations and the Tertiary Education Commission.

CHAPTER TWO

AN OVERVIEW

One of the main events affecting the tertiary education system in 2006 was the release of New Zealand's second tertiary education strategy. Following a consultation process that started in August 2006, the *Tertiary Education Strategy 2007-12* was released in December 2006. The strategy also incorporates the statement of tertiary education priorities for the years 2008 to 2010. The new strategy identifies three areas in which the tertiary system can make its contribution to national goals: contributing to the success of all New Zealanders through lifelong learning; innovation; and the strengthening of connections between tertiary education organisations and the communities they serve.

There are four priorities: ensuring more young people achieve qualifications at level 4 and above of the New Zealand Register of Quality Assured Qualifications; increasing the literacy and numeracy of the workforce; meeting regional and industry needs for trade, technical and professional qualifications; and improving research connections and linkages to create economic opportunities. Future funding decisions are also expected to focus on the distinctive contribution of each type of tertiary education organisation.

The government has signalled significant changes to the way in which organisations plan and to the approach to allocating resourcing. Under the proposed new system, investments in organisations will be based on multi-year plans developed by organisations and assessed by the Tertiary Education Commission. The intention of the plans is to ensure that tertiary education provision gives effect to government's priorities and meets the needs of stakeholders. The new arrangements are expected to start in 2008.

The second round of the quality evaluations for the Performance-Based Research Fund was started in September 2006. Distributions under the fund began in 2004 with the system being phased in over a three-year period.

To enable the financial performance of all tertiary education institutions to be monitored by one government agency, the government transferred the Ministry of Education's Tertiary Advisory Monitoring Unit to the Tertiary Education Commission on 1 September 2006.

THE 2007 YEAR

The Organisation for Economic Co-operation and Development released a report in January 2007 on the New Zealand tertiary education system. The purpose of the review was to examine how the organisation, management and delivery of tertiary education can help countries to achieve their economic and social objectives. For more information see: www.educationcounts.edcentre.govt.nz/publications/tertiary/oecd-thematic-review.html

The government introduced the Education (Tertiary Reforms) Amendment Bill in May 2007 to enable the implementation of the new tertiary education planning and resourcing systems in 2008.

Also in May 2007, the Tertiary Education Commission released the results of the 2006 Performance-Based Research Fund quality evaluation. Among the findings of the quality evaluation were: an increase in the number of staff whose evidence portfolios were assigned to a funded quality category; and improvements by all universities (and most other providers participating in the fund) in research quality since 2003, the year of the first quality evaluation.

The Ministry of Health published the report *Reshaping medical education and training to meet the challenges of the 21st century: a report to the Ministers of Health and for Tertiary Education from the Workforce Taskforce*. The government announced that it will seek cabinet approval to establish a Training Board – one of the taskforce's main recommendations – aimed at providing leadership of and direction for a sustainable medical education and training programme.

In June 2007, a new centre of research excellence was established – The Riddet Centre. The centre is hosted by Massey University in partnership with the University of Auckland and the University of Otago. The Riddet Centre focuses on bringing innovative solutions to the food industry and its vision is *'creating strategic opportunities by advancing knowledge in foods and biologicals'*. Government also agreed to extend funding for six of the existing centres.

The government announced that the New Zealand School of Music – a joint venture between Victoria University of Wellington and Massey University – will receive a one-off capital injection for a purpose-built facility in Wellington. The funding is contingent on a new business case and performance commitments.

Tertiary Education in New Zealand

Tertiary education includes all post-school education:

- foundation education, such as adult literacy and education for those with low qualifications who are looking for employment
- certificates and diplomas
- bachelors degrees
- industry training, including Modern Apprenticeships
- adult community education, and
- postgraduate qualifications, many of them requiring students to conduct substantial original research.

Tertiary education also includes programmes delivered in secondary schools, such as Gateway and the Secondary-Tertiary Alignment Resource (STAR).

Tertiary education makes a unique and invaluable contribution to New Zealand's national development in all dimensions – social, economic and environmental. It passes on skills needed in the workforce, gives people the opportunity to build careers, contributes to social cohesion and is responsible for much of the country's innovation and knowledge creation. The diversity of the tertiary education sector is evident in the mix of organisations that make it up: public tertiary education institutions, private training establishments, industry training organisations, adult and community education providers, and others. In addition, employers provide industry-related training and training in the workplace.

There are four kinds of public tertiary education institutions – universities, institutes of technology and polytechnics, colleges of education, and wānanga. Another 16 tertiary education providers, known as 'other' tertiary education providers, also deliver programmes of national significance and receive government funding. In addition, there are 756 registered private training establishments that cater for a range of learners.

DISTINCTIVE CONTRIBUTIONS OF DIFFERENT TYPES OF TERTIARY EDUCATION ORGANISATIONS

Universities

Universities are primarily concerned with advanced learning, and offer the opportunity to pursue disciplines from the undergraduate level to advanced postgraduate study and research. Universities develop new knowledge that underpins their teaching and undertake research in a wide range of fields. They are expected to have well-established international links and to meet international standards of scholarship. There are eight universities spread throughout New Zealand. In 2006, the eight universities collectively enrolled 166,000 students, including 25,900 international students. These enrolments represented 125,000 equivalent full-time students.

Institutes of technology and polytechnics

Institutes of technology and polytechnics are mainly focused on vocational training at certificate and diploma level, especially in trades and other applied areas, although this role has expanded over the past 16 years to meet the increasingly diverse needs of learners and the economy. Many polytechnics offer applied degree-level education and are involved in research activities, particularly applied research and research in technological areas. They provide pathways into tertiary education for adult learners and for learners with low prior qualifications, preparing them to achieve at higher levels. Institutes of technology and polytechnics offer regional tertiary education; there are 20 polytechnics spread across the country. The number of students enrolled in 2006 was 214,000, including 9,770 international students. These enrolments represented 76,000 equivalent full-time students.

Wānanga – Māori centres of tertiary learning

Wānanga were formally recognised as public tertiary education institutions in the last decade. They offer study at all levels, from foundation education to postgraduate study and research, where ahuatanga Māori (Māori tradition) and tikanga Māori (Māori custom) are an integral part

of the programme. Wānanga provide Māori-centred tertiary education that supports te ao Māori, provide pathways for Māori learners into other tertiary education institutions and promote the development of kaupapa Māori provision. There are three public wānanga. Wānanga had 48,800 students or 23,700 equivalent full-time students in 2006.

Colleges of education

The number of colleges of education has reduced over the past decade, from six in the early 1990s to two in 2005, as they have merged with nearby universities. At the beginning of 2007, the last two remaining colleges of education merged with their neighbouring universities. The Christchurch College of Education merged with the University of Canterbury and the Dunedin College of Education with the University of Otago.

The function of the colleges of education – to provide training and research mostly related to early childhood, compulsory and post-compulsory education – is now carried out by the universities. In 2006, before the latest mergers, there were 6,910 students at colleges of education, or 3,760 equivalent full-time students.

Private training establishments

The distinctive contribution of private training establishments is to support the government's investment decisions in tertiary education. Some offer training for specific employers on a full cost-recovery basis. Others are funded by the government for the delivery of targeted training programmes and some have arrangements with industry training organisations to deliver programmes funded through the industry training fund. Private training establishments may also receive tuition subsidies through the student component of the Integrated Funding Framework, while some receive no Crown funding at all. Many of those that receive no funding are English language schools that cater to full-fee-paying international students.

Registered private training establishments must meet financial, educational and management quality requirements set by the New Zealand Qualifications Authority to provide safeguards for learners. They must also meet financial and management requirements set by the Tertiary Education Commission.

In 2006, some 210 private training establishments received government funding through the student component, while about 410 received funding through Youth Training and Training Opportunities, the two largest targeted training programmes funded by the Tertiary Education Commission.

Government training establishments

There are eight government agencies that provide training, including the Armed Services and Police. These are recognised as government training establishments.

Workplace learning

There is also considerable formal training activity in the workplace. Some of this is funded through the Industry Training Fund (which includes Modern Apprenticeships), while the rest is supported by business. Workplace learning facilitates lifelong learning for employees that counts towards a qualification and, for employers, it provides productivity gains. Industry training is facilitated through industry training organisations. At the end of 2006, there were 40 industry training organisations in New Zealand, established by particular industries or groups of industries and recognised by the Minister of Education under the Industry Training Act 1992.

Industry training organisations facilitate workplace learning in employment, by:

- setting national skill standards for their industry
- developing appropriate training arrangements for their industry that will lead to qualifications recognised on the National Qualifications Framework and arranging for the delivery of the training
- moderating the assessment of training within their industry against the established national standards
- monitoring training quality
- providing leadership to industry on skill and training needs, and
- providing information and advice to employees and their employers.

Industry training raises the workforce skill levels and boosts competitive advantage for business. Its delivery is flexible. Industry training can be conducted on-job, off-job, through a registered training provider, through training provided by other staff in the workplace, or a combination of these. On-job training can take a number of forms. The learning can be self-paced, or the training can be delivered by an experienced staff member or an external trainer. Some businesses

run formal training sessions, while others train staff through their workplace tasks. Often, the relevant industry training organisation will provide training guides and resources.

Industry training is jointly funded by the government through the Industry Training Fund and by industry through financial and in-kind contributions. In 2006, industry contributed $60.5 million in cash to industry training, representing 27 percent of the total cost.

THE TERTIARY EDUCATION STRATEGY

Following the consultation and development process of the second tertiary education strategy in the latter part of 2006, the government decided to streamline the direction-setting for the tertiary sector by combining the strategy and the priorities in one document. The Tertiary Education Strategy 2007-12, released in December 2006, incorporated the statement of tertiary education priorities for the years 2008 to 2010.

The government's expectations and priorities for New Zealand's tertiary education system will be used to guide the Tertiary Education Commission's investment decisions in order to maximise the sector's contribution to our national goals.

Strategic contributions

The strategy identifies three areas where the New Zealand tertiary education sector is expected to make a significant contribution:

1. Success for all New Zealanders through lifelong learning.

   Within the period of the strategy there are five areas of focus for improved levels of achievement and continuation of learning:

   - ensuring maximum educational opportunity for all New Zealanders
   - strong foundation skills
   - successful transitions from schooling: ensuring the 'baby blip' generation achieves its potential
   - building relevant skills and competencies for productivity and innovation, and
   - building skills and competencies for social and cultural development.

2. Creating and applying knowledge to drive innovation.

   The three areas of focus below aim to improve the alignment of our research efforts with national goals:

   - supporting links between research, scholarship and teaching
   - focusing resources for greatest effect, and
   - improving research connections and linkages.

3. Strong connections between tertiary education organisations and the communities they serve.

   There are three areas of focus for strong connections between the tertiary education system and the communities it serves. These connections are to:

   - improve quality and relevance of education and knowledge
   - support economic transformation, and
   - support social, cultural and environmental outcomes.

Priority outcomes

The strategy outlines four priority outcomes where government believes there should be increased effort in order to achieve a shift in the system.

The priority outcomes are:

1. increasing educational success for young New Zealanders – with more achieving qualifications at level 4 and above by age 25
2. increasing literacy and numeracy levels for the workforce
3. increasing the achievement of advanced trade, technical and professional qualifications to meet regional and industry needs, and
4. improving research connections and linkages to create economic opportunities.

The Tertiary Education Commission will use these priority outcomes to guide its investment discussions with tertiary education organisations. Within the overall control on funding, the commission will continue to invest in a broad range of relevant and quality education and in research that fits within tertiary education organisations' distinctive contributions.

THE LEGISLATION RELATING TO TERTIARY EDUCATION

The main piece of legislation on tertiary education is the Education Act 1989. Among other things, this Act:

- sets up the government's tertiary education agencies and defines their roles and responsibilities
- gives the authority for the tertiary education strategy
- describes the basis for the funding of tertiary education, and
- defines the constitution and functions of different types of public tertiary education institutions.

The government introduced the Education (Tertiary Reforms) Amendment Bill in May 2007 to provide the mechanisms for the tertiary education reforms to be implemented in 2008. The bill implements the government's reform of the system for planning, funding and monitoring the provision of tertiary education. The objective of the bill was to ensure that the tertiary education sector contributes towards tertiary education outcomes that are more closely aligned with the social, economic and environmental interests of New Zealand.

There are other pieces of legislation that also apply in tertiary education. In particular, the Industry Training Act 1992 and the Modern Apprenticeship Training Act 2000 cover parts of the system, while aspects of the operation of tertiary education institutions are governed by the State Sector Act 1988, the Crown Entities Act 2004 and the Public Finance Act 1989.

THE GOVERNMENT AGENCIES RESPONSIBLE FOR TERTIARY EDUCATION

The main government agencies with a responsibility for tertiary education are the Ministry of Education, the Tertiary Education Commission, the New Zealand Qualifications Authority and Career Services Rapuara. During 2005, the State Services Commission led a review of how the government's main tertiary education agencies – the Ministry of Education, the Tertiary Education Commission and the New Zealand Qualifications Authority – work together. This review made proposals for improvements in how the agencies interact and coordinate their work. To address the review's recommendations, the agencies are now collaborating on a strategic work programme.

The Ministry of Education

The Ministry of Education – Te Tāhuhu o te Mātauranga – is the government department responsible for developing the broad policy framework for tertiary education and for advising Ministers on the development of the tertiary education strategy and the statement of tertiary education priorities. It is also responsible for monitoring the success of the strategy, collecting and managing data on tertiary education, and monitoring the performance of the overall system.

The Tertiary Education Commission

The Tertiary Education Commission – Te Amorangi Mātauranga Matua – is a Crown agency. The Commission is made up of a board of six to nine commissioners appointed by the Minister. From 2008, the commission's responsibilities are expected to be as follows:

- giving effect to the tertiary education strategy
- allocating the government's tertiary education funding to tertiary education organisations according to funding mechanisms determined by the Minister
- advising government on the tertiary education strategy, tertiary education priorities, sector activities and the performance of the sector
- monitoring the performance of tertiary education institutions
- providing advice to the Minister on tertiary education policy
- work with tertiary education organisations on the development of their multi-year plans to steer the tertiary education system, and
- conducting research and monitoring in support of its roles.

The New Zealand Qualifications Authority

The New Zealand Qualifications Authority is also a Crown agency. Like the commission, it has a board appointed by the Minister. Its functions are to:

- provide an overarching quality assurance role for the tertiary sector
- develop and quality assure national qualifications
- administer the National Qualifications Framework
- register private training establishments
- conduct quality assurance at private training establishments, wānanga and Unitec New Zealand

- establish and maintain the New Zealand Register of Quality Assured Qualifications
- administer the trade, vocational and school sector qualifications system, and
- evaluate overseas qualifications for immigration and employment purposes.

New Zealand Career Services Rapuara

New Zealand Career Services Rapuara provides information, advice and guidance services that are designed to help people make informed career choices. Effective career information, advice and guidance provide a link between education, the labour market and the skills, interests and abilities of New Zealanders.

Career Services' work includes:

- developing and providing career information
- providing individuals with advice on how best to use career information
- providing career guidance services, and
- developing and enhancing the skills of individuals and organisations that facilitate career information, advice and guidance for others.

To enhance access to career information, advice and guidance, Career Services has developed three vehicles for delivery – via the internet, by telephone and face-to-face. This allows individuals to access Career Services in a manner that best matches their needs.

As well as these bodies, there are a number of other government agencies that have an involvement with tertiary education.

Ministry of Social Development

The Ministry of Social Development is responsible for providing leadership in the areas of social development and social policy, and the delivery of social services, particularly income support.

Financial support is provided to students by StudyLink, a service of the ministry. StudyLink is responsible for the administration and delivery of student loans, student allowances and other income support to students while they are studying, and income support for students unable to find employment during vacation breaks. This includes assessing entitlements, making payments, and maintaining partnerships with key stakeholders, including other government agencies, tertiary education providers and student groups.

Inland Revenue Te Tari Taake

Inland Revenue is responsible for the assessment and collection of student loan repayments once loans have been transferred for collection. Inland Revenue also determines entitlement to interest write-offs for borrowers.

In addition, Inland Revenue is responsible for the Student Loan Scheme Act 1992 and the annual regulations made under that Act which set the interest rates for borrowers overseas and the repayment threshold.

The Department of Labour

The Department of Labour is the agency that advises the government on all matters to do with New Zealand's labour force. As part of that role, the department collects and analyses a great deal of information about the skills needed in the labour market and about how the tertiary education system interacts with the labour market.

HOW THE TERTIARY EDUCATION SYSTEM WORKS

The New Zealand tertiary education system is designed to work around four main elements:

- quality assurance
- investment and funding decisions – from 2008 onwards, multi-year plans developed by tertiary education organisations in collaboration with the Tertiary Education Commission are expected to steer government funding in tertiary education and align funding with the government's tertiary education strategy
- provision of government funding, and
- monitoring of the performance of tertiary education organisations and of the sector as a whole.

Quality assurance

High-quality qualifications and study programmes are a key requirement for students in the tertiary education sector.

Quality assurance of tertiary education in New Zealand is intended to provide a minimum standard for the quality of the learning outcomes for students. It focuses on the systems and processes that support delivery of learning by tertiary education organisations.

Quality assurance agencies decide whether providers, qualification developers and the programmes they deliver meet appropriate quality standards. There are currently two quality assurance agencies:

- the New Zealand Qualifications Authority, and
- the New Zealand Vice-Chancellors' Committee.

The New Zealand Qualifications Authority

The New Zealand Qualifications Authority has an overarching responsibility for the system of quality assurance in tertiary education. It has delegated some of its powers to the Institutes of Technology and Polytechnics of New Zealand and this organisation has created a quality assurance body, ITP Quality, to give effect to that delegation and to manage the quality assurance processes for polytechnics' qualifications at the undergraduate level.

The institutes of technology and polytechnics approvals are exercised by ITP Quality. As the delegating authority, the New Zealand Qualifications Authority has responsibility to audit ITP Quality's quality assurance systems. The New Zealand Qualifications Authority retains responsibility for course approval and accreditation for all qualifications offered by providers, other than universities and polytechnics, and for postgraduate qualifications offered by polytechnics.

New Zealand Register of Quality Assured Qualifications

One of the mechanisms for managing quality is the New Zealand Register of Quality Assured Qualifications. The register imposes certain common standards on qualification development and nomenclature. Each qualification has: an assigned level (1 to 10); an outcome statement for the whole qualification and each of its components; a credit value (120 credits is equivalent to one year of full-time study); and a title consistent with other qualifications on the register. The register is further described in chapter 3.

ITP Quality

The Board of ITP Quality operates as a quality assurance body under the authority delegated to the Institutes of Technology and Polytechnics of New Zealand by the New Zealand Qualifications Authority under section 260 of the Education Act 1989. ITP Quality was established in 1991 and has been operating the delegation independently since January 1993.

ITP Quality is responsible for approving polytechnic programmes at undergraduate degree level and below and for accreditation of institutes of technology and polytechnics to deliver approved programmes. ITP Quality has also been granted the authority from the New Zealand Qualifications Authority to audit institutes of technology and polytechnics for compliance and effectiveness against academic standards. A polytechnic that successfully meets the standards may be awarded 'quality assured' status for a period of four years.

The New Zealand Vice-Chancellors' Committee

The New Zealand Vice-Chancellors' Committee derives its authority from the Education Act 1989. It provides quality assurance for university qualifications through its Committee on University Academic Programmes.

The New Zealand Universities Academic Audit Unit carries out quality audits of the eight universities.

The Committee on University Academic Programmes

This committee is a standing committee of the New Zealand Vice-Chancellors' Committee that considers academic matters across the university system. These include: inter-university course approval and moderation procedures; advice and comment on academic developments; the encouragement of the coherent and balanced development of curricula; and the facilitation of credit transfer between qualifications.

Within policy determined by the New Zealand Qualifications Authority, the committee sets criteria for validating and monitoring university qualifications. It approves new qualifications in the university system. It also has responsibility for oversight of inter-university subject conferences. Its membership includes representation of other tertiary education interests and the student body.

Quality assurance in tertiary education in New Zealand

Only those tertiary education courses, qualifications and providers that have been quality assured by a *quality assurance body* are able to access government funding, industry training funding, student loans and allowances, and Training Opportunities, Youth Training and Skill Enhancement funding.

The New Zealand Qualifications Authority's audit requirements are aimed at improving the quality of providers and courses. While those audited to date have found the process challenging, they generally recognise that it has the potential to lift quality standards and identify problems more quickly. A number of potential academic and financial risks have been identified through the audit process. As a result, the New Zealand Qualifications Authority and the Tertiary Education Commission have carried out monitoring and auditing of academic quality, student record operations and financial viability.

A sub-committee on university entrance coordinates advice on the common standard of entrance to universities. The sub-committee also regulates discretionary entrance and coordinates the evaluation of overseas qualifications for the purposes of admission to university.

The New Zealand Universities Academic Audit Unit

The New Zealand Vice-Chancellors' Committee established the New Zealand Universities Academic Audit Unit to carry out academic quality audits of the eight universities. The unit also identifies and disseminates information on good practice in developing and maintaining quality in higher education and publishes reports and monographs. The unit maintains professional relationships with all quality assurance bodies working in tertiary education in New Zealand, and with similar agencies internationally.

The Inter-Institutional Quality Assurance Bodies Consultative Group

Established by the New Zealand Qualifications Authority as a forum for quality assurance bodies, this group brings together all the quality assurance oversight bodies – the New Zealand Qualifications Authority, the Vice-Chancellors' Committee and the Institutes of Technology and Polytechnics of New Zealand. The aim is to provide a system-wide focus on the quality of tertiary education provision and qualifications.

The group provides a forum for quality assurance bodies. It also provides a mechanism for cross-sector initiatives. In the past, these have included establishing working groups to provide input into the policy development relating to the New Zealand Register of Quality Assured Qualifications and credit recognition and transfer.

Investing in tertiary education

The government has published a tertiary education strategy that spells out the contributions it expects the tertiary education system to make to national goals. The Tertiary Education Commission's role includes giving effect to the government's tertiary education strategy. The Tertiary Education Commission is also responsible for operating the government's funding mechanisms – allocating funding to tertiary education organisations. The key instrument the Tertiary Education Commission is expected to use from 2008 onwards for managing these responsibilities is multi-year plans developed with tertiary education organisations.

Multi-year plans

Multi-year plans are intended to replace the current system of charters and profiles from 2008 onwards. The plans will set out a three-year funding path. In developing a plan with a tertiary education organisation, the Tertiary Education Commission will be looking for evidence of alignment with distinctive contributions, and to the priority outcomes of the Tertiary Education Strategy 2007-12. The plans are expected to define the role of the tertiary education organisations in the network of provision and the range and scale of provisions the government will fund. The plan also describes the organisation's engagement with other providers and

stakeholders. An approved plan will become a prerequisite for eligibility for public funding for quality-assured providers. The multi-year plans will be assessed by the Tertiary Education Commission.

In setting the amount of funding available the government will take account of inflation pressures, expected demographic change, student demand and competing priorities within and outside the education sector. The new investment-based approach will expect and reward high performance. An assessment of the organisation's performance, and assurance of its quality, will increasingly inform investment. The quality assurance and performance monitoring system will have an increased focus on outcomes. There will be greater transparency in the performance of the tertiary education system, and of tertiary education organisations within the system, as the quality of performance information improves and is made more available to students and the public.

A significant focus of the new system is expected to be on supporting the development of capability. There will be an explicit funding of capability through the tertiary education organisation component. The new system will also include a student achievement component.

Tertiary education organisations report on their performance and financial targets in an annual statement of service performance. The Tertiary Education Commission, the New Zealand Qualifications Authority and the Ministry of Education also carry out a range of other monitoring activities.

How funding works

The tertiary education system funding framework is intended to complement the tertiary education reforms and the tertiary education strategy. Its purpose is to resource and steer the tertiary education system, while providing tertiary education organisations with the flexibility to operate in a responsive and innovative way. It has three broad elements:

- funding for the teaching and learning of domestic students
- funding for research (through centres of research excellence funding and the Performance-Based Research Fund), and
- funding to build tertiary education organisation capability.

The framework as a whole has the following general features:

- Funding will be delivered to tertiary providers and industry training organisations as a bulk grant.
- No funding will be delivered until the Tertiary Education Commission approves part or all of the provider's plan for funding purposes.

Under the tertiary education reforms there will be stronger links between funding and the priority outcomes for the system through the use of detailed plans, negotiated by tertiary

Evaluating New Zealand's first tertiary education strategy

An evaluation of the impact of the first strategy found that it has provided people with a sense of there being a tertiary education system that encompasses and connects all post-school learning. The strategy has also brought about a greater focus on quality of education and research. The evaluation considered that the broad nature of the strategy allowed tertiary education organisations to focus on aspects that best fitted their own strategies. There was evidence that some tertiary education organisations retrofitted their plans to the strategy. Where the strategy was explicitly linked to funding, there were more apparent shifts towards outcomes sought in the strategy. For more information on the evaluation of the strategy refer to *Getting started – the report on stage one of the evaluation of the Tertiary Education Strategy 2002/07*. The report describes the results of interviews held with a range of people from tertiary education organisations and stakeholder groups on the usefulness and usability of the tertiary education strategy. The report also draws from other information such as the tertiary education strategy monitoring reports, research on stakeholder engagement with tertiary education providers and an analysis of tertiary education organisation profiles. For a copy of the report see: www.educationcounts.edcentre.govt.nz/publications/homepages/tes/index.html

education organisations with government, that ensure funding is invested in the highest-priority areas. Funding will not only be more closely linked to the quality and relevance of a tertiary education organisation's provision but investment decisions will increasingly consider the extent to which a provider's plan is linked to stakeholders' needs. Funding in the future will also be linked to the distinctive contribution the organisation makes to the system. And from 2008, funding will generally be determined in a three-year funding path – rather than the current annual funding.

Funding for research

Before 2004, the main funding for the research activities of tertiary education organisations was delivered as part of the student component funding for degree and postgraduate enrolments. This system of funding is being phased out over the period 2004 to 2007 as the new Performance-Based Research Fund is introduced. Under this fund, providers are allocated funding on the basis of their research performance, using a set of performance indicators complemented by peer assessment of the quality of their research.

In 2002 and 2003, the government invited bids from tertiary education organisations to host centres of research excellence – inter-institutional research networks focused on areas of established research excellence of importance to New Zealand. Seven centres were funded, each for a period of six years. In 2006, bids were invited for extension of the existing centres and in May 2007 the government announced that the centres will receive $31.4 million of operating funding in addition to a one-off capital funding of $20 million. All but one of the existing centres have been given extended funding. The one whose funding is to be phased out is the New Zealand Institute of Mathematics and its Applications. Its loss of recognition as a centre relates to the extent to which it meets the criteria of centres of excellence and it does not reflect the quality of its research. The appointment of a new centre – The Riddet Centre – was also announced in 2007. The seven centres of research excellence are:

- the **Allan Wilson Centre for Molecular Ecology and Evolution** (hosted by Massey University) – studying topics ranging from molecular rates of evolution and biodiversity, through to molecular anthropology
- the **Maurice Wilkins Centre for Molecular Biodiscovery** (hosted by the University of Auckland) – extracting new knowledge from genomic and proteomic (protein) data
- **The MacDiarmid Institute for Advanced Materials and Nanotechnology** (hosted by Victoria University of Wellington) – covering the spectrum from fundamental science to applied technology and combining expertise in chemistry, physics and engineering to discover and understand new materials and technologies
- the **National Centre for Advanced Bio-Protection Technologies** (hosted by Lincoln University) – pursuing multidisciplinary research and development to meet the biosecurity and pest management needs of New Zealand
- the **National Centre for Growth and Development** (hosted by the University of Auckland) – concentrating on the biology of early development and its lifelong consequences for health and disease
- **Nga Pae o te Maramatanga – Horizons of Insight** (hosted by the University of Auckland) – The National Institute of Research Excellence for Māori Development and Advancement, and
- **The Riddet Centre** (hosted by Massey University) – advancing knowledge in foods and biologicals.

In addition to these sources of research funding, tertiary education organisations active in research are expected to raise additional research revenue through the contestable science funds supported by the government through Vote Research, Science and Technology. Tertiary education organisations also bid for contracts to provide research for firms and other organisations that want research reports for the purposes of their businesses.

The research funding system, and how its components relate to each other, is explained more fully in chapters 13 and 16 of this report.

CHAPTER THREE

AN OVERVIEW

Tertiary education in New Zealand provides a wide range of learning, ranging from education in foundation skills to doctoral studies. The New Zealand system embraces provision across technical and vocational education and training, higher education, workplace training, adult and community education, and tertiary education within the senior secondary school.

While the system has evolved to meet the needs of New Zealand's society and economy, New Zealand also provides learning opportunities to a significant number of tertiary students from other countries who come as international students.

The New Zealand Register of Quality Assured Qualifications provides a standard structure for naming and describing qualifications across levels and types of provision. It describes what learners can expect from a qualification and it provides for a measure of portability across the system.

In addition, the tertiary sector contributes to the national innovation system through its research activities; more than 60 percent of all New Zealand's research papers come from the tertiary education sector.

THE 2007 YEAR

New Zealand's second tertiary education strategy continues the broad and inclusive approach taken by the first strategy to cover the diversity of tertiary education. However, the Tertiary Education Strategy 2007-12 has a sharper focus on the expected contribution of the tertiary education system to government's national goals. It describes how tertiary education can contribute to economic transformation – accelerating the pace of change in our economy; families – young and old – providing families with the support to maximise potential; and national identity – pride in who and what we are.

The latest strategy includes an outline of the new tertiary education system and specifies three areas in which the system is expected to contribute: success for all New Zealanders through lifelong learning; creating and applying knowledge to drive innovation; and strong connections between tertiary education organisations and the communities they serve.

The tighter focus provided by the second strategy responds to the evaluation of the first strategy, which found that the participants in the system required more guidance to support decision-making. Consequently, the strategy includes a statement of the distinctive contribution to be made by different parts of the sector and sets clear expectations for tertiary education organisations about the role they play in the system.

The new system for tertiary education is built around 'investing in a plan'. To allow investment in tertiary education organisations to be on the basis of a plan from 2008 onwards, the Tertiary Education Commission carried out negotiations in 2007 with stakeholders and tertiary education organisations on the detail of their expected contribution to the new system. These negotiations were also based on the government's priority outcomes for tertiary education incorporated into the strategy for the years 2008 to 2010.

Four outcomes where government expects to see shifts in the provision of education and research are included in the Statement of Tertiary Education Priorities 2008-10. The first priority – increasing educational success for young New Zealanders – more achieving qualifications at level 4 and above by age 25 years – is focused on young people, as the benefits of a tertiary education are higher for those who start earlier. It is also concerned with achieving qualifications at level 4 and above, as these make a greater contribution to an individual's success.

The second priority – increasing literacy, numeracy and language levels for the workforce – is focused on people in low-skilled occupations and industries, and, in particular, on Māori and Pasifika peoples in the workforce with low literacy, numeracy and language levels.

The third priority – increasing the achievement of advanced trade, technical and professional qualifications to meet regional and national industry needs – is focused on identifying, planning for and providing future skill needs. Tertiary education organisations need to increase the achievement of advanced trade and technical qualifications and professional qualifications linked to occupations with projected shortages (including the health, education and social services workforces).

Priority number four – improving research connections and linkages to create economic opportunities – is focused on strengthening the linkages between tertiary education institutions, Crown research institutes and firms. These linkages are especially important in a small country like New Zealand, as many firms are too small to engage in research and development themselves. This priority is also concerned with the continued completion of research-based postgraduate qualifications and attracting and retaining high-quality researchers as an essential part of growing New Zealand's intellectual capital.

NEW ZEALAND'S TERTIARY EDUCATION PROVISION

The bulk of formal learning delivered by public tertiary education institutions, and through private training establishments and other tertiary education providers, has met the required quality standards and demonstrated the relevance of the provision to the Tertiary Education Commission. The government provides funding for New Zealand students undertaking formal learning. In the recent past, the largest share of this funding has been delivered through student component funding – funding that is allocated on a per student basis, with differential rates set by subject area. It is a contribution towards the costs of education. In most cases the student is also charged an enrolment fee. From 2008, the student component will be replaced by a new investment system – under which the Tertiary Education Commission will make three-year funding decisions based on criteria that focus on how the organisation will meet government priorities and the needs of stakeholders. These in turn reflect quality and relevance of the provision offered. Some funding – a new student achievement component – will continue to be delivered on a per student basis with some being allocated to tertiary education organisations to fund developments in their capability – the tertiary education organisation component.

While the student component is the largest fund that is administered by the Tertiary Education Commission, training programmes for some formal students are managed by the Commission through other funds – such as Youth Training – which are targeted to particular types of students. Some of those funds are described in more detail later in this chapter.

Formal and informal learning

Learning opportunities within the New Zealand tertiary education system can be categorised as formal (that is, contributing towards a recognised qualification) and non-formal (that is, not contributing to a recognised qualification). Both formal and non-formal learning can be further divided into situations where students are enrolled with an education provider and situations where students are learning through a relationship with an employer or community organisation.

While most students in formal tertiary education are New Zealanders, international students also make up a significant number of formal students (8.7 percent of those in formal tertiary education in 2006, compared to 9.4 percent in 2005). New Zealand attracts international students from around the world, with 70 percent coming from Asia. International students are usually required to pay the full costs of their tuition. Australian citizens attain permanent residency status in New Zealand and are treated as domestic students and pay domestic fees.

Industry training provides training, designed by, and delivered in conjunction with, industry, that counts towards recognised qualifications. The costs of training are jointly met by government and industry. The training is administered and supported through the 40 industry training organisations, which have been established by particular industries or groups of industries.

Table 3.1 // Types of learning opportunities provided through the tertiary education system

	Formal	Non-formal
Enrolled with an education provider	• Student component-funded students • International students • Targeted training programmes • Tertiary education in schools • Industry training and Modern Apprenticeships (off-job training)	• Adult and community education through community education providers, tertiary education institutions, schools and others
Employment and community-based learning	• Industry training and Modern Apprenticeships (on-job training)	• Adult and community education through community organisations • Adult literacy programmes

In the industry training system, all trainees enter into a training agreement with their employers. Most of the training takes place on-job and progress is assessed by registered assessors. On-job training can take a number of forms. The learning can be self-paced, or the training can be delivered by an experienced staff member or an external trainer. In some cases, on-job training is complemented by off-job training. Industry training organisations facilitate individual training arrangements, purchase

off-job training from tertiary education providers and then tailor these arrangements to the needs of learners and employers.

The Modern Apprenticeships Programme is an employment-based education initiative aimed at encouraging participation in industry training by young people aged between 16 and 21. The initiative combines the mentoring aspect of the apprenticeship tradition with formal industry training that leads to recognised qualifications at levels 3 and/or 4 on the National Qualifications Framework. The Modern Apprenticeships Programme is administered by the Tertiary Education Commission, which contracts the services of Modern Apprenticeships coordinators. The coordinators promote the programme, set up the training agreements, and act as mentors to the learners and their employers. They develop an individual training programme for each learner that specifies the qualification(s) and generic skills they will gain, and maps out how this learning will take place.

The government provides several targeted training funds that provide fully subsidised education and training to specific groups. For example, Youth Training is for youth up to the age of 18 who have left school with no or very low-level qualifications. The programmes funded by Youth Training provide foundation and vocational skills training at levels 1 to 3 of the qualifications register.

Training Opportunities is a labour market programme for people aged 18 and over who are considered disadvantaged in terms of employment and educational achievement. The programmes funded by Training Opportunities provide foundation and vocational skills training at levels 1 to 3 of the qualifications register.

Skill Enhancement is a vocational training programme for young Māori and Pasifika. When directed towards Māori, the programme is known as Rangatahi Māia while among Pasifika it is called Tupulaga Le Lumana'i. The programmes funded by Skill Enhancement provide a wide range of pathways that lead to qualifications at level 3 and above on the qualifications register. In 2005, Skill Enhancement was reviewed and, following this, government has refocused the programme to target young people with significant labour market disadvantages.

Adult and community education

This type of education is non-formal and provides a bridge to further learning opportunities. It fosters a culture of lifelong learning, active citizenship, critical social awareness and increased control over the future for individuals and communities. The five national priorities for adult and community education (ACE) are:

- Strengthening social cohesion
- Strengthening communities by meeting identified community learning needs
- Encouraging lifelong learning
- Raising foundation skills, and
- Targeting learners whose initial learning was not successful.

ACE is supported by, and delivered through, a range of community organisations. Funding for ACE is also available to schools and tertiary education institutions.

ACE Networks are collaborative groups of local ACE providers and practitioners who provide an opportunity to share information, knowledge and expertise and work collaboratively to meet identified community learning needs. The networks are varied in nature, reflecting local conditions and requirements.

Learning environments

Tertiary education includes a wide range of learning environments. This includes traditional lecture-based teaching, as well as delivery through the world wide web and many other modes. Large providers are increasingly decentralising their campuses to provide access to tertiary education in more communities. Tertiary education includes a range of practical and theoretical activities. On-job education and training are becoming more common, and not just within industry training.

A notable trend over the last five years has been the growth in extramural or distance education. Provision ranges from fully distance-based learning through to courses involving on-campus block courses and local learning groups with tutoring and mentoring support. In 2006, there were 128,000 students (or 33,600 equivalent full-time students) taking courses of this kind.

The development of e-learning has also had a major impact on tertiary education in New Zealand. E-learning in tertiary education ranges from the use of technology to support teaching and learning in an on-campus course through to fully online courses that can be studied from anywhere in the world.

The ACE Innovation and Development Fund has been set up to encourage responsiveness and innovation in ACE at local levels and support capability development of providers and emerging providers. It provides one-off funding for projects that utilise new and innovative approaches which respond to community learning needs and align with the government's ACE priorities.

The ACE New Provider Fund was established in May 2004 to support previously unfunded ACE providers whose programmes and activities align well with the government's ACE priorities. The fund was allocated for the first time in July 2005. The final round will be in 2007.

Community Learning Aotearoa New Zealand allocates small amounts of funding to community groups for community learning activities. Grants are usually under $2,000, although special projects may receive up to $5,000.

The government also funds ACE programmes in secondary schools from the wider ACE Pool. These programmes include adult foundation learning, languages, culture, art and leisure, business development, and health and fitness. There were 149,000 enrolments in 2006. Funding for schools was transferred from the Ministry of Education to the Tertiary Education Commission at the start of 2004.

Tertiary education institutions have also been able to run ACE prorgrammes using the student component funding. ACE programmes were provided by eight universities, 19 institutes of technology and polytechnics, two colleges of education and two wānanga in 2006 and attracted an estimated 110,000 learners.

From January 2006, all funding for adult and community education comes from a single, capped ACE pool covering all ACE providers including schools. Funding for all providers continued in 2006 at the same rate as in previous years except for tertiary education institutions that had their funding reduced in 2006.

In 2006, the Tertiary Education Commission worked with the tertiary education institutions to determine how the reduction of ACE funding for 2007 could be managed. ACE funding for universities remained the same in 2006 and is expected to be allocated at approximately the same volume for 2007.

Adult literacy and foundation education

A range of non-formal learning opportunities is also funded in the area of adult literacy and foundation education including numeracy and English for speakers of other languages. The Adult Literacy Innovations Pool provides funding for quality literacy learning opportunities. It provides funding for:

- new approaches
- reaching learners not currently accessing foundation learning
- strengthening foundations in existing provision, and
- learning with a focus on family and community links, new pathways and special groups.

In 2005, this fund became part of the overall Foundation Learning Pool.

The Workplace Literacy Fund supports improved literacy in the workplace. Workbase, the New Zealand Centre for Workforce Literacy Development, administered funding for basic skills until 2005, as well as promoting workplace literacy and supporting the development of literacy resources. The funding is now directly administered by the Tertiary Education Commission.

There is a range of support provided for English for Speakers of Other Languages (ESOL). These include:

- the National Association of ESOL Home Tutor Schemes, which provides English language skills and resettlement support for migrants and refugees
- the Multicultural Centre for Learning and Support Services, which provides language and settlement support to migrants and refugees
- ESOL Assessment and Access Specialist Services, which assess the learning needs of new migrants and refugees, and
- the English for Migrants scheme, which provides English language tuition for migrants to New Zealand who have pre-paid their training.

English for Speakers of Other Languages tuition is also provided through other funded provision, including Training Opportunities and student component-funded courses.

Tertiary education within senior secondary schools

The development and introduction of the National Qualifications Framework has supported new options for accessing tertiary education within the senior secondary school.

The Gateway programme enables senior secondary school students to access workplace learning as an integrated part of their school education. Students pursue individual learning programmes, gain new skills and knowledge in a workplace or their local community and gain unit standards that can be credited towards the National Certificate of Educational Achievement or other national certificates.

The Secondary-Tertiary Alignment Resource (STAR) assists schools to meet the needs of senior secondary students by granting additional funding for schools to use in accessing a wide range of courses to provide greater opportunities for senior students. STAR funding is a capped resource available to schools with students in year 11 and above. The objectives of STAR are to enable schools to:

- facilitate transition to the workplace for students, particularly those intending to go straight into the workforce or those likely to leave school without any formal qualifications, and
- provide or purchase tertiary-type courses that will meet students' needs, motivate them to achieve, and facilitate their smooth transition to further education, training and employment.

STAR courses can involve work-based learning and/or study towards credits for the National Certificate of Educational Achievement and recognised tertiary qualifications.

COMPETENCIES AND QUALIFICATIONS

The results of learning through tertiary education can be viewed in terms of improving competencies and attainment, or progress towards attainment, of recognised qualifications.

Key competencies in tertiary education

New Zealand's second tertiary education strategy, like its predecessor, places a strong focus on the role of tertiary education to contribute to the success for all New Zealanders through lifelong learning, including:

- ensuring maximum educational opportunity for all New Zealanders
- strong foundations in literacy, numeracy and language
- successful transitions from school to tertiary education and work
- building relevant skills and competencies for productivity and innovation, and
- building skills and competencies for social and cultural development.

These strategies stem from a vision for New Zealand in which most adults have the required mix of generic and specific skills and the adaptability to contribute to national economic and social wellbeing.

Recent international research advocates a shift in emphasis from precisely defined 'skills' to the broader term 'competency'. A competency includes all the skills, knowledge, attitudes and values needed to do something.

Competency does not exist as something that can be learnt in isolation. It is demonstrated in the performance of a task. Competence is developed most effectively in contexts that have meaning and purpose. It also exists on a continuum from novice to expert.

Towards a New Zealand framework

In 2005, the Ministry of Education released a discussion document offering a New Zealand framework for key competencies for the tertiary education sector. The framework proposes three key shifts:

- building a shared understanding of desired outcomes in relation to key competencies within and between the education and employment sectors

Table 3.2 // Alignment of key competency frameworks across sectors

TE WHĀRIKI	SCHOOL CURRICULUM	TERTIARY
Wellbeing	Managing self	Acting autonomously
Belonging	Participating and contributing	
Contribution	Relating to others	Operating in social groups
Communication	Using language, symbols and texts	Using tools interactively
Exploration	Thinking	Thinking

Source: Ministry of Education (2005), *Key Competencies in Tertiary Education, Developing a New Zealand Framework, discussion document.*

- developing higher levels of competence for effective participation in the knowledge society, and
- enhancing the teaching and learning of key competencies in tertiary programmes.

The tertiary education framework has four groups of key competencies:

- operating in social groups, including relating to others, managing and resolving conflict and motivating groups to achieve a particular outcome
- acting autonomously, including identifying and taking action regarding one's interests, limits and needs and acting within the big picture/larger context
- using tools interactively, which means the ability to understand, use and take meaning from language, literacy and numeracy, symbols, knowledge and technology, and
- thinking, including creative thinking, critical thinking, reflection and judgement.

International work is also being used in redefining the essential skills of the New Zealand school curriculum. This will lead to a consistent framework for key competencies across the wider education system. The figure below shows how the proposed key competencies framework for tertiary education compares with the New Zealand curriculum key competency groups and aligns with the early childhood education curriculum, Te Whāriki.

Existing mechanisms such as the National Qualifications Framework, the New Zealand Register of Quality Assured Qualifications and tertiary education organisation profiles will be used to enable the framework to be embedded into practice.

Learning for Living – a focus on foundation competencies

Raising foundation skills so all people can participate in our knowledge society is a key element of the tertiary education strategy. The goal of the government's Learning for Living programme is to build adults' fluency, independence and range in language, literacy and numeracy so that they can use these competencies to participate effectively in all aspects of their lives.

Learning for Living is about making a range of shifts in understanding, thinking, practice and outcomes at all levels of the tertiary education sector in order to ensure that programmes deliver the competent individuals that New Zealand needs. In order to build literacy, language and learning in New Zealand adults, these shifts will need to include:

- moving towards a shared understanding across education providers and employers of the literacy, language and numeracy competencies that all adults need
- clearer articulation of literacy, language and numeracy competencies in a broad range of existing tertiary courses and qualifications (including courses that focus on specific knowledge and skills), and
- capability development to increase the effectiveness of literacy, language and numeracy teaching.

The first phase of the strategy is the development of a set of aligned initiatives that will improve quality and build capability. These initiatives comprise:

- the development of descriptive standards that define competence in reading, writing, speaking, listening and numeracy

- learning progressions to provide snapshots of what adults know and can do as they build their competency from novice to expert
- teaching and learning materials, including assessment tools
- professional development and educator qualifications, and
- tailored quality assurance arrangements, unit standards and course statements.

This phase is supported by a number of research and development projects across a range of foundation learning that will develop knowledge about:

- access and participation
- funding and targeting
- effective integration of foundation learning into broader learning programmes
- development of expertise
- quality assurance arrangements, and
- professional development.

THE NEW ZEALAND REGISTER OF QUALITY ASSURED QUALIFICATIONS

The New Zealand Qualifications Authority was established in 1990 with a key function of having an overview of qualifications in the senior secondary school and tertiary education sectors. This function was initially exercised through the development of the National Qualifications Framework, comprising national certificates and diplomas and their component standards. This framework has now been expanded through the development of the New Zealand Register of Quality Assured Qualifications, Te Āhurutanga. The register includes the National Qualifications Framework as a sub-set, but also incorporates qualifications developed by universities and institutes of technology and polytechnics. The register provides a way of:

- identifying clearly all quality-assured qualifications in New Zealand
- defining common naming conventions and requirements across the various systems of qualification approvals
- ensuring that all qualifications have a purpose and relation to each other that students and the public can understand
- maintaining and enhancing learners' ability to transfer credit by the establishment of a common system of credit, and
- enhancing and building the international recognition of New Zealand qualifications.

The register establishes 10 levels of qualifications and qualification titles that can be used at each level.

For each qualification there is a statement of learning outcomes that includes what the whole qualification represents in terms of the application of knowledge, understanding, skills and attitudes, as well as the components of the qualification.

Each qualification has a specific credit value that represents the amount of learning and assessment that is typically required to achieve the qualification.

Table 3.3 // Levels and qualification titles for the New Zealand Register of Quality Assured Qualifications

LEVEL	NAMING SEQUENCE
10	Doctorates
9	Masters Degrees
8	Postgraduate Diplomas and Certificates, Bachelors Degrees with Honours
7	Bachelors, Graduate Diplomas
6	Graduate Certificates
5	Diplomas
4	Certificates
3	
2	
1	

Source: New Zealand Qualifications Authority (no date), The New Zealand Register of Quality Assured Qualifications, Te Āhurutanga.

The general qualification definitions are as follows:

Certificates may be used in a wide range of contexts across all levels up to and including level 7, and are often used to prepare candidates for both employment and further education and training.

Diplomas often prepare learners for self-directed application of skills and knowledge. These qualifications often build on prior qualifications or experience and recognise capacity for initiative and judgement in technical, professional and/or managerial roles.

Graduate certificates and graduate diplomas are designed primarily as vehicles for graduates to pursue further study at an undergraduate level, either as a bridge to further study in a new area or to broaden and deepen existing knowledge areas.

Bachelors degrees provide a systematic and coherent introduction to the knowledge, ideas, principles, concepts, chief research methods and problem-solving techniques of a recognised major subject or subjects. They involve at least one sequential study programme preparing learners for postgraduate study and supervised research. Bachelors degree programmes are taught mainly by people engaged in research and emphasise general principles and basic knowledge as the basis for self-directed work and learning.

A bachelors degree with honours may be awarded to recognise advanced or distinguished study in advance of a level 7 bachelors degree. It typically involves an additional year of study and/or research at level 8.

Postgraduate certificates and postgraduate diplomas are designed to extend and deepen a candidate's knowledge and skills by building on attainment in the principal subject(s) of the qualifying degree. They provide a systematic and coherent survey of current thinking and research in a particular body of knowledge and may include instruction in relevant research methodologies.

Masters degrees are normally designed to build on the principal subject(s) of the qualifying degree. However, the degree may build on relevant knowledge and skills derived from occupational experience, as in the Master of Business Administration (MBA). Different discipline areas have different traditions. Typically, they require students to demonstrate mastery of theoretically sophisticated subject matter; evaluate critically the findings and discussions of literature; research, analyse and argue from evidence; apply knowledge to new situations; and engage in rigorous intellectual analysis, criticism and problem-solving. A masters degree programme contains a significant element of supervised research, usually resulting in a thesis, dissertation or substantive research paper.

Doctoral degrees are research degrees at a significantly higher level than masters, undertaken under the guidance of recognised experts in the field of study. The doctorate is awarded on the basis of an original and substantial contribution to knowledge as judged by independent experts, applying contemporary international standards.

A higher doctorate is awarded for independent work of special excellence, as judged by leading international experts. A higher doctorate does not require a person to have enrolled for the degree; the research on which the awarding of the degree is based will have been completed and may have been published over many years.

Honorary doctorates are awarded in recognition of exceptional contributions made to the institution awarding the degree, to a profession or to society at large.

RESEARCH AND KNOWLEDGE CREATION AND TRANSFER

The country's innovation system is a complex network of research organisations, educational institutions, industry associations, financial institutions and communities. That system relies on the supply of knowledge, highly skilled workers and financing to support the growth of new ideas, products, processes and organisations to create economic, social and environmental benefits.

The tertiary education system plays a key role in furthering research and innovation in New Zealand. The advancement of knowledge through education and research is a core function of the tertiary education sector. The sector also undertakes significant research focused on adapting, transferring and exploiting domestic and international knowledge and technology. It does this alongside, and sometimes in partnership with, other research organisations, industry and business, community organisations, and government. The tertiary education sector is responsible for the largest share of the country's research output.

Most importantly, the tertiary education sector is responsible for the training of the research workforce and for producing graduates with skills, knowledge and attributes that enable them to contribute to the innovation system.

The primary roles of tertiary education research activities are to:

- support degree-level teaching and ensure that degree graduates are of high quality and informed by up-to-date scholarship and developments in the knowledge base
- train New Zealand's future knowledge-creators and innovators
- contribute to improving the knowledge base through high-quality research that generates new knowledge, and
- interpret new knowledge and disseminate it as a means of influencing people in communities and business.

Universities make an important contribution to the national research effort in the area of basic research, which involves exploring and expanding the frontiers of knowledge. Whereas the Crown research institutes and many other research providers are more likely to focus on applied or strategic research, the traditional role of the universities in postgraduate training and the nature of the funding for research in the universities mean that university-based researchers have greater opportunity to work in basic research. The *Research and Development Survey* published by Statistics New Zealand in 2004 estimates that two-thirds of all research conducted in the tertiary education sector is basic research. The survey reports that, in 2004, just over half (51 percent) of the basic research in New Zealand was conducted in the universities.

As part of the tertiary education reforms, the government has developed two major new means of promoting and funding research in the sector.

The first is the centres of research excellence. The first centres were established during 2002 and 2003. The centres of research excellence have been designed to support world-class research that will contribute to New Zealand's development as a knowledge society. The centres are inter-institutional research networks with researchers working together on a commonly agreed research plan. The seven centres and the areas of study they cover are described in chapter 2, together with the name of the university hosting the centre.

In June 2007, a new centre of research excellence was established – The Riddet Centre, which covers research into foods and biologicals. The government also agreed to extend funding of the existing six centres.

The second is the Performance-Based Research Fund, which was phased in over the period 2004 to 2007. This fund has shifted the basis of research funding from a system based on student enrolments to one where funding is allocated on the basis of research performance.[1] One consequence of the shift to the Performance-Based Research Fund is that much more information is now collected on research in tertiary education, for example the quality of the research, the people conducting research in tertiary education organisations and the relative research performance in different research fields and organisations.

A considerable amount of tertiary education research is also funded through research contracts. Some of these come from government-managed research funds, such as those administered by the Foundation for Research, Science and Technology. However, many of them come from the private sector. In some areas, universities and some polytechnics have entered into more formalised knowledge creation and transfer programmes with the private sector, involving joint research programmes, commercialisation of research outputs and development of research and technology parks.

1. Detailed information on the operation of the Performance-Based Research Fund can be found in Ministry of Education (2003) *New Zealand's tertiary education sector: Profile & Trends 2002*, pp 108-110, and in Tertiary Education Commission (2007) *Performance-Based Research Fund: evaluating research excellence – the 2006 assessment.*

CHAPTER FOUR

AN OVERVIEW

The number of people in the New Zealand population with a tertiary qualification is rising. In 2006, more than one in every three New Zealanders was tertiary qualified, while the proportion without a qualification has fallen significantly. The proportion of people with a bachelors or higher qualification has increased in all ethnic groups, although in some groups the proportion has increased more than in others. The proportion of women who are tertiary qualified is increasing.

A strong economy, coupled with a tighter labour market, has significantly reduced unemployment at all qualification levels. Nevertheless, the tertiary qualified have a higher level of participation in the labour force. As more women become tertiary qualified, their participation in the labour market participation is likely to increase.

The earnings premium for those with a tertiary qualification decreased in 2006, compared with those with no qualification. This fall in the tertiary qualification premium reflects the strength of the labour market which currently is providing greater access to employment for those with no or lower-level qualifications. Despite the strong labour market, a significant earnings advantage continued to exist in 2006 for those with tertiary qualifications.

The findings of studies using the integrated dataset for *Student Loan Scheme Borrowers* suggest that participation in tertiary education can lead to a significant earnings advantage in the years following study. In particular, completion of a qualification increased earnings. Recent studies showed that the earnings advantage persisted over time. A summary of these studies is included later on in this chapter.

Information from New Zealand's latest population census confirms that an increasing proportion of people hold a tertiary qualification. The higher knowledge and skill levels of the New Zealand population in 2006 – reflecting an increase in the human capital of the economy – was due to a higher participation rate in tertiary education over the last decade, coupled with higher levels of migration. The census data showed that younger adults – those under 35 years – hold more higher-level tertiary qualifications than people in older age groups. One in every two people aged 25 to 34 years in 2006 held a tertiary qualification. Proportionately, there were also more women than men with a tertiary qualification in this age group in 2006. Also, proportionately more women than men held a higher-level tertiary qualification in this age group. Among the ethnic groups, younger people were also more qualified than those in older age groups.

The unemployment rate in the population with higher-level tertiary qualifications has fallen to below 3 percent. The 2006 census data showed that differences in earnings decrease between individuals as their qualification levels increase. Another census finding showed that those with a higher-level tertiary qualification earn more, on average. A summary of the 2006 census information is provided later on in this chapter.

THE 2007 YEAR

Recent increases in enrolments by New Zealand's younger aged population in 2007 is expected to lift the proportion of the population with a tertiary qualification further. New Zealand is moving towards a knowledge-based economy and a further widening of its knowledge and skill base is expected. Both increased participation in tertiary education and increased migration are expected to contribute to the growth in New Zealand's knowledge and skills base. The demand for vocational and technical qualifications in the areas of health, education, information technology, creative arts, and engineering and related studies is likely to rise further.

The tighter labour market is expected to continue in the near future and, with it, the recent low unemployment rates. More people with a vocational or technical non-degree qualification are expected to enter the labour market. Also, more women with a higher-level tertiary qualification are likely to enter full-time employment as the proportion of women with a tertiary qualification is rising more rapidly than that of men. The prospects of better opportunities and higher living standards are greater for those with a tertiary qualification.

ANALYTICAL TABLES: An associated set of tables on tertiary education outcomes is available on the Education Counts website, Tables COM1-36, EAP1-8, PSE1-3, PSI1-12 and PSO1-2. Detailed technical information on the data presented here can be found in chapter 18.

RISING TERTIARY QUALIFICATIONS

Figure 4.1//**Working-age population (June quarter) by highest qualification**

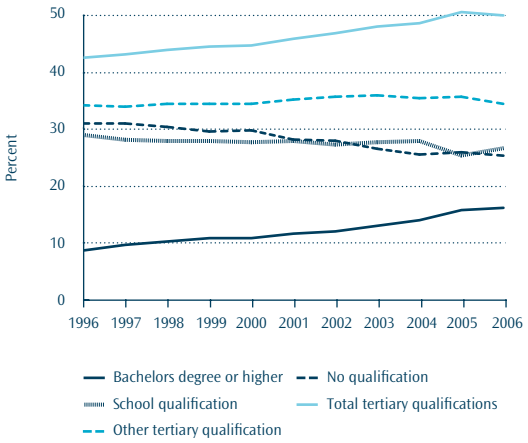
Survey data shows that the proportion of the New Zealand working-age population holding a tertiary qualification increased in 2006 and nearly one in every two New Zealanders is now tertiary qualified. On the other hand, the proportion without a qualification has fallen steadily in recent years, down to 25 percent in 2006.

The proportions of the working-age population with a tertiary qualification in 2006:

Total tertiary qualifications	49%	(45% in 2001)
Bachelors degree or higher[1]	15%	(11% in 2001)
Other tertiary qualification[2]	34%	(34% in 2001)
School qualification	26%	(27% in 2001)
No qualification	25%	(28% in 2001)

Note: The proportion with a tertiary qualification from the *Household Labour Force Survey* is based on a sample and it is higher than the figure from the 2006 census. While the census is based on the entire population not everyone completed the census question on qualifications and as a result the proportion with a tertiary qualification from the census is lower.

Source: Statistics New Zealand (2006), *Household Labour Force Survey*.



HIGHER QUALIFICATIONS AND AGE

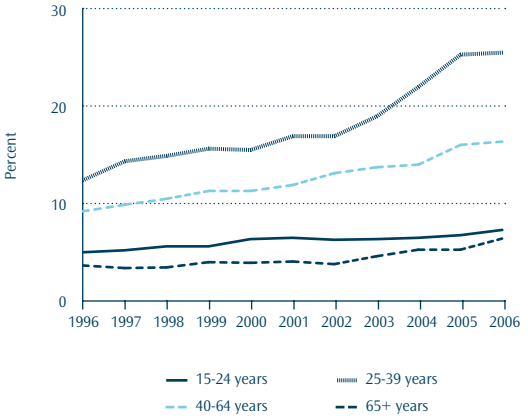
Figure 4.2//**Working-age population (June quarter) with a bachelors degree or higher qualification by age group**

The proportion of the population with a bachelors degree or higher qualification increased slightly in 2006. After significant growth since 2002, the proportion aged 25 to 39 years with a bachelors or higher qualification remained flat in 2006.

The proportions of the working-age population with a bachelors or higher qualification in 2006:

15 years and over	15%	(11% in 2001)
15-24 years	7.0%	(6.2% in 2001)
25-39 years	25%	(17% in 2001)
40-64 years	16%	(12% in 2001)
65 years and over	6.1%	(3.8% in 2001)

Source: Statistics New Zealand (2006), *Household Labour Force Survey*.



OTHER TERTIARY QUALIFICATIONS AND AGE

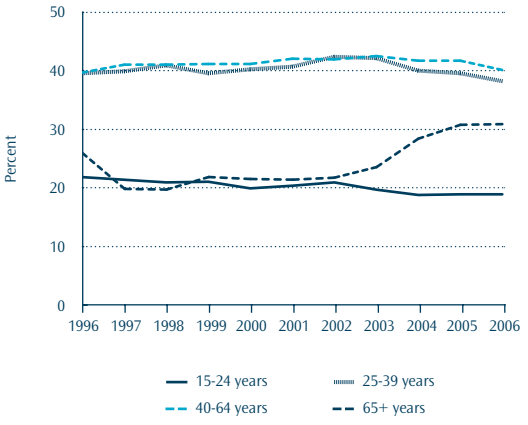
Figure: 4.3//**Working-age population (June quarter) with other tertiary qualifications by age group**

The proportion of the population holding other tertiary qualifications has been steady at 34 percent in recent years. In the various age groups, the proportions have been declining – except for an offsetting increase in other tertiary qualifications gained by those aged 65 years and over.

The proportions of the working-age population with other tertiary qualifications in 2006:

15 years and over	34%	(34% in 2001)
15-24 years	18%	(20% in 2001)
25-39 years	38%	(40% in 2001)
40-64 years	40%	(42% in 2001)
65 years and over	30%	(21% in 2001)

Source: Statistics New Zealand (2006), *Household Labour Force Survey*.



1. 'Bachelors degree or higher' qualifications include postgraduate degrees, certificates or diplomas.
2. 'Other tertiary qualifications' include university, teaching and nursing certificates or diplomas, New Zealand certificates or diplomas, technician's certificates, local polytechnic certificates or diplomas, and trade certificates or advanced trade certificates.

TERTIARY QUALIFICATIONS AND ETHNIC GROUP[3]

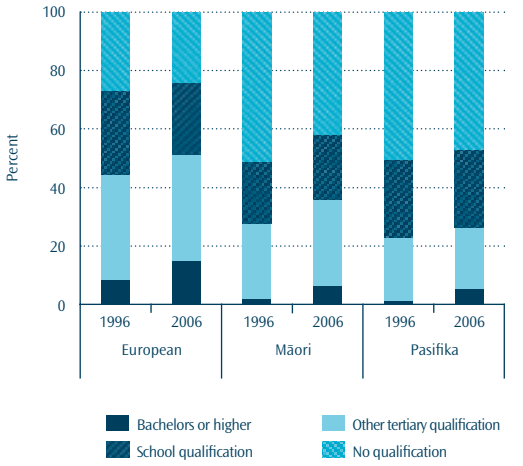
Figure 4.4//**Working-age population (June quarter) by highest qualification and ethnic group**

The proportion of the working-age population with tertiary qualifications increased for Europeans, Māori and Pasifika between 1996 and 2006. In each of these ethnic groups, the proportion with a bachelors degree or higher qualification increased. However, the proportion of Māori and Pasifika with tertiary qualifications remained significantly below that of Europeans in 2006.

The proportions of the working-age population with tertiary qualifications by ethnic group in 2006:

	Bachelors degree or higher		Other tertiary qualification	
	2006	1996	2006	1996
	%	%	%	%
European	15	8.5	36	36
Māori	6.2	1.9	30	26
Pasifika	5.3	1.2	21	22
Others	30	23	26	20

Source: Statistics New Zealand (2006), *Household Labour Force Survey*.



TERTIARY QUALIFICATIONS AND GENDER

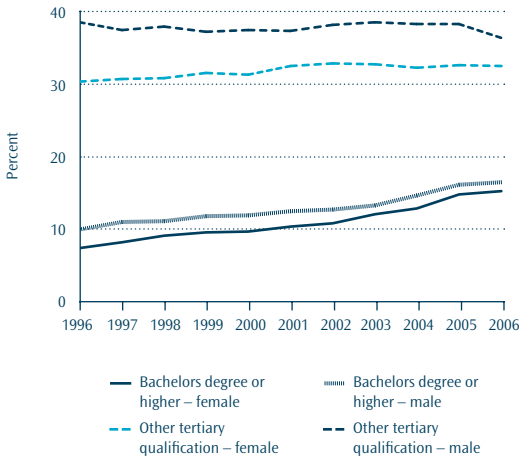
Figure 4.5//**Working-age population (June quarter) with a tertiary qualification by gender**

Although more men than women held tertiary qualifications, the gap between them continued to narrow in 2006.

The proportions of the working-age population with a tertiary qualification by gender in 2006:

Bachelors degree or higher – female	15%	(10% in 2001)
Bachelors degree or higher – male	16%	(12% in 2001)
Other tertiary qualification – female	32%	(32% in 2001)
Other tertiary qualification – male	36%	(37% in 2001)

Source: Statistics New Zealand (2006), *Household Labour Force Survey*.



LOWER UNEMPLOYMENT FOR THE TERTIARY QUALIFIED

Figure 4.6//**Unemployment rates (June quarter) for the working-age population by highest qualification**

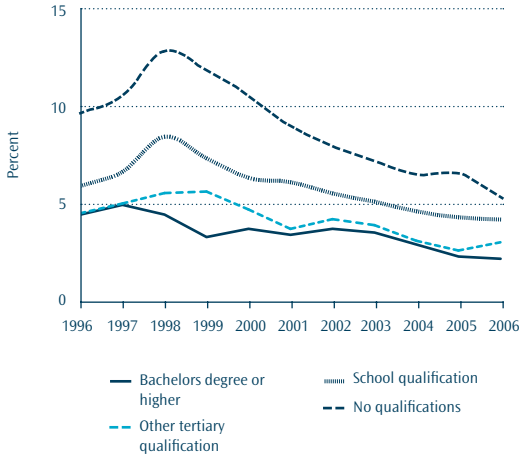
Although people with tertiary qualifications had lower levels of unemployment than those without tertiary qualifications, the gap between them continued to narrow in 2006.

However, during times of economic recession people with tertiary qualifications are more likely to be retained in employment than those without tertiary qualifications.

The unemployment rate of the working-age population by highest qualification in 2006:

All qualification levels	3.5%	(5.2% in 2001)
Bachelors degree or higher	2.1%	(3.3% in 2001)
Other tertiary qualification	2.9%	(3.6% in 2001)
School qualification	4.1%	(6.0% in 2001)
No qualification	5.2%	(8.9% in 2001)

Source: Statistics New Zealand (2006), *Household Labour Force Survey*.



3. The sampling errors for the smaller ethnic groups such as Māori and Pasifika are generally larger requiring caution to be exercised in interpreting changes in this data over time.

LABOUR FORCE PARTICIPATION

Figure 4.7//**Labour force participation rates (June quarter) by qualification level and gender**

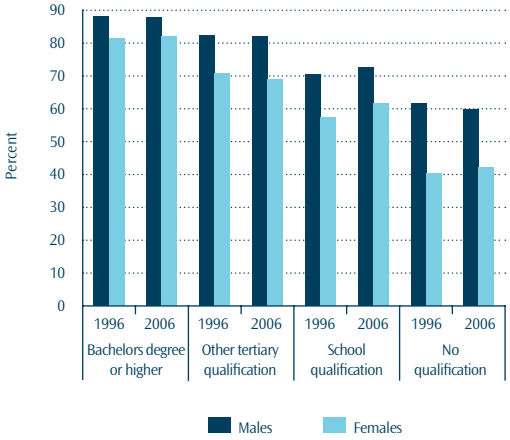
The tertiary qualified have a higher level of participation in the labour force. Also, the gap in the participation rate between men and women narrows for those with tertiary qualifications.

Between 1996 and 2006, the labour force participation rates of those with tertiary qualifications remained relatively stable, with the exception of the rate for women with other tertiary qualifications, which fell slightly.

The labour force participation rates of the working-age population by highest qualification in 2006:

	Females		Males	
	2006	1996	2006	1996
	%	%	%	%
Bachelors degree or higher	82	82	88	88
Other tertiary qualification	69	71	82	82
School qualification	62	57	73	71
No qualification	42	40	60	62

Source: Statistics New Zealand (2006), *Household Labour Force Survey*.



HIGHER EARNINGS FOR THE TERTIARY QUALIFIED

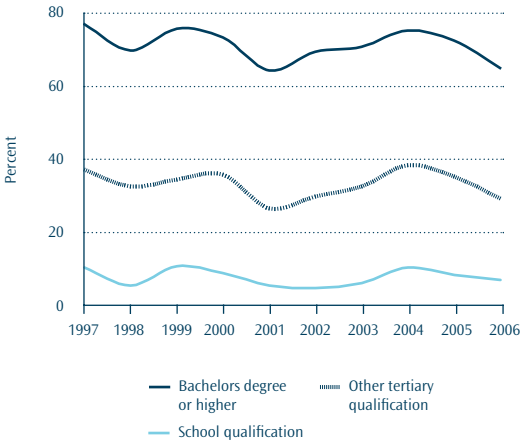
Figure 4.8//**Median hourly earnings premiums (June quarter) by highest qualification compared with those with no qualification**

The median hourly earnings premium for those with tertiary qualifications, compared with those with no qualification, decreased in 2006. This reduction reflects the strength of the labour market, which currently provides greater access to employment for those with low or no qualifications. However, a significant earnings advantage continued to exist for those with tertiary qualifications.

Median hourly earnings premiums by highest qualification compared, in relation to no qualification, in 2006:

Bachelors degree or higher	64%	(76% in 1997)
Other tertiary qualification	29%	(37% in 1997)
School qualification	6%	(10% in 1997)

Source: Statistics New Zealand (2006), *Household Labour Force Survey*.



YOUTH INACTIVITY

Figure 4.9//**The proportion of youths not in employment or formal study, or in a caregiving role, by gender and age group**

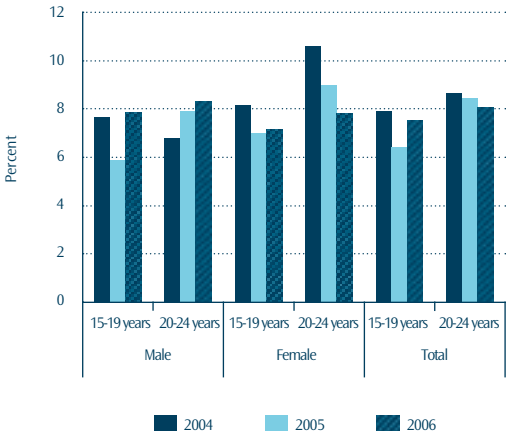
The proportion of the youth population not in employment, not in formal study and not in a caregiving role increased for 15 to 19 year-olds and decreased for the 20 to 24 year-olds in 2006.

The proportion of women aged 20 to 24 years not in employment, not in formal study and not in a caregiving role has declined noticeably since 2004, while the proportion of men in this category has increased.

The proportion of youth not in employment, not in formal study and not in a caregiving role in 2006:

	Males		Females		Total	
	2006	2004	2006	2004	2006	2004
15-19 years	7.8%	7.7%	7.2%	8.1%	7.5%	7.9%
20-24 years	8.3%	6.8%	7.8%	10.6%	8.1%	8.7%

Source: Statistics New Zealand (2006), *Household Labour Force Survey*.



THE PAYOFF FROM A TERTIARY EDUCATION

Recent studies by Nair (2007) and Hyatt, Nair and Smyth (2007) applied statistical modelling to the *Student Loan Scheme Borrowers* dataset to analyse the factors that influence the earnings of the borrowers in the years after tertiary study – in this case three and five years. By tracking the earnings of borrowers over time we can analyse the impact of tertiary education on earnings. Further, we can monitor how long any earnings advantage from participation in tertiary education lasts.

This article presents a brief summary of the key findings of the two analytical reports. Firstly, the dataset used in the studies is described, followed by a brief outline of the methodology used, then the summary of the key findings from both studies is presented and, finally, some overall conclusions are drawn.

Data and method

Nair (2007) and Hyatt et al (2007) used the integrated *Student Loan Scheme Borrowers* dataset in their studies. This dataset is maintained by Statistics New Zealand and contains information on the tertiary education of student loan borrowers matched to information on their earnings following study. In the studies, the records of around 97,000 borrowers who left tertiary study between 1997 and 1999 were analysed.[4]

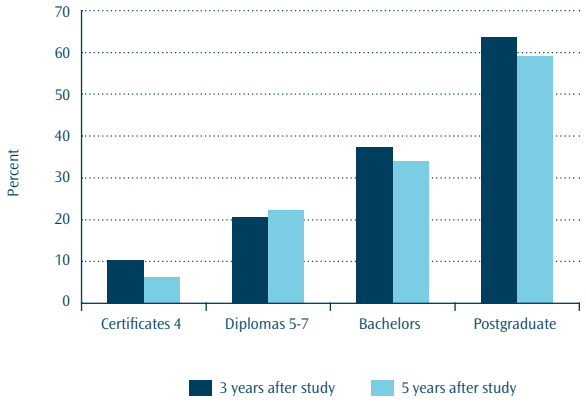
Both studies applied generalised logistic regression to the integrated dataset to model the impact of various demographic and study- and employment-related factors on earnings in the years following tertiary study.[5] An advantage of using regression analysis is that it allows for the impact of each of the study-related variables to be examined individually, while holding other non-study-related factors[6] constant.

Higher earnings for higher-level qualifications

Nair (2007) examined the effect of the level of tertiary study on earnings three and five years after finishing study. Nair found that those who studied at higher qualification levels had an income advantage over others – the size of the premium increased as the level of the qualification increased, while controlling for other factors.

Figure 4.10 presents the premiums earned three and five years after study for the different levels of study, compared with the earnings of borrowers who studied towards level 1 to 3 certificates. As can be seen in Figure 4.10, the highest premium was earned by borrowers who studied at postgraduate level. Comparing the premiums earned three and five years after study showed that at most levels of tertiary qualification the premium earned decreased only slightly five years after study. The exception was a slight increase in the premium five years after study for borrowers who studied for level 5 to 7 diplomas.

Figure 4.10 // Earnings premiums by level of study compared with level 1 to 3 certificates



Source: Statistics New Zealand, *Student Loan Scheme Borrowers* dataset.

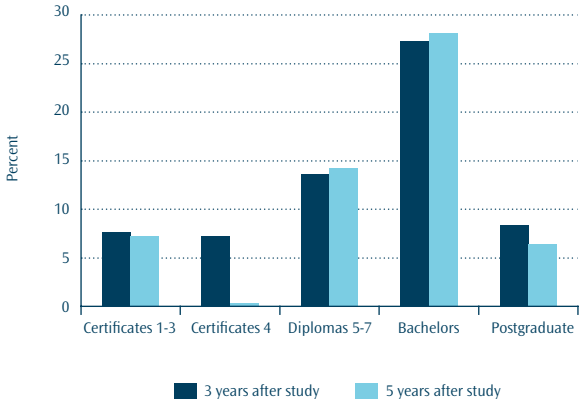
Higher earnings for completed qualifications

The level of study had a stronger influence on earnings than whether or not individuals were successful in completing a qualification. But after controlling for level of study, there was a premium for completing a qualification. This was measured by comparing the earnings of individuals who completed a qualification with individuals who had studied towards the same qualification without completing. Nair's study found that completing a qualification at specific levels of study had a strong influence on earnings after study.

Figure 4.11 presents the earnings premiums three and five years after study for completing a qualification at different levels of study. As can be seen, the highest premium for completing a qualification was for borrowers who studied at bachelors level. Generally, the premium for completing a qualification five years after study was similar to the premium three years after study, with the exception of level 4 certificates, where the premium virtually disappeared.

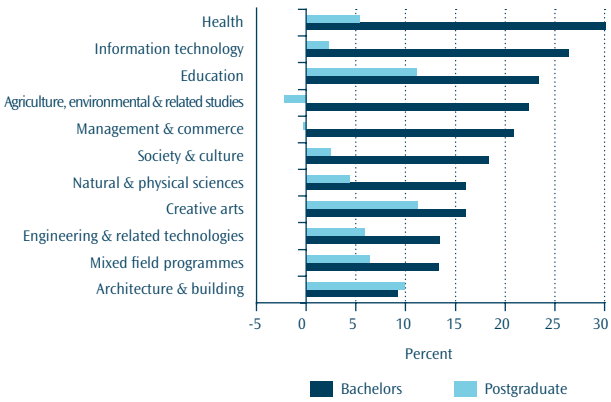
4. Around 80 percent of full-time tertiary students access a student loan.
5. For a more detailed description of the methodology used see Nair (2007), p7.
6. Such as age and industry of employment.

Figure 4.11 // Earnings premiums for completing a qualification by level of study



Source: Statistics New Zealand, *Student Loan Scheme Borrowers* dataset.

Figure 4.12 // Earnings premiums 5 years after study for a bachelors or higher qualification by field of study



Source: Statistics New Zealand, *Student Loan Scheme Borrowers* dataset.

Premiums for completed qualifications and field of study

Nair's study also found that the premium for completing a qualification varied by field of study and by level of study. Figure 4.12 presents the earnings premiums five years after study for borrowers who completed a bachelors or higher qualification. The largest premium at the bachelors level was earned by those who studied health, information technology or education. At the postgraduate level, the highest premium for completing a qualification was earned by those who studied in the fields of education, creative arts or architecture.

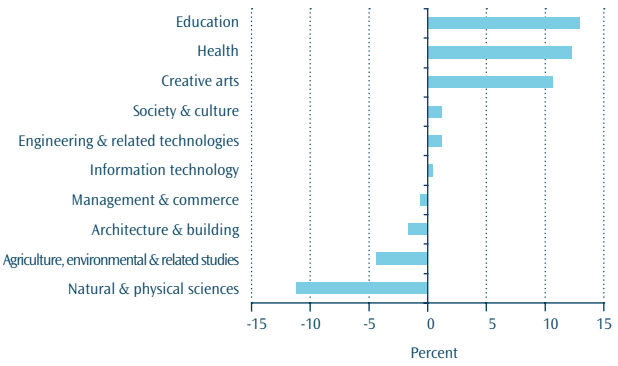
Premiums for completed qualifications and provider type

The study by Hyatt et al (2007) examined the impact of the provider type on the earnings premium for completing a qualification – with a focus on universities and polytechnics. The study found that the earnings premium five years after study for a bachelors degree or a level 1 to 3 certificate was slightly higher for a borrower who studied at a polytechnic. At the other levels of study, the earnings premium for completing a qualification was higher for borrowers who studied at a university.

Figure 4.13 // Earnings premiums for a completed qualification by level of study and provider type

Source: Statistics New Zealand, *Student Loan Scheme Borrowers* dataset.

Figure 4.14 // Earnings premiums 5 years after study for a bachelors degree from a university relative to a polytechnic by field of study



Source: Statistics New Zealand, *Student Loan Scheme Borrowers* dataset.

Earnings premiums varied by field of study and provider type

Hyatt et al (2007) also found that the field of study impacted on the earnings of borrowers, as did the level of study and type of provider. Figure 4.14 presents the earnings premiums five years after study of borrowers who completed a bachelors degree. At this study level, there was a significant earnings advantage for borrowers who had studied at a university in education, health or creative arts. In the area of information technology and of management and commerce there was little difference in the earnings premium based on the provider type. Borrowers who studied at polytechnics in the fields of natural and physical sciences or agriculture, environmental and related studies earned more than those who studied these fields at a university, while controlling for other factors.

Conclusion

The findings of the studies by Nair (2007) and Hyatt et al (2007) suggest that participation in the tertiary education system can lead to a significant earnings advantage in the years following study. In particular, completing a qualification significantly increased earnings. Importantly, the studies showed that the advantage of completing a qualification and attaining higher -level tertiary qualifications persisted over time.

As the *Student Loan Scheme Borrowers* dataset is updated on an annual basis, the analysis of earnings after tertiary study can be repeated over time to monitor whether the advantage of attaining tertiary qualifications continues over the working life of New Zealanders.

NEW ZEALAND'S EXPANDING KNOWLEDGE AND SKILLS RESOURCE

An important contributor to New Zealand's economic and social development is the knowledge and skill level of the working-age population – its human capital. The increased focus on a knowledge-based society in recent years acknowledges the importance of a highly skilled and knowledgeable workforce. An improvement in the stock of human capital leads to benefits to the individual – in the form of higher earnings and better non-financial outcomes – as well as to gains for the wider society.

This report shows how those with tertiary qualifications benefit from their higher-level[7] education, by examining their post-study outcomes and their likelihood of employment. This study uses data from the *2006 Census of Population and Dwellings* and compares this with the previous censuses held in 2001 and 1996. By analysing the changing trends in the tertiary qualifications of the New Zealand population this study measures the change in the nation's stock of human capital.

More New Zealanders with tertiary qualifications

The New Zealand population is now better qualified than it was 10 years ago. The 2006 census data showed that 36 percent of the population held a tertiary qualification in 2006, compared to 26 percent 10 years earlier.[8] The proportion of the population with a bachelors or higher qualification increased from 8 percent in 1996 to 14 percent in 2006 (Figure 4.15). Over the same period, those with a non-degree tertiary qualification increased from 18 percent in 1996 to 22 percent in 2006. The proportion of the population with a school qualification remained relatively constant at 31 percent, while the number without a qualification fell from 32 percent in 1996 to 22 percent in 2006. The two main factors responsible for this lift in the population's educational attainment were increased participation by New Zealanders in tertiary education and a significant level of immigration during this period.

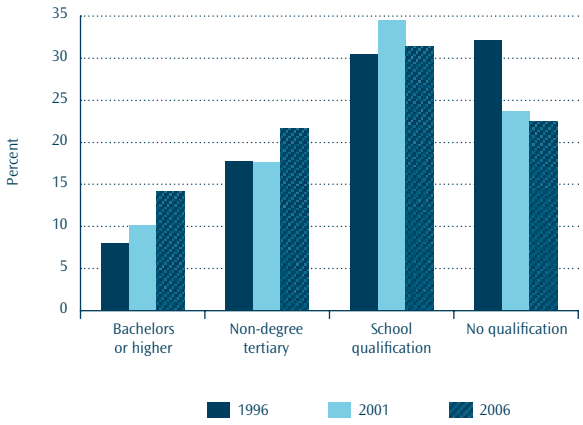
The information from New Zealand's Census of Population and Dwellings is of a high quality as it covers the total population. The census collects information on people's highest educational qualifications – both from school and from tertiary study. The tertiary qualification levels reported on here cover non-degree qualifications, that is, level 1 to 4 certificates and level 5 to 6 diplomas; bachelors-level qualifications including level 7 graduate diplomas and certificates; and postgraduate qualifications covering bachelors degrees with honours, postgraduate diplomas and certificates, masters degrees and doctorates. The census also collects information on the field of study of those with tertiary qualifications.

The population referred to in this study is the New Zealand Employed census usually resident population count, aged 15 years and over, unless otherwise specified.

In 1996 and 2001, vocational qualifications were reported as either basic, skilled, intermediate or advanced, while in 2006 these were classified as certificates levels 1 to 3, certificates level 4, and diplomas levels 5 to 6.

Note: The counts of the number of qualifications in this report will in some cases underestimate the actual number of qualifications held by the New Zealand population. This is because some people hold more than one qualification. For example, someone with a postgraduate qualification and a bachelors degree will be included in the counts based on their highest qualification, underestimating the bachelors degree count in this case.

Figure 4.15 // Distribution of the New Zealand population by highest qualification



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

7. For more information on tertiary education outcomes see the report by Smart, W. (2006) *Outcomes of the New Zealand tertiary education system – a synthesis of the evidence*, Wellington: Ministry of Education.
8. This analysis does not consider invalid responses such as 'not stated', 'refused to answer' or 'not elsewhere included' when calculating the percentage figures. Hence, the proportions stated in this report may not match with those published by Statistics New Zealand.

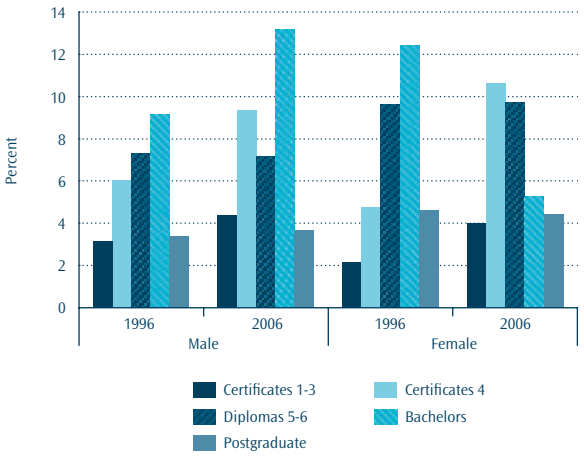
More women with higher-level tertiary qualifications

The proportion of women with a bachelors degree more than doubled over the last 10 years, while the proportion of men with this level of qualification increased by 54 percent. In 2006, the proportion of women with a bachelors degree was 11 percent, compared to 9.3 percent for men.

The proportion of women with a postgraduate qualification also increased at a faster rate than men over the last 10 years. From 1996 to 2006, the proportion of women with a postgraduate qualification increased from 2.2 percent to 4.0 percent of the population. Over the same period, the proportion of men with a postgraduate qualification rose from 3.2 percent to 4.4 percent.

In 2006, proportionately more men held a non-degree tertiary qualification than women. Twenty-four percent of men held a non-degree tertiary qualification in 2006, compared to 19 percent of women. The proportion of men with a diploma at levels 5 to 6 remained steady between 1996 and 2006 at just over 7 percent, while for women this proportion remained unchanged at 10 percent. Men with a level 4 certificate increased from 9.2 percent of the population in 1996 to 13 percent in 2006. In contrast, the proportion of women with a certificate at level 4 declined over the last 10 years, from 12 percent to 5.3 percent. The proportion of the population with level 1 to 3 certificates remained virtually unchanged for both men and women. In 2006, the percentage of men in the population with this level of qualification was 3.7 percent and for women this was 4.4 percent.

Figure 4.16 // Distribution of the New Zealand population by highest qualification and gender

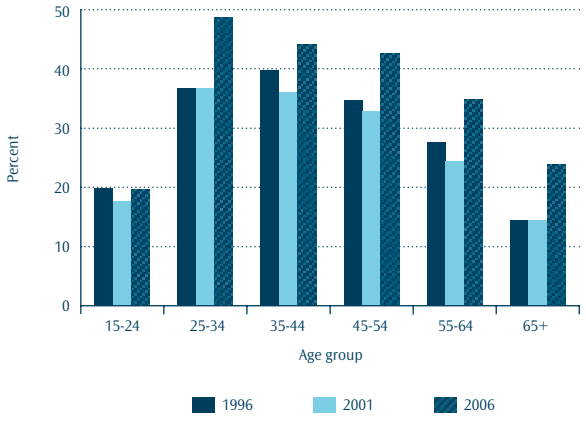


Source: Statistics New Zealand, *Census of Population and Dwellings.*

New Zealand's younger adult population becomes more qualified

Almost one in two New Zealanders aged 25 to 34 years held a tertiary qualification in 2006. In 1996, only 36 percent of the population in this age group were tertiary qualified. From 1996 to 2006, there were significant increases in the proportion of the population with a tertiary qualification for all age groups except those aged 15 to 24 years. Fifteen to 24 year-olds with a tertiary qualification remained unchanged at 20 percent over the last 10 years. The 2006 census data also showed that the proportion of people aged 65 years and over with a tertiary qualification increased from 14 percent in 1996 to 24 percent in 2006, the second biggest increase among the age groups.[9]

Figure 4.17 // Proportion of the New Zealand population with a tertiary qualification by age group



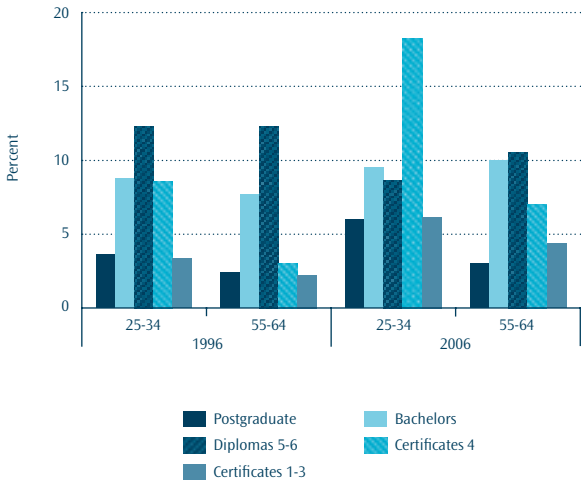
Source: Statistics New Zealand, *Census of Population and Dwellings.*

Note: The proportions graphed here exclude those who did not respond to this question in the census.

Comparing the educational attainment of the population at the various qualification levels showed that in the younger age groups the proportion with a bachelors degree had doubled from 1996 to 2006. The proportion of 25 to 34 year-olds with a bachelors degree rose from 9 percent to 18 percent over this period (Figure 4.18). While the proportion with a bachelors degree also doubled for those aged 55 to 64 years, this increase was of a lower magnitude – 3.0 percent in 1996 and 7.0 percent in 2006.

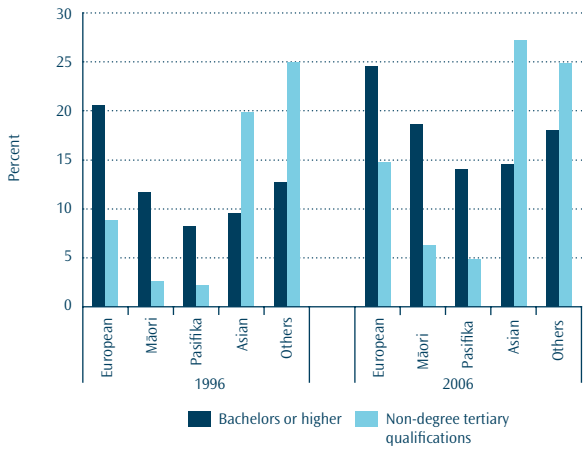
9. For further details refer to the Census 2006 fact sheet released on the Education Counts website in October 2007.

Figure 4.18 // Distribution of the New Zealand population by highest qualification and age group



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

Figure 4.19 // Distribution of the population with degree and non-degree qualifications by ethnic group



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

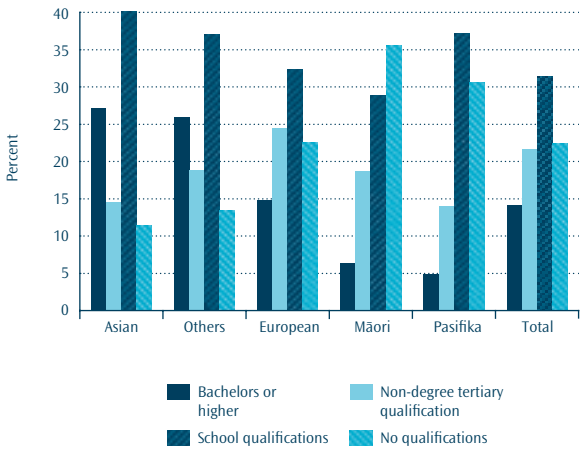
Ethnic groups and educational attainment

When the census data was disaggregated, the Pasifika group had the highest overall increase in their number with a tertiary qualification as a proportion of the population (Figure 4.19). Ten percent of Pasifika peoples had a tertiary qualification in 1996 and by 2006 this proportion had increased to 19 percent. For Māori the proportion with a tertiary qualification increased from 1996 to 2006, from 14 percent to 25 percent. Asians had the third highest increase in the proportion of their number with a tertiary qualification, followed by Europeans and then the Other ethnic group. The proportion of Asians with a tertiary qualification was 29 percent in 1996 and 42 percent in 2006. For Europeans these proportions were 29 and 39 percent and for the Other ethnic group they were 38 and 43 percent.

Of those with a bachelors degree in 2006, Asians had the highest proportion in the population at 27 percent. The Other ethnic group had the next highest proportion, at 25 percent, followed by Europeans (15 percent), Māori (6.3 percent) and Pasifika peoples (4.9 percent). However, from 1996 to 2006, the Māori and the Pasifika ethnic groups showed the biggest percentage growth in their numbers with a bachelors degree. The number of Europeans and Asians with this level of qualification also increased significantly, while the proportion for the other ethnic group with a bachelors degree remained virtually unchanged.

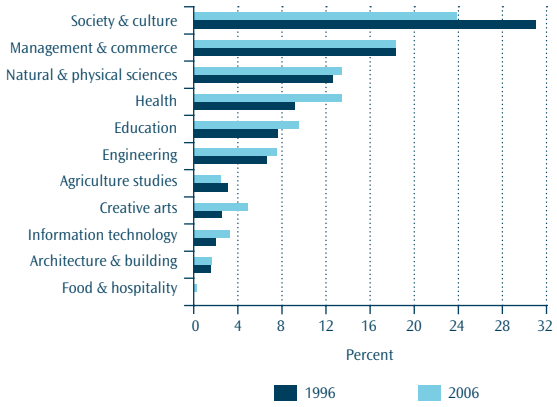
In 2006, the proportion of the population with a non-degree tertiary qualification varied from 15 percent to 25 percent among the ethnic groups (Figure 4.20). Twenty-five percent of Europeans held a non-degree tertiary qualification in 2006, compared to 19 percent for Māori, 18 percent for the Other ethnic group, 15 percent for Asians and 14 percent for Pasifika peoples. The increase from 1996 to 2006 in the proportion of Māori and Pasifika with a non-degree tertiary qualification was larger than that for the Other ethnic group. The proportion of Māori with a non-degree tertiary qualification was 12 percent in 1996 and for Pasifika peoples this was 8 percent.

Figure 4.20 // Distribution of the population by highest qualification and ethnic group



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

Figure 4.21 // Distribution of the population with a bachelors or higher qualification by field of study



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

Between 1996 and 2006, the proportion of the population with a tertiary qualification had increased for all ethnic groups. However, the increase in the proportion of Māori and Pasifika with a non-degree tertiary qualification was significant (Figure 4.20). The proportion of Māori with a non-degree tertiary qualification increased from 12 percent in 1996 to 19 percent in 2006. The comparative figures for Pasifika peoples were 8 percent and 14 percent.

Study of 'society and culture' remained the most common in 2006

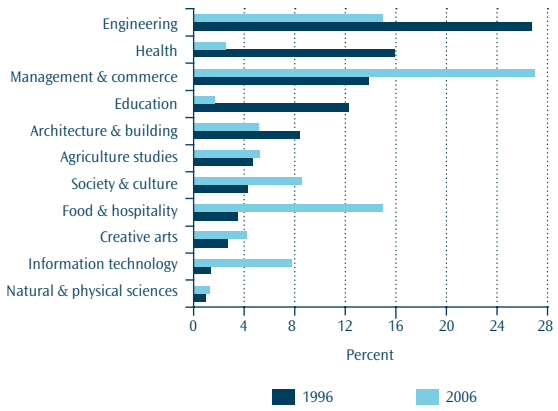
The most common field of study in 2006 for those with a bachelors or higher qualification was society and culture (Figure 4.21). Twenty-four percent of the population with a bachelors or higher qualification had studied in the field of society and culture, followed by management and commerce (18 percent) and health (14 percent). Younger people with a bachelors or higher qualification most commonly studied in the field of management and commerce. Seventeen percent of those aged 15 to 24 years studied management and commerce and 19 percent of those aged 25 to 44 years. The other most common fields studied by those aged 15 to 44 years in 2006, were natural and physical sciences and engineering and related technologies.

While society and culture remained the most common field of study in 2006 for those with a bachelors or higher qualification, as a percentage of the population, study in this field decreased by seven percentage points from 31 percent in 1996. Study in the field of health increased from 1996 to 2006, from 9.2 percent to 13 percent of the population with a bachelors or higher qualification.

From 1996 and 2006, there have been significant changes in the field of study of those with non-degree tertiary qualifications, suggesting structural shifts in the New Zealand economy and the changing qualification requirements of industry. There were significant increases in non-degree tertiary study in the field of management and commerce from 1996 to 2006 (up from 14 percent to 27 percent). Study at the non-degree tertiary level also increased in the food and hospitality services from 1996 to 2006 (up from 3.5 percent to 15 percent) and in information technology (up from 1.4 percent to 7.8 percent).

The census recorded a significant decrease in non-degree-level study in the field of engineering and related technologies (down from 27 percent in 1996 to 15 percent in 2006). From 1996 to 2006, there was also a decrease in non-degree-level study in the field of health (down from 16 percent to 3 percent) and education (down from 12 percent to 1.7 percent). These decreases were, however, due to a switch from non-degree to degree-level qualification requirements in these sectors.

Figure 4.22 // Distribution of the population with a non-degree tertiary qualification by field of study



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

Some fields of study continued to be dominated by men and others by women in 2006. For instance, engineering and related technologies, architecture and building, information technology, and agriculture and related studies were male-dominated fields. Of those who studied engineering and related technologies in 2006 more than 80 percent were men and in the case of architecture and building, 90 percent of those with level 1 to 4 certificates were men.

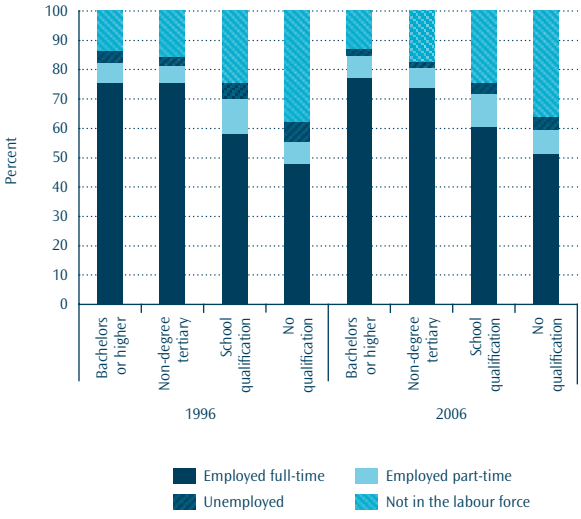
The impact of tertiary qualifications on the labour market outcomes for individuals

The census data showed that those with tertiary qualifications had a greater likelihood of employment and this was the case for both men and women. Seventy-seven percent of men with a bachelors or higher qualification were in full-time employment in 2006, and 74 percent of men with a non-degree tertiary qualification (Figure 4.23). This compared to 60 percent for men with school qualifications and 51 percent for men with no formal qualifications.

Sixty-one percent of women with a bachelors or higher qualification were in full-time employment in 2006 (Figure 4.24). This compared to 47 percent of women with a non-degree tertiary qualification and 38 percent for women with a school qualification and 24 percent for women with no formal qualification.

The labour force participation rate in the working-age population was highest among the tertiary qualified compared with those who had a school qualification or no qualification. The risk of unemployment was highest among those with no or lower-level qualifications. The census information also showed that women had a slightly higher risk of unemployment than men. However, the recent strong economic growth has lowered the unemployment rate at every qualification level.

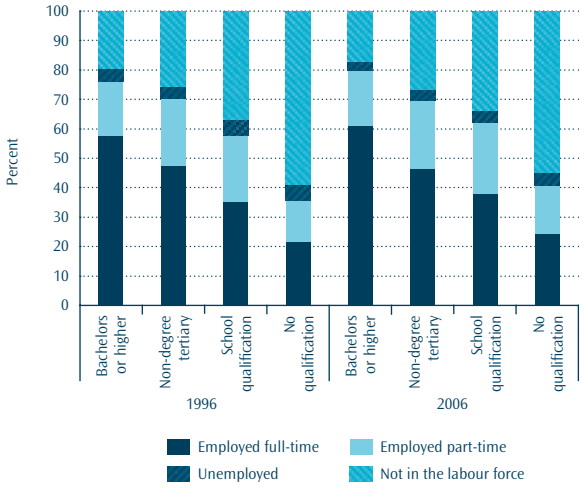
Figure 4.23 // Men in the working-age population by highest qualification and labour force status



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

The full-time employment rate was higher for women with a bachelors or higher qualification than for those with a non-degree tertiary qualification. From 1996 to 2006, this rate for women with a bachelors or higher qualification increased from 57 percent to 61 percent in 2006. For men with a bachelors or higher qualification, the full-time employment rate was 77 percent in 2006, up two percentage points from 1996.

Figure 4.24 // Women in the working-age population by highest qualification and labour force status



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

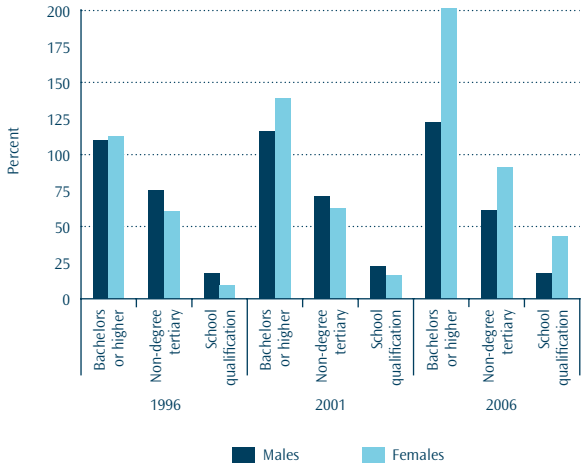
Although women's participation in full-time employment was considerably lower than that of men, the growth in the number of women in full-time employment from 1996 to 2006 was much higher than that for men. Nevertheless, fewer than 50 percent of women with non-degree tertiary qualifications were employed full-time in 2006, compared to 74 percent of men with this level of qualification. Women also continued to account for the majority of those working part-time, irrespective of their qualification level. In 2006 the proportion of women with a tertiary qualification working part-time remained virtually unchanged compared with 1996.

The unemployment rates from the census showed considerable variation based on the individual's age, gender, ethnic group, their qualification level and also on the region in which they lived. In the case of men and women with a tertiary qualification, the unemployment rates showed considerable decreases from 1996 to 2006. For women with a bachelors or higher qualification, the unemployment rate went down from 4.2 percent to 2.5 percent. For men with this level of qualification, the unemployment rate decreased, over the same period, from 4.0 percent to 2.3 percent. For those with a non-degree tertiary qualification the decrease in the unemployment rate from 1996 to 2006 was more marginal – for women it fell from 3.7 percent to 3.4 percent and for men it fell from 3.0 percent to 2.1 percent.

The impact of tertiary qualifications on post-study earnings

Median earnings were calculated using the 1996 and 2006 census income bands. Comparing the earnings in 1996 with those in 2006 showed that the premium earned by those with tertiary qualifications, compared those with no qualifications, had increased over this time.[10] Especially for women with a bachelors or higher qualification, the increase in the premium was considerable, as shown in Figure 4.25. The premium for women with a bachelors or higher qualification increased from 113 percent in 1996 to 202 percent in 2006. The comparable figures for men with a bachelors or higher qualification were 110 percent and 123 percent. The larger increase in the premium for women was partly due to their higher full-time participation in the workforce since 1996.

Figure 4.25 // Earnings premium by highest qualification and gender



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

It was noticeable that the premium earned for a tertiary qualification by women in 2006 was significantly higher than for men at each qualification level. These differentials were much smaller in 1996. While the earnings premium for women was calculated from a lower base than for men, it does indicate that the earnings advantage for women with tertiary qualifications has increased since 1996.[11]

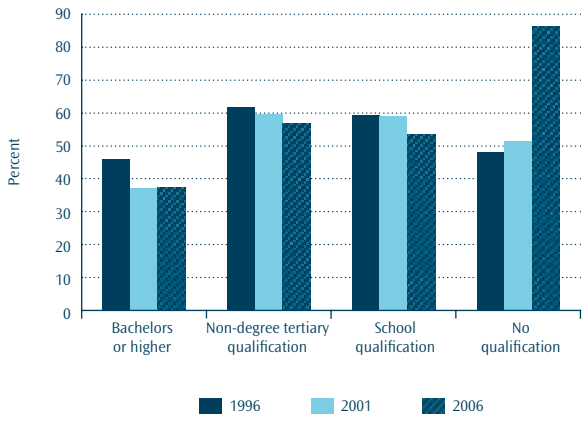
The census data showed that the increased rate of employment of women with higher-level tertiary qualifications has closed the gap

10. The premium was calculated on the median earnings, including income from salaries, wages and bonuses but excluding income from benefits.
11. The relative earnings gap due to gender should be treated with caution because of the lower workforce participation by females.

in median earnings between men and women. Figure 4.26 shows the earnings advantage of males, compared with females, for different qualification levels. In 2006, the median earnings of men with a bachelors or higher qualification were 38 percent higher than the median earnings of women with this level of qualification. The median earnings of men with a non-degree tertiary qualification were 59 percent higher than the median earnings of women. The comparative figure for a school qualification was 58 percent and for no qualification, 86 percent.

When comparing the 2006 figures with those for 1996, it is apparent that the gap in median earnings between men and women has dropped the most for women with a bachelors or higher qualification and to a lesser degree for those with a non-degree tertiary qualification or a school qualification. In contrast, the gap in median earnings between men and women without any qualification increased significantly from 1996 to 2006 (Figure 4.26). These findings illustrated that the inequalities in earnings decrease between individuals as their qualification levels increase.

Figure 4.26 // Earnings premium of men compared with women by qualification level



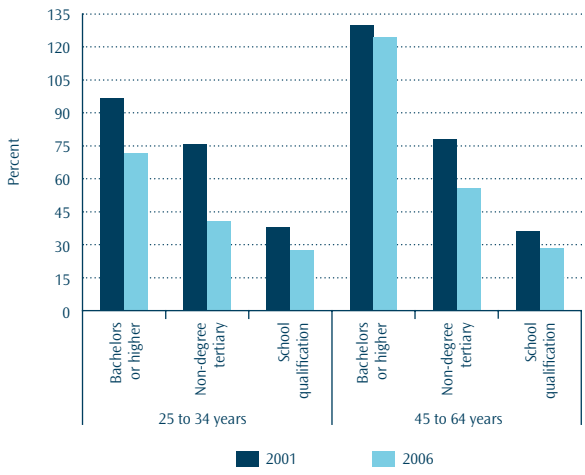
Source: Statistics New Zealand, *Census of Population and Dwellings.*

An analysis of the earnings premium among age groups indicated how tertiary qualifications, combined with work experience, impact on earnings. Figure 4.27 compares the earnings premium of two age groups – 25 to 34 years and 45 to 64 years – at the different qualification levels, compared with those with no qualification.

The census data showed that the earnings premium resulting from educational qualifications decreased from 2001 to 2006 for all age groups and at every level of qualification. This may be attributable to the tighter labour market in recent years, which has lowered the level of unemployment for those with no qualifications and has therefore reduced the premium for higher levels of qualification.

Figure 4.27 shows that there is relatively little difference in the earnings premium between the two age groups for those with a school qualification. In other words, work experience would appear to add little to the earnings premium for those with a school qualification. However, for those with a non-degree tertiary qualification or a bachelors or higher qualification there was a considerable earnings advantage for those aged 45 to 64 years, indicating that tertiary qualifications, combined with work experience, produce an additional premium. In 2006, the earning premium for those aged 45 to 64 years with a bachelors or higher qualification was 124 percent. This compared to an earnings premium of 72 percent for a person with the same level of qualification in the 25 to 34 years age group.

Figure 4.27 // Earnings premium by qualification level and age group, compared with those with no qualification



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

Conclusion

The census 2006 data indicated that the knowledge and skill level in New Zealand's economy is increasing. The expansion from 1996 to 2006 of the proportion of the New Zealand working-age population with a tertiary qualification emphasises this fact. The higher participation rate of New Zealanders in tertiary education in the last decade, coupled with increased migration, has contributed significantly to the latest increases in the economy's human capital.

About 50 percent of New Zealand's younger working-age population – those aged 25 to 34 years – held a tertiary qualification in 2006, up 14 percentage points on 1996. There were proportionately more women than men with tertiary qualifications in this age group in 2006. Also, proportionately more women than men held higher-level tertiary qualifications in this age group. Among all ethnic groups, younger people were also more qualified than those in older age groups. More women took up full-time employment in 2006, compared to 10 years earlier, and this is likely to be due to the fact that more women held a tertiary qualification in 2006.

The increase in the skill level of the workforce has also contributed to the recent growth in the New Zealand economy. The unemployment rate for those in the population with bachelors or higher qualifications fell below 3 percent in 2006. The latest census data also enabled comparisons to be made that indicate that as the population's knowledge and skill levels rise, the differences in earnings decrease. The census data also confirmed that people with tertiary education earn more, on average, than those with no qualifications.

References:

- Nair, B. (2007) *Measuring the returns on investment in tertiary education three and five years after study*, Wellington: Ministry of Education.
- Hyatt, J. R., Nair, B. & Smyth, R. (2007) *Does it really matter where you study?* Wellington: Ministry of Education.

CHAPTER FIVE

AN OVERVIEW

In 2006, over 700,000 people were engaged in some form of formally recognised learning either at a tertiary education provider or in the workplace, or both. Twenty percent more New Zealanders participated in formal tertiary education in 2006 than was the case five years earlier. Nearly one in five New Zealanders aged 15 years and over were involved in some form of formal tertiary education. Fourteen percent of the population were enrolled at a tertiary education provider and over 5 percent were undertaking formal learning in the workplace.

After rising rapidly for many years, the number of formal students enrolled at tertiary education providers fell in 2006. In contrast, workplace-based learning grew strongly – the number of industry trainees increased by 8.1 percent in 2006 to 176,000. When converting the number of people studying to equivalent full-time students, both domestic and international provider-based enrolments fell in 2006. International enrolments fell more strongly than domestic enrolments. This was the second consecutive decline in international enrolments, after strong growth between 2000 and 2003, and reduced growth in 2004. In terms of equivalent full-time students, 12 percent of formal provider-based students were international in 2006.

Study at certificate levels by domestic students fell in 2006, in terms of both student numbers and equivalent full-time students, following reviews of the relevance and quality of some qualifications. Compared with a year earlier, the number of domestic students enrolled at diploma levels 5 to 7 remained virtually unchanged although in terms of equivalent full-time students these enrolments fell. Bachelors-level study remained virtually unchanged from 2005 to 2006 for domestic students while enrolments at this level by international students fell. The number of people undertaking doctoral study continued to rise in 2006. Doctoral study by international students is now funded on the same basis as domestic students and the number of international doctoral enrolments rose strongly in 2006.

Non-formal learning in New Zealand continued to decline in 2006, reflecting the government's more targeted approach to the funding of this type of education.

The latest information from the Organisation for Economic Co-operation and Development showed that New Zealand had high participation rates in tertiary education because of higher enrolments by students at older ages. One of New Zealand's education priorities for 2008 to 2010 is to increase educational success for young New Zealanders – more achieving qualifications at level 4 and above by age 25 years. A short study of international comparisons is provided later on in this chapter.

Another recent study on how many students pass their courses showed that many students pass all of their courses without necessarily gaining a qualification. The study suggests that a number of people undertake tertiary study with course-related rather than qualification-related goals. Later in this chapter there is a summary of this study which includes updated information on how many students passed courses in tertiary education for the period 2002 to 2006.

THE 2007 YEAR

Greater predictability in the patterns of participation in tertiary education is likely as a result of recent funding changes and as multi-year funding plans to steer the tertiary education system commence in 2008.

Reviews of the relevance and quality of provision were carried out in 2005 and 2006. These reviews resulted in some qualifications being modified while some others were phased out. It is expected that student numbers in A1 and J1 qualifications will continue to fall over the next two years. The continued strength of the labour market may also reduce numbers in certificate-level study. However, as the government's reforms take effect there will be an increase in provision in areas of higher relevance and with better labour market outcomes.

The introduction of funding for doctoral study by international students on the same basis as domestic students is likely to further increase these enrolments.

The continuation of the 'baby blip' generation moving from school into tertiary education will also exert an upward movement on enrolments and led to an increase in degree-level enrolments in universities in 2007. A further 129,000 will be turning 18 or 19 years of age in 2007.

ANALYTICAL TABLES: An associated set of tables on the learners in tertiary education is available on the Education Counts website, Tables ENR1-40, EFT1-38, PPN1-13, PRG1-15, TTP1-2, STR1-3, ACE1-4, COM1-36, ARN1-18, TTA1-2, ITP1-17, CSC1-10 and ITA1-5. Detailed technical information on the data presented here can be found in chapter 18.

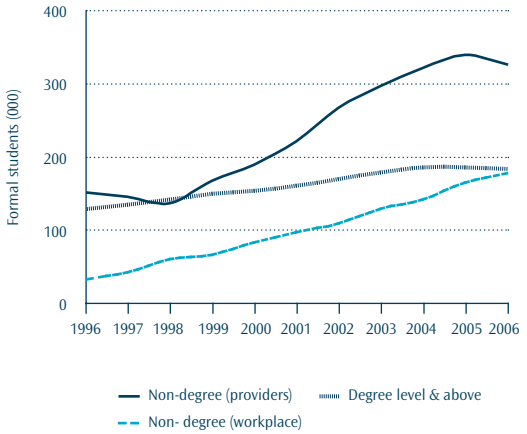
TRENDS IN FORMAL EDUCATION

After rising rapidly for many years, the number of formally enrolled students fell in 2006. The number of people studying in non-degree-level courses fell significantly in 2006, while the number studying at degree level and above flattened off. In contrast, the upward trend in workplace-based enrolments continued to increase in 2006.

Notes:
1. See Table 5.1 for more information on the size of the tertiary education sector.
2. Data before 1999 excludes students in private providers.

Source: Ministry of Education and Tertiary Education Commission.

Figure 5.1// **Trend in formal students by level of study and setting[1,2]**



STUDENT ENROLMENTS IN 2006

The number of students in formal tertiary study in 2006:[1]

Total formal students[2]	**703,000**	
Provider-based		
Total students not included elsewhere	491,000	(down 2.5% on 2005)
Training Opportunities	17,000	(up 3.2% on 2005)
Youth Training	11,000	(down 0.9% on 2005)
Skill Enhancement	558	(down 26% on 2005)
Secondary-Tertiary Alignment Resource	17,200	(up 1.7% on 2005)
Workplace-based		
Total industry training	176,000	(up 8.1% on 2005)
Industry training[3]	167,000	(up 7.8% on 2005)
Modern Apprenticeships	9,470	(up 13% on 2005)
Gateway	6,680	(up 19% on 2005)

In 2006, there were also 65,800 formal students in short courses and 15,000 students in non-government-funded providers.

NON-FORMAL STUDENTS

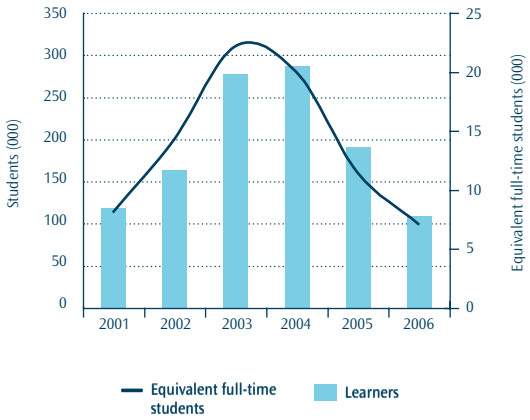
The declines in recent years in adult and community education reflect a more targeted approach to the funding of this type of education.

The estimated number of students in non-formal tertiary study in 2006:

Adult and community education:		
Tertiary education institutions	95,700	(down 47% from 2005)
Schools	149,000	(down from 164,000 in 2005)
Community organisations		Unknown
Adult literacy and English for Speakers of Other Languages:		
Estimated funded learners	12,000	

Note: Students are counted in each course they enrol in.

Figure 5.2// **Non-formal students in tertiary education institutions**



1. Students are counted in each type of programme they enrol in, so the sum of components will not add to totals.
2. Students enrolled at any time during the year with a tertiary education provider in formal qualifications of more than one week's duration.
3. Excluding Modern Apprenticeships. The Modern Apprenticeship numbers used here are as at 31 December.

PROVIDER-BASED ENROLMENTS BY LEVEL OF STUDY

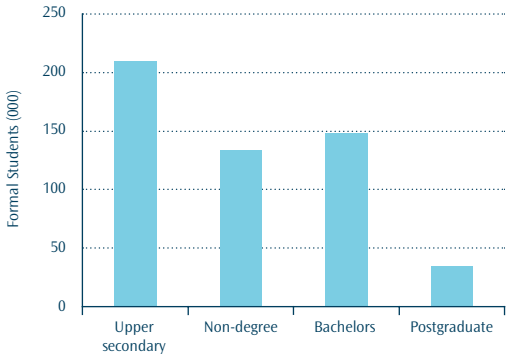
Provider-based enrolments at level 1 to 3 declined in 2006 for the first time in many years. Reviews of the relevance and quality of some qualifications led to this decrease. There were also smaller declines in provider-based enrolments at study levels 5 to 7 due, in part, to a decrease in international enrolments while domestic enrolments remained stable. Study at postgraduate level increased in 2006.

The number of provider-based formal students in 2006:[2]

	Domestic		International	
	2006	% change from 2005	2006	% change from 2005
All study levels	448,000	-1.7	42,700	-10.0
Certificates 1-3	204,000	-5.9	5,470	-13.9
Certificates 4	61,500	-3.0	2,720	-3.8
Diplomas 5-7	61,900	0.0	10,700	-21.7
Bachelors	127,000	-0.4	22,100	-9.1
Postgraduate	30,500	+1.9	4,320	+5.5

Note: Provider-based students studying certificates 1-3 are included in the upper secondary category.

Figure 5.3// **Provider-based formal students by level of study[2]**



WORKPLACE-BASED ENROLMENTS BY LEVEL OF STUDY

Workplace-based study increased at all qualification levels in 2006.

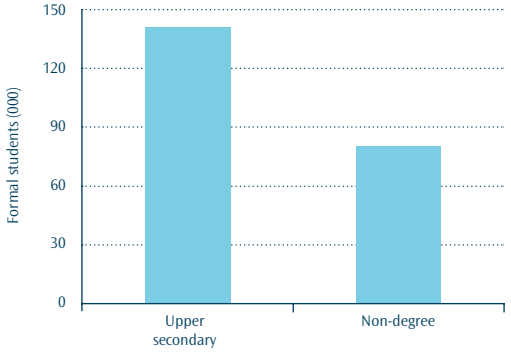
The number of industry trainees in 2006:

All study levels	176,000	(up 8.1% on 2005)
Levels 1-3	141,000	(up 15% on 2005)
Level 4	74,800	(up 2.7% on 2005)
Levels 5-6	5,670	(up 30% on 2005)

The proportion of Gateway students going on to further study or employment in 2006:

Education	64%	(69% in 2002)
Employment	32%	(29% in 2002)

Figure 5.4// **Industry trainees by level of study[2]**



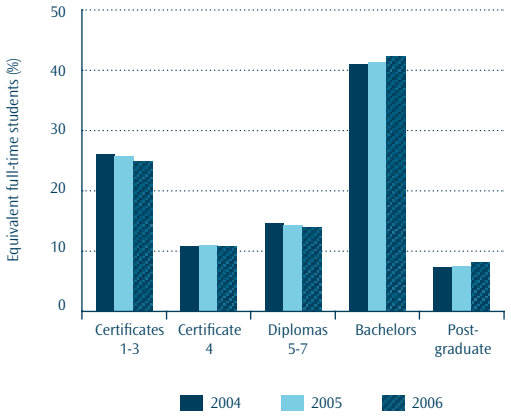
EQUIVALENT FULL-TIME STUDENTS

Converting the provider-based enrolments to equivalent full-time students showed that the proportions of people studying certificates at levels 1 to 3 and diplomas fell in 2006. The proportion of full-time equivalents studying a certificate at level 4 has remained the same over the last three years, while those at bachelors and post-graduate levels increased over this time.

The number of students in formal tertiary education in 2006 by study level (expressed in equivalent full-time student units): [2]

	Domestic		International		
	2006	% change from 2005	2006	% change from 2005	% of 2006 enrolments
All study levels	238,000	-3.1	32,500	-14.9	12.0
Certificates 1-3	64,600	-8	2,530	-18.7	0.9
Certificates 4	28,100	-5.7	1,390	-1.9	0.5
Diplomas 5-7	30,400	-2.2	7,090	-26.9	2.6
Bachelors	96,300	-0.2	18,300	-12.5	6.8
Level 8[4]	8,370	4.7	1,010	1	0.4
Masters	6,040	-5.4	1,170	-15.4	0.4
Doctorates	4,350	8.8	1,020	55.5	0.4

Figure 5.5// **Distribution of equivalent full-time students by level of study[2]**



4. This category covers bachelors degrees with honours, postgraduate certificates and postgraduate diplomas.

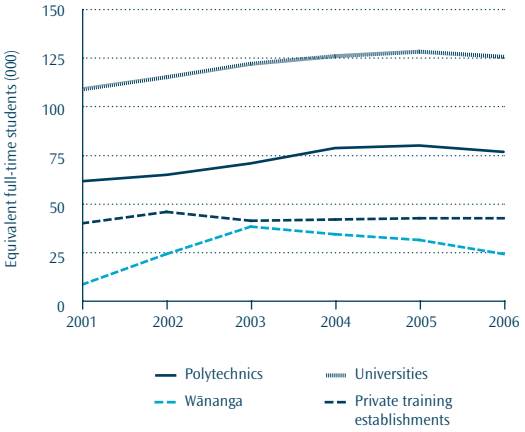
FORMAL STUDENTS BY PROVIDER TYPE

Figure 5.6// **Equivalent full-time students by selected provider type**[2]

The latest fall in the number of formal students in provider-based tertiary education was spread across all provider types. In private training establishments falling international enrolments were offset by a domestic increase. At universities, international enrolments were lower and at polytechnics both domestic and international enrolments fell. The biggest decline in 2006 occurred in wānanga due to lower domestic enrolments. However, before these falls student numbers in the wānanga had been increasing rapidly.

Students by selected provider type in 2006 (expressed in equivalent full-time student units):[2]

All formal enrolments	270,000	(down 4.7% on 2005)
Tertiary education institutions	228,000	(down 5.5% on 2005)
Private training establishments	42,000	(no change on 2005)
Universities	125,000	(down 2.1% on 2005)
Polytechnics	76,000	(down 4.1% on 2005)
Wānanga	23,700	(down 23% on 2005)



PARTICIPATION RATES BY ETHNIC GROUP

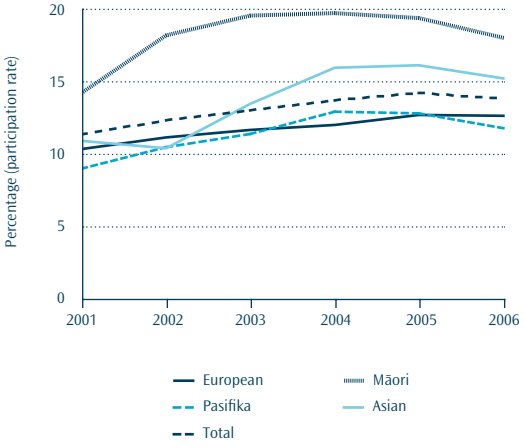
Figure 5.7// **Age-standardised participation rates in provider-based tertiary education by ethnic group**[2]

The participation by Māori and Pasifika peoples in formal tertiary education declined significantly in 2006. The participation by the Asian ethnic group also fell in 2006 while for Europeans the participation rate remained static. The decreases in certificate-level courses and a relatively low unemployment rate were contributing factors to this lower level of participation.

The percentage of New Zealanders aged 15 years and over in formal tertiary study by ethnic group in 2006:[2]

Ethnic group	Industry training %	Provider-based Non-degree %	Provider-based Degree or higher %	All levels %
European	4.4	7.3	4.3	11.6
Māori	7.5	16.3	4.0	20.3
Pasifika	5.9	10.3	4.2	14.6
Asian	na	9.5	8.0	17.6
Total	5.4	9.0	4.8	13.7

Note: In the provider-based rates, students are counted in each ethnic group they affiliated with, while in the workplace-based rates a learner is allocated only one ethnicity based on the 'prioritised' method.



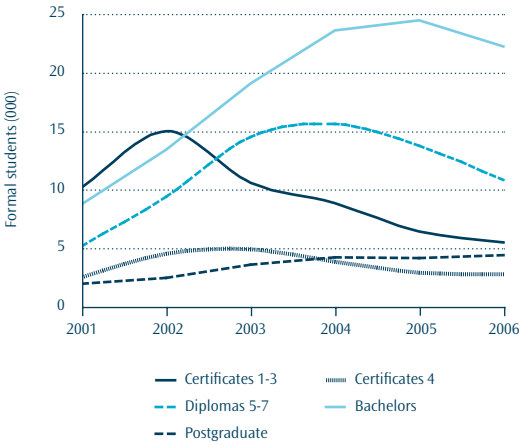
INTERNATIONAL STUDENTS

Figure 5.8// **International students by level of study**[2]

From a peak of 50,500 enrolments in 2004, the number of international students has declined over the last two years to 42,700 enrolments in 2006.

- 8.7% of tertiary education students were from overseas.
- 70% of the international students were from Asia.
- 90% of the latest fall was due to fewer Asian enrolments.
- 56% more international students enrolled in doctoral studies.

Doctoral study by international students is now funded on the same basis as domestic doctoral studies, meaning that there was a substantial reduction in fees for international students taking doctoral degrees.



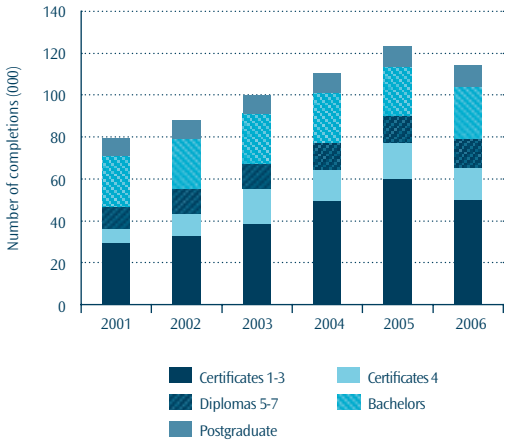
COMPLETING A QUALIFICATION

Qualifications completed by provider-based domestic formal students fell overall in 2006. This downward movement resulted from falls in the completions of non-degree certificates. Completions of diplomas, bachelors degrees and postgraduate qualifications all rose. The level of qualifications completed by international students remained flat in 2006.

Qualification completions by formal students in 2006:

	Domestic			International		
	2005	2006	% change	2005	2006	% change
Total completions	120,000	110,000	-7.6	13,400	13,600	+1.0
Certificates 1-3	60,400	50,100	-17.1	2,200	2,240	+1.8
Certificates 4	17,000	15,400	-9.7	1,140	965	-15.6
Diplomas 5-7	12,800	13,800	+7.9	3,840	3,560	-7.2
Bachelors	23,400	24,600	+5.0	4,630	5,320	+15.0
Honours/postgraduate	6,160	6,580	+6.9	798	748	-6.3
Masters	3,230	3,240	+0.3	960	869	-9.5
Doctorates	578	570	-1.4	71	71	0.0

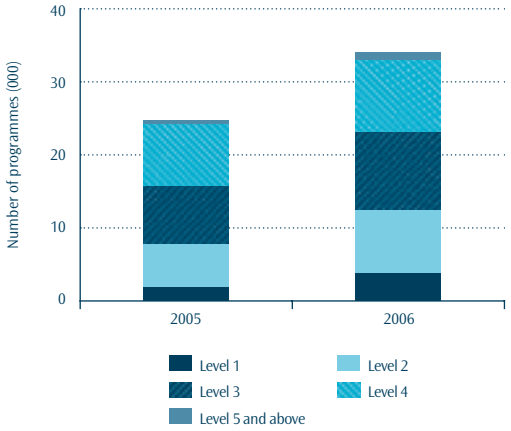
Figure 5.9// **Qualification completions by provider-based formal domestic students[2]**



INCREASED WORKPLACE-BASED ACHIEVEMENT

In 2006, over a third more industry training programmes were completed compared with the previous year. Thirty-five thousand trainees completed a programme in 2006 and in 2005.

Figure 5.10// **Completed industry training programmes by level of study**



MORE STUDENTS RETAINED IN STUDY

The proportion of domestic students who started study in 2002 and who had completed their qualification or who were still studying in 2006 increased, compared with students who started study five years earlier. This was the case at all qualification levels except for bachelors, masters and doctorate students, whose five-year retention rates have remained virtually unchanged over the last five years.

The five-year retention rates for domestic formal students:

	1997	2002
All levels of study	49%	54%
Certificates 1-3	34%	41%
Certificates 4	23%	44%
Diplomas 5-7	30%	39%
Bachelors	59%	59%
Level 8[4]	60%	65%
Masters	60%	61%
Doctorates	70%	71%

Figure 5.11// **First-year and five-year retention rates for domestic formal students[2]**

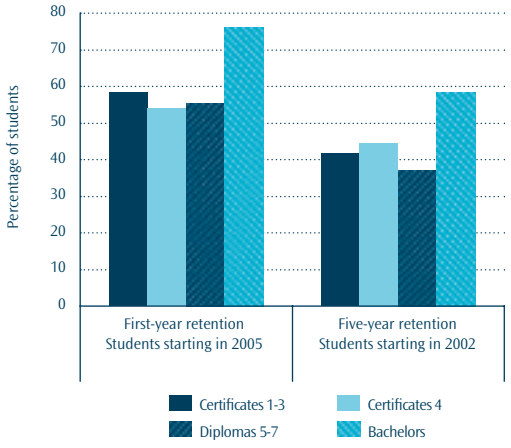


Table 5.1 below summarises the main types of programmes available in New Zealand's tertiary education system in 2006. More information on each of the programmes is provided in the highlights in chapters 6 to 10.

Table 5.1 // Size of the tertiary education sector by level of study

Estimated number of students/learners	Upper secondary	Post-secondary non-degree	Bachelors	Postgraduate	Total
Formal students[1]					
Provider-based					
Domestic students in government-funded providers	204,000	121,000	127,000	30,500	448,000
International students in government-funded providers	5,470	13,200	22,100	4,320	42,700
Students in non-government-funded providers (estimate)	10,000	5,000			
Secondary-Tertiary Alignment Resource	16,600	667			17,200
Targeted training programmes	17,000				17,000
– Training Opportunities					
– Youth Training	11,000				11,000
– Skill Enhancement		558			558
Students in qualifications of more than 1 week's duration	264,000	140,000	149,000	34,800	520,000
Students in qualifications of less than 1 week's duration	60,200	6,240			65,800
Total provider-based students	331,000	146,000	149,000	34,800	574,000
Workplace-based					
– Learners in industry training (excluding Modern Apprenticeships)	129,000	37,600			167,000
– Learners in Modern Apprenticeships	936	8,530			9,470
– Gateway	6,680				6,680
Total workplace-based learners	137,000	46,100	0	0	183,000
Non-formal students					
ACE* through tertiary education institutions					103,000
International students in non-formal qualifications					6,580
Adult literacy and English as a second or other language (estimated funded learners)					12,000
ACE funded through schools					149,000
ACE through community organisations					Unknown

*Adult, community and other education not elsewhere classified.

Student component-funded learners	**179,000**	**110,000**	**127,000**	**30,800**	**416,000**

Notes:

1. Provider-based students are counted in each type of programme they enrol in, so the sum of components will not add to totals.
2. Provider-based students enrolled at any time during the year with a tertiary education provider in formal qualification of less than one week's duration.
3. Training Opportunities, Youth Training, Secondary-Tertiary Alignment Resource, Gateway, and ACE programmes are included in chapters 7 and 10.
4. Industry training, including Modern Apprenticeships, is included in chapter 6.
5. Skill Enhancement programmes are included in chapter 8.

PARTICIPATION IN TERTIARY EDUCATION AND ITS OUTCOMES: AN INTERNATIONAL COMPARISON

The Organisation for Economic Co-operation and Development (OECD) publishes a growing range of indicators that allows international comparisons to be made of tertiary education systems. New Zealand's tertiary education system differs, however, from those in the OECD member countries. Our sector is more diverse and has more open access than the systems in some countries. These differences require care to be exercised in interpreting these comparisons.

One important difference to recognise is that New Zealand defines all post-secondary education as tertiary while the OECD distinguishes between tertiary education and post-secondary education that is at lower levels. New Zealand does, of course, report its data to the OECD based on the OECD definition of tertiary education as detailed in the box on the right.

The following snapshot gives an overview of the latest performance of New Zealand's tertiary education system compared with other OECD countries. In 2005, New Zealand had:

- one of the highest rates of part-time study
- the widest age distribution in degree-level study
- a high enrolment rate for students aged 30 years and over
- a relatively low enrolment rate for 15 to 19 year-olds
- one of the highest net entry rates to tertiary education
- a low first-qualification survival rate
- a high graduation rate relative to the population
- an average proportion of the adult population with tertiary qualifications, and
- a high proportion of science-related graduates in the population.

Who participates in education?

The OECD indicator has three measures for participation in education – the enrolment rate, the net entry rate and the expected years in tertiary education. The enrolment rate takes enrolments as a percentage of the population for four age groups. The net entry rate is estimated by adding together the number of first-time participating students as a proportion of the population for every age in an effort to get an idea of what proportion of people eventually will enrol in tertiary education. The expected years of education measure estimates the number of years that a 17 year-old will be in tertiary education. It combines study duration with the net entry rate.

The OECD categories of post-secondary education are based on the International Standard Classification of Education (ISCED-97): www.oecd.org/dataoecd/36/7/35325710.pdf

Post-secondary non-tertiary level of education (ISCED 4): Programmes that serve to broaden the knowledge of participants who have already gained an upper secondary qualification. Their content may not be significantly more advanced than upper secondary programmes. Also included are apprenticeships designed for holders of an upper secondary qualification.

Certificates at level 4 on the New Zealand Register of Quality Assured Qualifications would be covered here.

Tertiary-type B education (ISCED 5B): Programmes that are typically shorter than those of tertiary-type A and focus on practical, technical or occupational skills for direct entry into the labour market. They may include some theoretical foundations and are of a minimum duration of two years' full-time study.

In New Zealand most diplomas are covered here.

Tertiary-type A education (ISCED 5A): Programmes that are largely theory based and provide sufficient qualifications for entry to advanced research programmes and professions with high skill requirements, such as medicine. They have a minimum duration of three years' full-time study.

In New Zealand this covers all bachelors and masters degrees and all postgraduate certificates and diplomas.

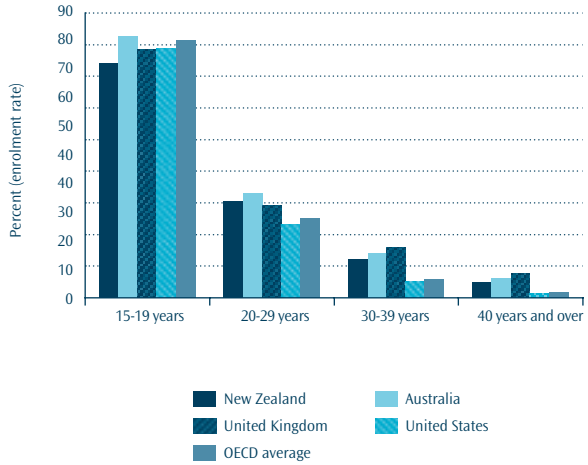
Advanced Research Qualifications (ISCED 6): Programmes that lead directly to the award of an advanced research qualification, for example, a doctorate. They have a minimum duration of three years' full-time study. The programmes are devoted to advanced study and original research.

This covers all doctorates in New Zealand.

New Zealand's wide age distribution in degree-level study gives it a high participation rate at older ages. In 2005, New Zealand's enrolment rate for students aged 25 to 29 years was 30 percent, well above the OECD average of 25 percent. The only countries with a higher participation rate for this age group were Finland, Denmark, Sweden, Iceland, Poland and Australia. For ages 30 to 39 years, New Zealand's participation stood out at 12 percent, double the OECD average. Only four member countries had higher participation rates for this age group – the United Kingdom, Australia, Switzerland and Finland. For ages 40 years and over, New Zealand had the third highest participation rate in the OECD at 5.1 percent – Australia was ranked second with 6.2 percent and the United Kingdom had the highest rate at 7.8 percent. The OECD average for this age group was 1.6 percent in 2005.

However, for students in the 15 to 19 years age group New Zealand had a relatively low participation rate in education in 2005. At 74 percent, New Zealand's participation for this age group was well below the OECD average of 82 percent. This lower retention of younger people at school coincided with a strong New Zealand labour market. Also, the participation rate does not include workplace learning and this has been a fast-growing area of tertiary education in New Zealand for some years. Nevertheless, one of New Zealand's priority outcomes for the years 2008 to 2010 is increasing education success for young New Zealanders – more achieving qualifications at level 4 (tertiary-type B) and above by age 25 years.

Figure 5.12 // OECD education enrolment rate in 2005 by age group



Source: OECD (2007), *Education at a glance: OECD indicators 2007*, Table C2.1, p. 291.

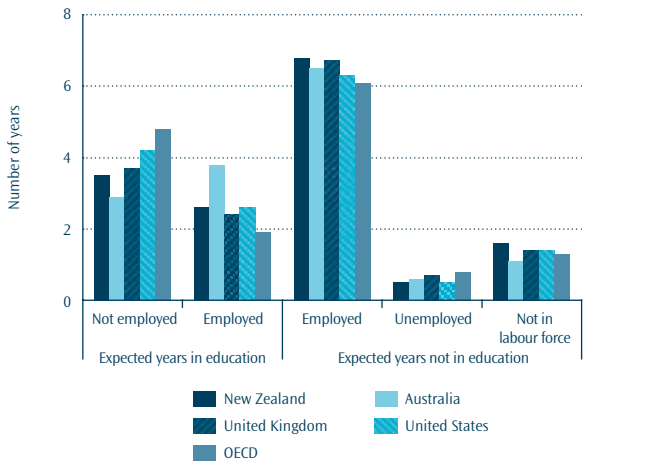
Note: The OECD enrolment rate does not distinguish between participation at secondary schools and tertiary education institutions.

In 2005, New Zealand's net entry rate for tertiary-type A programmes ranked second in the OECD behind Australia. The New Zealand equivalent of tertiary-type A programmes are bachelors or higher qualifications, excluding advanced research qualifications. In 2005, New Zealand's net entry rate for this level of study was 79 percent, compared to the OECD average of 54 percent. Australia's net entry rate was 82 percent. Other countries with a high net entry rate for tertiary-type A programmes were Norway, Poland, Sweden and Finland. New Zealand's rate was increased by its high number of international students and also its current high first-time participation rate at older ages.

For tertiary-type B programmes, the net entry rate of 48 percent for New Zealand and Korea was ranked first equal in the OECD in 2005. This finding is indicative of a high level of participation in vocationally focused tertiary education. Tertiary-type B programmes are equivalent to New Zealand's non-degree level 5 to 7 provider-based qualifications.

The third measure of participation – educational expectancy – showed that New Zealand was only just above average for upper secondary-level study in 2005. However, at all post-secondary levels New Zealand had a high expectancy in tertiary education. New Zealand's rate was increased by its high proportion of part-time, part-year students at older ages. Figure 5.13 depicts a relatively high educational expectancy for New Zealanders aged 15 to 29 years.

Figure 5.13 // OECD education expectancy in 2005 for 15 to 19 year-olds



Source: OECD (2007), *Education at a glance: 2007 OECD indicators*, Table C4.1a, p. 335.

How many students finish tertiary education?

The OECD also looks at the rate at which students graduate following tertiary education and the survival rate of new entrants. The first measure of system success is the graduation rate – the number of new graduates as a proportion of the population who are at the typical age of graduation. The second measure of system success – the survival rate – calculates the proportion of new entrants who successfully complete a first qualification, within the typical completion time, at their entry level of tertiary education.

In 2005, New Zealand had the third highest graduation rate for tertiary-type A qualifications in the OECD at 51 percent. The OECD average was 36 percent in 2005. Australia, at 59 percent, had the highest rate followed by Iceland at 56 percent. New Zealand's rate was increased by the high percentage of overseas students. New Zealand's rate was also increased by its high proportion of older aged students completing qualifications.

Tertiary-type B programmes are a sizeable feature of the tertiary education system in only a small number of OECD countries. In 2005, New Zealand's graduation rate for tertiary-type B qualifications was the third highest in the OECD at 21 percent, compared to the average of 8.9 percent. Japan had the highest graduation rate in the OECD at 27 percent, followed by Ireland at 24 percent.

In the case of post-secondary non-tertiary graduation rates, New Zealand has the third highest rate (18 percent) in the OECD, after the Czech Republic (26 percent) and Hungary (20 percent). Other countries with relatively high graduation rates at this level were Germany, Switzerland, Ireland and Poland.

At 1.1 percent, the graduation rate in 2005 for New Zealand's advanced research programmes was slightly lower than the OECD average of 1.3 percent.

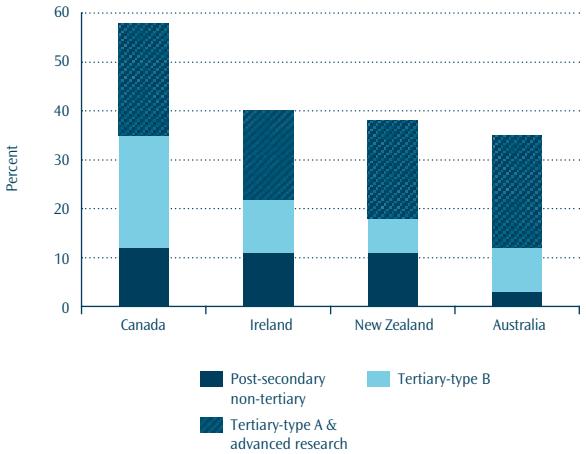
The OECD's survival rate indicator measures the proportion of people who complete qualifications in the typical completion times. New Zealand's survival rates in tertiary education reflect a high incidence of part-time study. In 2004, New Zealand had the lowest survival rates, at 54 percent, for tertiary-type A programmes. The OECD average was 71 percent. A similar situation exists for tertiary-type B programmes – again, the high proportion of part-time students lowers New Zealand's qualification completion rate and lowers its survival rate as calculated by the OECD. In 2004, New Zealand's survival rate for tertiary-type B programmes was 42 percent, among the lowest rates in the OECD. The average for all member countries was 67 percent.

To what level have adults studied?

The OECD profiles the educational attainment of the adult population. It attempts to capture the adult population's knowledge and skill level using formal educational qualifications as a proxy. This indicator also considers the distribution of the population by field of study and the movement of people in and out of the labour market with particular skills. Another measure considers whether people who are overqualified 'crowd out' the lesser qualified.

In 2005, the proportion of the New Zealand population aged 25 to 64 years with a tertiary-type B or higher qualification was 27 percent. The OECD average for this measure was 26 percent. In 2005, there were 11 OECD countries where 30 percent of the population or more held a tertiary-type B or higher qualification, including Australia and Canada.

Figure 5.14 // Distribution of the 24 to 64 year-old population by highest qualification

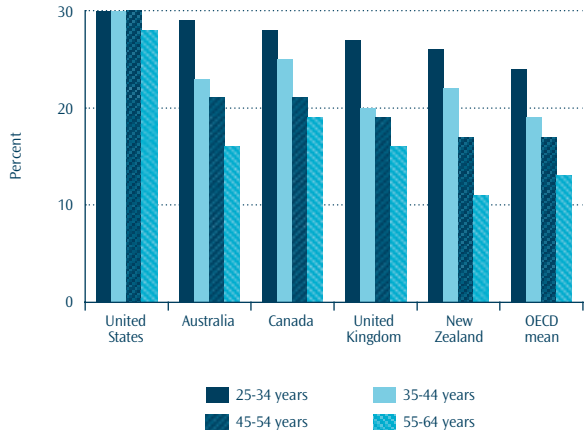


Source: OECD (2007), *Education at a glance: 2007 OECD indicators*, Table A1.1a, p.36.

Consideration of the tertiary educational attainment of the population by age group in 2005 shows that while the percentages of the New Zealand population with tertiary-type A or higher qualifications were above the OECD average, they were lower than for countries such as Australia, Canada, the United States and the United Kingdom (Figure 5.15). Looking at the figures by age group shows a steady improvement of New Zealand's position over time. For those aged 24 to 34 years and 35 to 44 years, the percentage of the New Zealand population with

this type of qualification was 26 percent and 22 percent, respectively, while the OECD averages were 24 and 19 percent. The percentage of New Zealanders aged 45 to 54 years with tertiary-type A or higher qualifications equalled the OECD average of 17 percent. Of those aged 55 to 65 years, 11 percent held a tertiary-type A qualification, compared to an OECD average of 13 percent.

Figure 5.15 // Percentage of the population in 2005 with a tertiary-type A or higher qualification by age group



Source: OECD (2007), *Education at a glance: 2007 OECD indicators*, Table A1.3a, p.38.

In the case of tertiary-type B qualifications, sharper contrasts at the various age levels existed between the OECD average and the New Zealand population. The percentage of New Zealanders, aged 24 to 34 years, with tertiary-type B qualifications was 5 percent in 2005, compared to the OECD average of 10 percent. A similar finding applied to those aged 35 to 44 years, while the reverse applied to the older age groups. Ten percent of New Zealanders aged 45 to 64 years held a tertiary-type B qualification, compared to OECD averages of 8 percent for those aged 45 to 54 years and 6 percent for those aged 55 to 65 years. This finding indicates that there has been a shift in the educational qualifications in New Zealand between generations. Among younger age groups more people have degree-level qualifications and fewer have vocational diplomas, compared with older age groups.

It is interesting to note that the OECD data shows that the increasing levels of tertiary education in member countries have not had a negative effect on employment – the overqualified have not crowded out the lesser qualified. The growth in tertiary attainment in the OECD countries has not led to a slump in graduate pay. In other words, although the supply of degree graduates has increased, the demand for their skills has expanded.

How does participation in education affect participation in the labour market?

This OECD indicator looks at the labour force status of individuals and how this links to their study and qualification levels. The OECD employment rates are slightly higher than the rates from New Zealand's *Household Labour Force Survey* because the OECD calculation uses the population aged 25 to 64 years instead of those aged 15 to 64 years.

The employment rate for the New Zealand population with a tertiary-type B or higher qualification equalled the OECD average in 2005 at 84 percent. Australia's employment rate was also 84 percent, while one-third of OECD countries had employment rates of more than 84 percent or higher for individuals with a tertiary-type B or higher qualification in 2005.

The employment rates for New Zealand males with upper secondary or higher education was very similar at the various qualification levels. In 2005, these rates varied from 89 to 92 percent while for males with only lower secondary education this was 78 percent. These rates were above the OECD averages for males of 82 to 89 percent and 73 percent for males with only lower secondary education.

For New Zealand females with upper secondary or higher education in 2005, the employment rate was lower than for males at each level of qualification, the employment rate for men being 12 to 17 percentage points higher in 2005. The rates for females varied from 72 to 80 percent in 2005, and for females with only lower secondary education it dropped to 57 percent. These rates were above the OECD averages for females of 64 to 79 percent and 49 percent for females with only lower secondary education.

The above findings show that the employment rate for those with higher-level education was markedly higher than for those with lower-level education. Also, significant differences existed in the employment rates between men and women, while this narrowed for those with higher levels of education.

Another OECD finding was that those with lower levels of education are less likely to be in the labour force and they are more likely to

be unemployed. New Zealand's unemployment rate for those with tertiary-type B and higher qualifications was half that of those who had only studied at the lower secondary level. At 1.9 percent, New Zealand's unemployment rate for those with tertiary-type B and higher qualifications was also less than half the OECD average of 4 percent in 2005. The unemployment rate for New Zealanders with only lower-level secondary education was 3.8 percent in 2005, while the OECD average was 11 percent. A stronger New Zealand economy has led to lower rates of unemployment in recent years.

What are the economic benefits of education?

Three measures of the economic benefits of education are examined by the OECD: the relative earnings of the population with different qualification levels, the distribution of pre-tax earnings and the financial return on the investment in education. The comparisons made here cover the relative earnings and the financial return on the investment in education of the countries that New Zealand is commonly compared with.

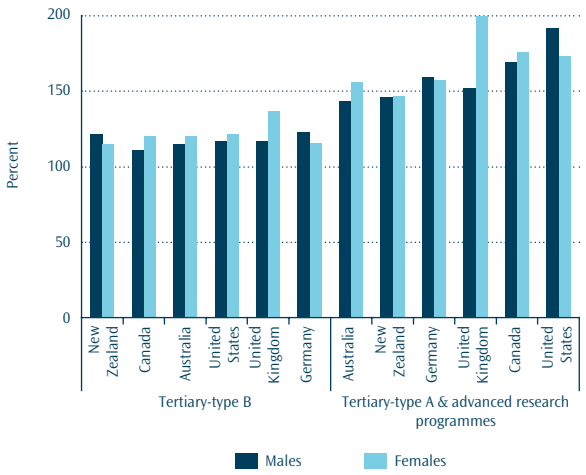
The relative earnings of the population with income from employment were calculated for four levels of education compared with earnings of those with upper and post-secondary non-tertiary education – the New Zealand equivalent of certificate levels 1 to 3.

The findings showed that the relative earnings in 2005 of New Zealanders with post-secondary non-tertiary education were 7 percent higher than the base earnings for males and 5 percent higher than the base earnings for females. The margins in Australia, Germany, Canada and the United States ranged from 3 to 13 percent. The range of relative earnings for females with post-secondary non-tertiary education was wider than that for males. The rates for females in these countries varied from 4 percent lower than the base earnings to 16 percent higher.

The relative earnings of males with tertiary-type B education in New Zealand were 22 percent higher than the base earnings in 2005, while for females the margin was 15 percent. In Australia, Germany, Canada, the United States and the United Kingdom those with these qualifications earned from 11 to 23 percent above the base earnings (Figure 15.5). The relative earnings of females in these countries with tertiary-type B education were 15 to 37 percent higher. German males and British females with this level of education had the highest relative earnings of the countries listed above.

At the higher qualification levels, the range of relative earnings doubled across the countries under consideration here. The relative earnings of males with tertiary-type A and advanced research qualifications in New Zealand were 43 percent higher than the base earnings for males, while females earned 56 percent more. In the other countries in the comparison, males earned between 43 and 92 percent above the base earnings, while females' earnings were between 47 and 100 percent more than the base. American males and British females with this level of education had the highest relative earnings of the countries listed above.

Figure 5.16 // Relative earnings in 2005 of the population by qualification level and gender



Source: OECD (2007), *Education at a glance: 2007 OECD indicators*, Table A9.1a, p.156.

Note: Upper and post-secondary non-tertiary education = 100. The population used here refers to those aged 25 to 64 years. The data for Canada refers to 2004.

The impact on earnings of investing in tertiary education was measured by calculating the internal rate of return on the investment. The internal rate of return takes account of both the costs of getting a qualification, in terms of fees and study costs, and also income foregone and gained. In 2006, the OECD published the 2003 internal rates of return for individuals (the private rate of return) and the return for governments (the public rate of return). The rates were calculated for 11 OECD countries based on the following two scenarios:

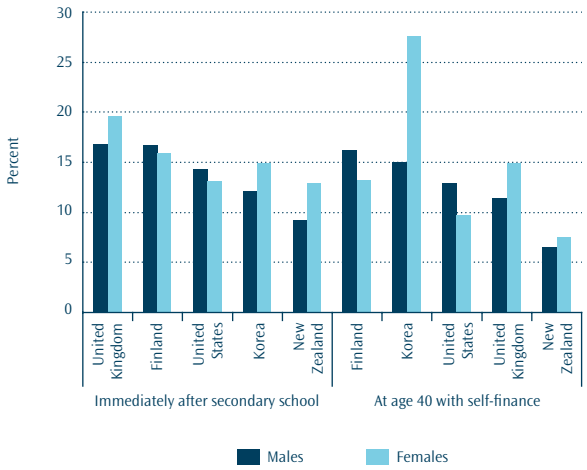
- The individual followed a tertiary education programme directly from school before entry to the labour market.
- Study at the next higher level of education was postponed until the age of 40.

The rates were calculated by comparing individuals in the two scenarios with an individual working for the minimum wage with a lower secondary level of education (Figure 5.17). The return in the OECD countries, except in New Zealand, Denmark, Sweden and Switzerland, was above 10 percent per annum for both men and women who, immediately following secondary school, acquired a bachelors degree. In New Zealand, the private rate was well below that of the United States and the United Kingdom, while it was higher than the rates in Sweden and Denmark. New Zealand's lower private internal rate of return reflects the relatively low income disparity and the low unemployment rate in 2003. New Zealand's internal rate of return in 2003 for those going straight to tertiary education was 13 percent for females, and 9.3 percent for males. The relatively higher return to women implies that acquiring a bachelors degree tends to reduce the disparity in incomes between men and women.

The private internal rate of return was lower for those who attained a bachelors degree at age 40. The New Zealand rate was 6.5 percent for males and 7.5 percent for females. The rates for New Zealand, Denmark and the United States were lower than in all other OECD countries. While the impact on earnings for individuals who invest mid-career is likely to be more modest, the overall result is that there is still a positive return on investment in tertiary education for individuals.

The estimates in Figure 5.16 are, however, a snapshot of average pre-tax earnings and they do not consider different courses of study or the fact that individuals from different social groups may have different rates of return. Also, in estimating the rates of return, the increased likelihood of employment due to education is taken into account. This does, however, make the estimates sensitive to the stage in the economic cycle when the data was collected.

Figure 5.17 // The private internal rate of return in 2003 for a bachelors degree by gender



Source: OECD (2007), *Education at a glance: 2007 OECD indicators*, Table A9.6, p.165.

Note: The rate of return has been calculated compared with an individual working for the minimum wage with a lower secondary level of education. The rate for those at age 40 is based on the direct costs and foregone earnings.

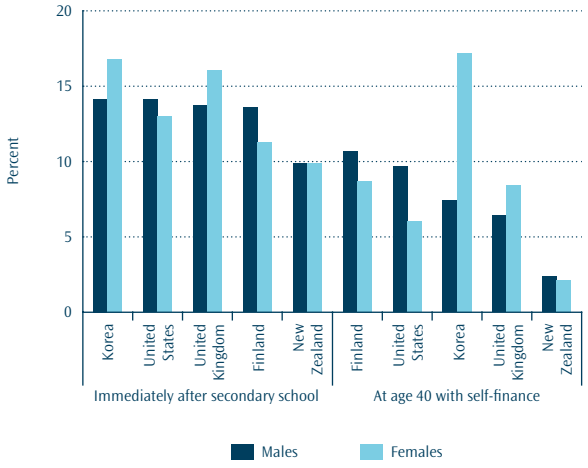
These OECD findings show that the rate of return on investing in tertiary education was above the bond rate, meaning that, even in a narrow financial sense, tertiary education is a good investment for a private individual.

In 2006, the OECD also calculated the public return to tertiary education for the 2003 year. The public internal rate of return attempts to measure the cost to the taxpayer of funding an individual's education and balances this against the extra tax that is collected as a result of the fact that graduates earn more. The rate calculated for New Zealanders who, immediately following secondary school, acquired a bachelors-level degree, was again positive – it was financially a good investment for the government.

New Zealand's public return for both males and females was 9.9 percent in 2003. While the rate of return to New Zealand was lower than in countries such as the United Kingdom, Finland, the United States and Korea, it was higher than in Denmark, Norway, Sweden and Switzerland. Nevertheless, these public rates of return are still high and well above, for example, the interest rate offered in some countries on long-term government bonds.

For those individuals who return to tertiary education mid-career, and absorb the direct costs of tuition and foregone earnings, the public rate of return for completing a bachelors degree was lower in 2003 than the private return in all countries. There were particularly low rates of return in Denmark, New Zealand, Sweden and Switzerland. These low rates are driven by factors such as the high costs of providing education, and high losses in tax receipts from foregone earnings relative to tax revenues when the individual returns to work.

Figure 5.18 // Public internal rate of return in 2003 for a bachelors degree by gender and country



Source: OECD (2007), *Education at a glance: 2007 OECD indicators*, Table A9.8, p.166.

The overall positive result is that, for those who acquire tertiary education, the high private internal rates of return in most countries indicate that investment in human capital appears to be an effective way for individuals to build wealth.

For an international comparison of New Zealand's tertiary education funding refer to chapter 16 of this report. More information on the OECD's indicators and international comparisons is available on their website: www.oecd.org/statsportal

PASSING COURSES

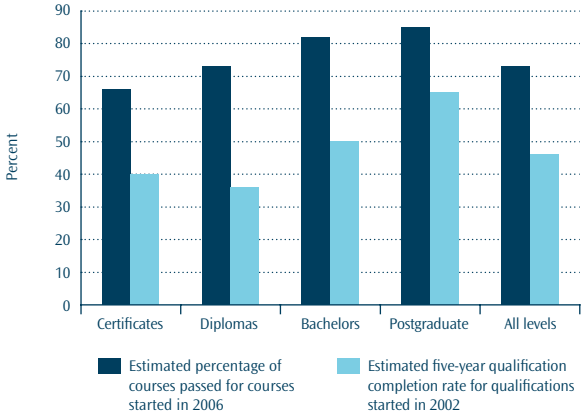
In 2006, over 490,000 students enrolled in formal tertiary courses[5] in New Zealand. Collectively these students enrolled in nearly 3,430,000 courses, involving over 60,500 different courses and 4,310 different qualifications, in over 300 tertiary education providers. On average, each student enrolled in seven courses.

In 2006, the Ministry of Education published a report[6] that introduced new information on how many tertiary students pass their courses. The report also drew on existing information about qualification completion, to compare success at the course level with success at the qualification level. This article updates information from that report with information on courses that were started in 2006.

Students passed 73 percent of all courses taken in 2006. Pass rates were higher at higher academic levels. Students passed 66 percent of all courses taken at certificate level, 73 percent of courses at diploma level, 82 percent of courses at bachelors level, and 85 percent of courses at postgraduate level. Course pass rates have not changed much since 2001.

The outcome for a number of course enrolments is not always able to be determined. This occurs when, for example, the course is not yet complete, or when students are still being assessed. In these cases, the pass rate is taken as the mid-point between the rate where all students with unknown outcomes are assumed to have failed and the rate where all students with unknown outcomes are assumed to have passed. As such, pass rates represent estimates rather than actual rates. The margins of uncertainty range from ±1% at bachelors level to ±14% at certificate level.

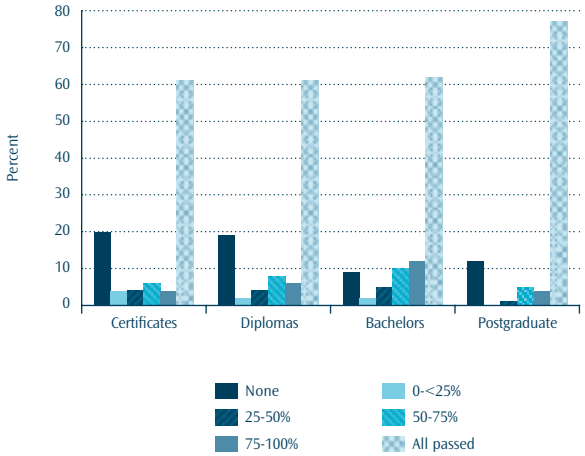
Figure 5.19 // Course and qualification completion rates



5. The term 'course' as used in this report, refers to a distinct module, paper, or unit of study that forms part of a larger programme of study that may or may not lead towards a recognised qualification. This is different from other countries, such as Australia or Britain, where the term 'course' is commonly used to refer to a programme of study qualification.
6. Scott, D. (2006) *Passing courses*, Wellington: Ministry of Education.

Broadly speaking, students are more likely to pass all, or none of their courses. Over 60 percent of students pass all their courses each year and around 16 percent fail all their courses. The percentage of students passing all their courses increases to 77 percent at postgraduate level. Students at bachelors level are more likely to pass some and fail some of their courses compared with students studying at other levels.

Figure 5.20 // Percentage of courses that are passed – for courses started in 2006

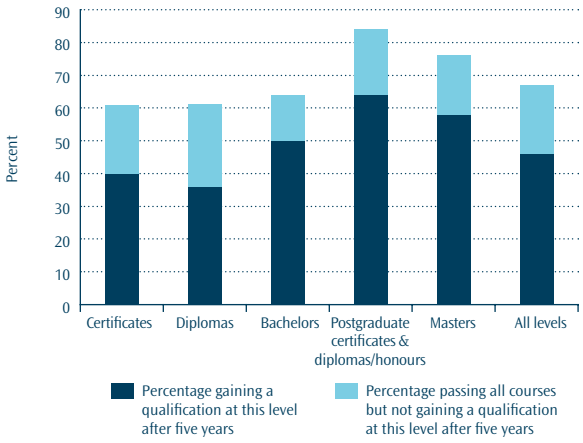


People enrolling in just one or two courses a year are more likely to pass them all, compared with those enrolled in a larger number of courses. Earlier studies[7] have shown that full-time students are more likely to complete a qualification than part-time students. However, studying full-time does not appear to be a factor for success at the course level, and part-time students actually pass courses at the same rates or even higher rates than students with more full-time study loads.

The tertiary education system is not solely focused on students gaining qualifications. Some students undertake study without a qualification goal in mind. Many people, especially those who are in employment and those who have already attained a qualification, are interested in acquiring further skills and knowledge through tertiary study, but are less interested in completing a qualification. On the other hand, most younger students are focused on gaining a qualification that they can use to get employment.

Of all the students who started any level of study in 2002, 21 percent passed all the courses they enrolled in, but had not gained a qualification after five years. Students who started diplomas in 2002 are most likely to fit into this category with around 25 percent passing all their courses but not gaining a qualification, compared to 14 percent of bachelors students and around 20 percent of postgraduate students.

Figure 5.21 // Passing courses and qualifications – for students starting qualifications in 2002



About 46 percent of people who started a qualification in 2002 had successfully completed it within five years. But if success is extended beyond qualification completion to include those that pass all courses without gaining a qualification, then the percentage of students who are 'successful' increases from 46 percent to 67 percent. The use of qualification completion rates alone, therefore, is likely to significantly underestimate the performance of the sector, in terms of successful skills and knowledge acquisition.

What is the range of pass rates across types of providers?

At degree level and above, there is little difference in course pass rates between universities and polytechnics. Courses at bachelors level (which include graduate certificates and diplomas as well as degrees) were offered at 18 of the 20 polytechnics in 2006, and represented 16 percent of all bachelors-level enrolments in 2006.

7. See for example Scott, D. & Smart, W. (2005) *What factors make a difference to getting a degree in New Zealand?*, Wellington: Ministry of Education.

Table 5.2 // Course and qualification completion rates in 2006 by provider type and level

Provider type	Certificate		Diploma		Bachelors		Postgraduate	
	Course	Qualification	Course	Qualification	Course	Qualification	Course	Qualification
	%	%	%	%	%	%	%	%
University	75	49	75	28	82	52	86	61
Polytechnic	67	29	72	30	83	36	82	53
Wānanga	64	46	66	47	72	35	66	na
Private provider	66	35	75	42	86	23	90	92
All providers	66	40	73	36	82	50	85	65

Note: The course pass rate relates to courses started in 2006. The qualification completion rate relates to the percentage of 2002 starting students who had gained a qualification at the same level as the one they started by the end of 2006.

However, more university students gain their bachelors degree after five years than do polytechnic students. A number of polytechnics, in conjunction with a university, offer the first year of a bachelors programme at the polytechnic, with the remaining years at the university. These students are not reflected in the qualification completion rates for the polytechnic. Also, university students are more likely to be studying full-time, and are more likely to have a bachelors degree as their goal.

At certificate level, universities have the highest pass rates, while polytechnics have similar pass rates to private providers and wānanga. Course pass rates at diploma level appear broadly similar across provider types, except wānanga, where rates from year to year tend to be lower than for other parts of the sector. However, more students at wānanga (along with private providers) gain a diploma qualification after five years than other parts of the sector.

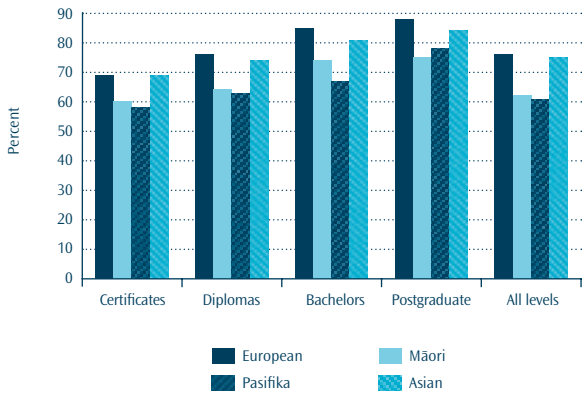
Although there is only a small amount of provision at degree level and above in private tertiary education providers, their course pass rates at these levels are similar to, or higher than, other parts of the sector.

Ethnic, age and gender differences

Older students have higher course pass rates at certificate and diploma level, while younger students have higher pass rates at degree level and above. However, older students are less likely to take out a qualification, and more likely to have passed all courses without gaining a qualification than younger students, consistent with the hypothesis that younger students may be more likely to be focused on gaining a qualification.

Women have higher completion rates than men, both at the course and qualification level, although this gap closes at higher levels. Women are also more likely to have passed all courses without gaining a qualification.

Figure 5.22 // Course pass rates by ethnic group and level – for courses started in 2006



Asian and European students have higher pass rates than Māori at both the course and qualification level. Pasifika students have the lowest rates of completion at both course and qualification level. There does not appear to be any tendency for one ethnic group over another to be studying on a partial qualification basis, ie with specific course goals, rather than a qualification goal.

CHAPTER SIX

AN OVERVIEW

The number of learners in industry training has continued to increase at a steady rate in recent years, even while the increase in the numbers in provider-based education has been slowing. One driver of the rise has been funding increases from both government and industry, reflecting a shared commitment to solve long-term skills shortages in key New Zealand industries and improve workplace productivity.

The number of learners in industry training increased significantly between 2005 and 2006, while there was a decline in student enrolments in equivalent provider-based study in the same period. This growth also surpassed the increase in workers in the labour force, so that the proportion of workers involved in industry training was higher in 2006 than in 2005.

The significant growth in participation in the Modern Apprenticeships Programme, a part of industry training, can be attributed to a programme of government funding increases and to its popularity with both industry and young people. Gateway, established in 2001 to broaden educational options for senior school students by offering them workplace-based learning, has also continued to expand. Over 6,700 secondary school students participated in Gateway in 2006. There are prospects for further growth in Gateway because the programme will be expanded to all decile 7 to 10 integrated and state secondary schools from 1 January 2008.

Industry training, Modern Apprenticeships and Gateway programmes are all linked to the National Qualifications Framework. This means that participants can earn credits towards national qualifications and in the case of Modern Apprenticeships and the majority of industry training programmes, participation is linked to the completion of national certificates and diplomas. Learners in industry training can gain credits through flexible, limited and supplementary credit programmes, or study towards qualifications such as national certificates, national diplomas and, less frequently these days, trade certificates.

All three programmes saw significant increases in credit achievement over 2006, while national certificate and other qualifications attainment also grew at a steady rate.

THE 2007 YEAR

Early indications suggest that the number of learners in industry traininig will continue to grow throughout 2007. The government signalled a continued commitment to increasing participation in workplace-based learning in Budget 2007 by allocating an additional $53 million in funding over four years. Government also invested $15.8 million, over four years, to establish a sector leadership component for industry training organisations that will better support them in performing their sector leadership and national standard-setting roles within the tertiary system. This will enable them to expand their ability to identify current and future skill and training needs, and to support them developing national qualifications.

In March this year, the 3,000th modern apprentice completed his training programme, gaining a National Certificate in Carpentry at level 4 through the Building and Construction Industry Training Organisation. At the time of announcing the completion, government emphasised the Modern Apprenticeships Programme as the vehicle through which to achieve the transformation of New Zealand into a higher-growth, higher-skilled economy.

At the annual Industry Training Federation conference in July, government also announced work to develop a skills strategy, aimed at meeting New Zealand's skills and productivity needs. This strategy would take in industry training and workplace learning, with a strong role for industry training organisations in building the capacity of the sector to ensure increased skills. The proposed skills strategy and their new national strategic leadership role will enable industry training organisations to consolidate their relationships with the wider tertiary sector.

The commitment of industry training organisations to the new sector priorities was illustrated in the merger, announced in February, of the furniture and the forestry industry training organisations. The new industry training organisation will operate under the name of the Forestry Industry Training and Education Council (FITEC), with FITEC Furniture operating as an independent sub-sector organisation. The reasons for the merger were cited as indicative of the heightened cooperation between tertiary education organisations, and the enlarged leadership role of industry training organisations, as well as growing similarities between the furniture and forestry industries.

Workplace-based learning is an essential component of the New Zealand tertiary education system. It is designed to facilitate a more skilled, innovative and productive workforce. To a considerable extent, skill issues of the workforce have to be addressed by industries themselves. The provision of workplace-based learning is therefore industry-led, while jointly funded by government and industry.

The main component of workplace-based learning is industry training. Industry training is a workplace learning programme that provides training and learning which count towards a national qualification. The Modern Apprenticeships Scheme complements and builds on industry training by attracting young people into careers in industry and providing additional mentoring and support for their training. Gateway is a scheme designed to offer workplace learning for senior secondary school students.

UPWARD TREND IN INDUSTRY TRAINEES[1]

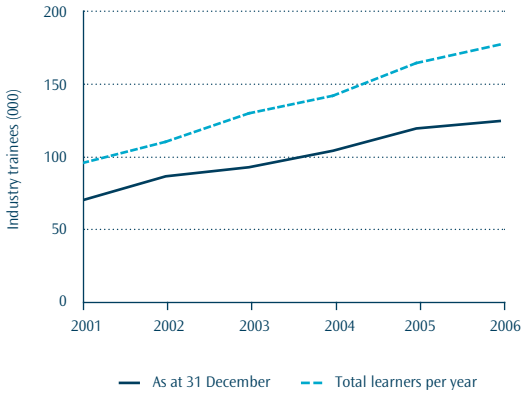
There has been strong growth in the number of learners in industry training in recent years. This reflects the significant increases in the financial investment in industry training and also the increases in the number of participating employers.

The number of industry trainees in 2006:

Total learners	176,000	(up 8.1% on 2005)
As at 31 December	124,000	(up 4.5% on 2005)
Modern Apprenticeships	9,470	(up 13% on 2005)

Source: Tertiary Education Commission.

Figure 6.1// **Learners in industry training**



PARTICIPATION RATE IN INDUSTRY TRAINING

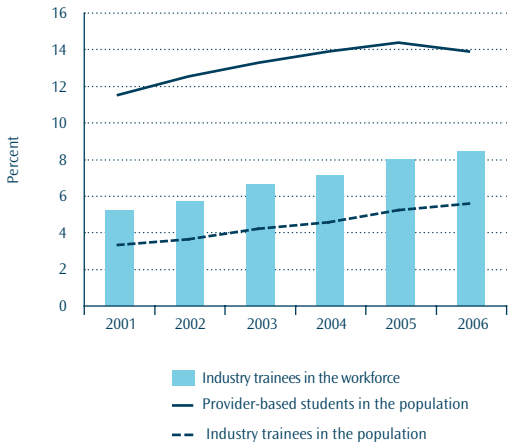
The proportion of workers undertaking industry training is another measure of access and demand for workplace learning. An estimate of the proportion of workers in industry training from the March quarter *Household Labour Force Survey* shows that this has been increasing in recent years. In Figure 6.2 this measure is shown together with the proportions of industry trainees and provider-based formal students in the population aged 15 years or over.

Estimates of participation:

	2001	2005	2006
	%	%	%
Industry training	5.2	8.0	8.4
Provider-based learning	11.4	14.2	13.7

Source: Tertiary Education Commission and Statistics New Zealand.

Figure 6.2// **Participation rates for industry training and provider-based learners**



MORE EMPLOYERS PARTICIPATING IN TRAINING

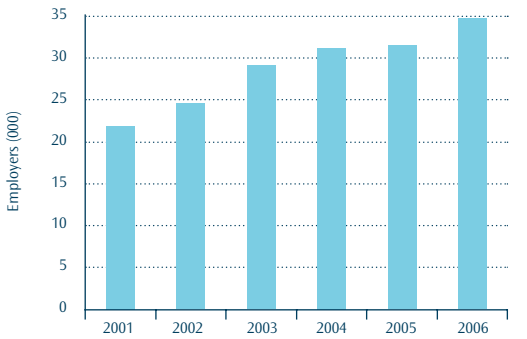
The number of employers providing industry training has increased since 2002 and a high proportion of New Zealand's employers and employees now have access to formal training. The annual report of the Tertiary Education Commission stated that an estimated two-thirds of New Zealand's employers and 72 percent of employees were covered in 2005 by an industry training organisation. All primary industries and 96 percent of manufacturing and construction industries were covered.

The number of employers involved in training:

2001	2005	2006
21,900	31,500	34,800

Source: Tertiary Education Commission and Statistics New Zealand.

Figure 6.3// **Employers providing workplace learning for employees**



ANALYTICAL TABLES: An associated set of tables on workplace-based learners is available on the Education Counts website, Tables ITP1-17, ITA1-5, PSE4 and FNR9. See also the participation and achievement tables. Detailed technical information on the data presented here can be found in chapter 18.

1. Unless otherwise stated, industry training numbers are for the whole year, and include modern apprentices.

INDUSTRY TRAINING ORGANISATIONS

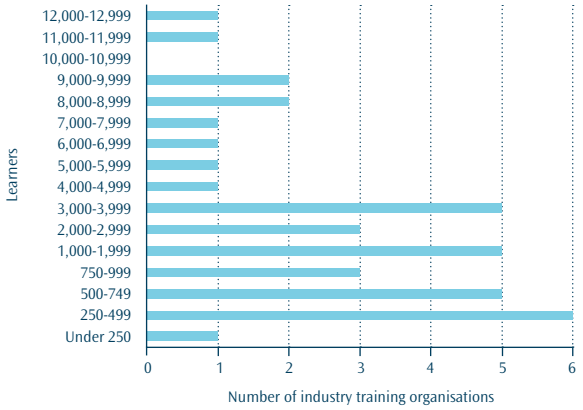
Figure 6.4// **Distribution of industry training organisations by number of learners (December 2006)**

Industry training occurs on the job in employment situations, and industry training organisations make arrangements for workplace assessment and off-job training. Each organisation covers a specific industry area and the number of organisations with learners has decreased over time.

There were 38 industry training organisations with learners as at December 2006.

The size of industry training organisations varies greatly and the average number of learners per organisation increased to 3,200 at December 2006. About half have fewer than 1,700 learners (1,500 in 2005). The two largest organisations are Competenz (engineering, food and manufacturing industries) and FITEC (forestry industries), both of which have over 11,000 learners.

Source: Tertiary Education Commission.



INCREASED FUNDING OF INDUSTRY TRAINING

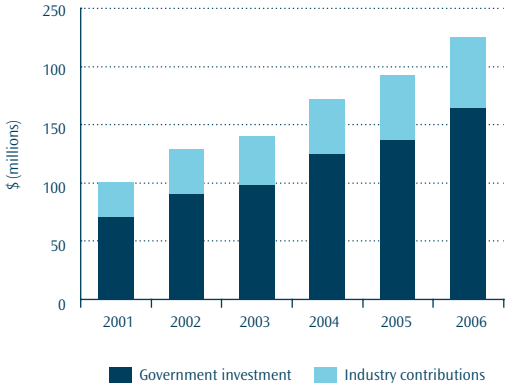
Figure 6.5// **Industry training funding by source**

Industry training funding totalled $225 million in 2006, an increase of 17 percent on 2005. Industry training is jointly funded by government and industry. Government's contribution is made through the industry training and Modern Apprenticeships funds, with industry contributions being in cash or in kind. Employees may bear some of the costs, by meeting some proportion of the training fees or accepting a lower rate of pay as part of the training arrangement.

Funding of industry training:

	2004	2005	2006
		$ (millions)	
Government investment	125.4	137.3	164.4
Industry contribution	46.6	55.5	60.5

Source: Tertiary Education Commission.



INCREASED ETHNIC DIVERSITY

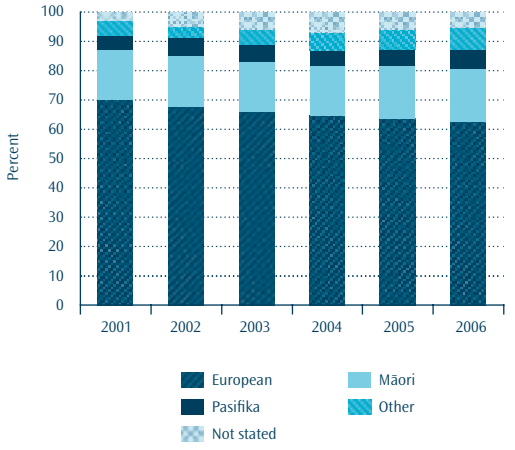
Figure 6.6// **Industry training learners by ethnic group**

The demographic profile of industry training learners continues to diversify. Over the last five years, learners in the Other ethnic group increased as a proportion of total trainees, while there was a small increase in the proportion who identified themselves as Māori and Pasifika. The proportion of learners identified as European declined over this period.

The proportions of industry trainees by ethnic group in 2006:

Māori	18%	(17% in 2001)
Pasifika	6%	(5% in 2001)
European	63%	(70% in 2001)
Other	8%	(5% in 2001)

Note: Ethnic group is based on the single prioritised method of reporting.



INCREASED PARTICIPATION BY WOMEN

An increasing proportion of industry training learners is women, but they are spread unevenly among different industries.

The proportion of industry training learners who are women:

2001	2005	2006
23%	28%	29%

The most popular industries for women to participate in workplace-based learning in 2006:

Pharmacy	96%
Community support services	96%
Hairdressing	94%
Te Kaiawhina Ahumahi (social services)	77%

Industries with few women participating are boating, building and construction, and plumbing and gasfitting.

Source: Tertiary Education Commission.

Figure 6.7// **Industry training learners by gender**

INCREASED PARTICIPATION BY YOUNG PEOPLE

Diversity in the ages of learners in industry training has increased in recent years. The number of learners aged 15 to 19 years has increased by 177 percent since 2000 (compared to 116 percent for all ages), showing the impact of the Modern Apprenticeships scheme. The apprenticeships were introduced to facilitate increased access for young people to industry training. The proportion of industry training learners aged 15 to 19 years was 10 percent in 2006 (8 percent in 2001).

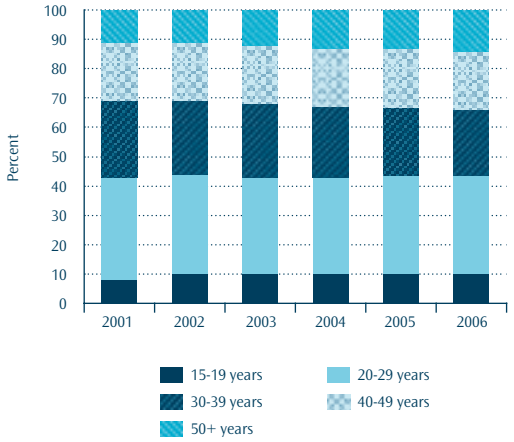
An estimate of the workforce participation in industry training by age group from the *Household Labour Force Survey* shows that participation by those workers in the 15 to 19 year age group has increased.

Participation in industry training by 15 to 19 year-olds:

2004	2005	2006
11%	12%	13%

Source: Tertiary Education Commission.

Figure 6.8// **Proportions of industry training learners by age group**



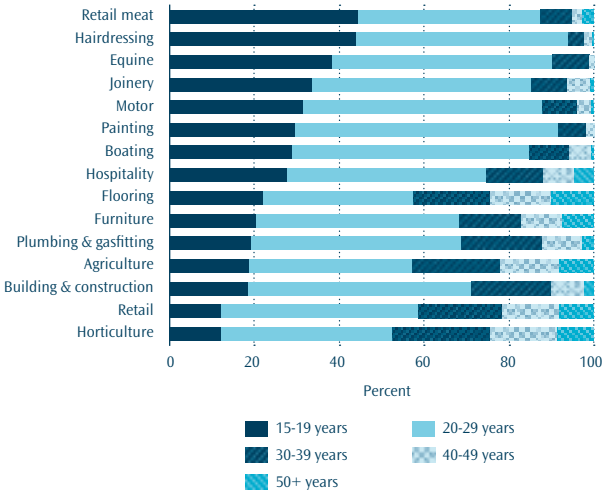
AGE DISTRIBUTIONS VARY AMONG INDUSTRIES

There is variation in the age distribution across industry training areas. Industry trainees aged 15 to 19 years accounted for 30 percent of all learners in the industry area of painting, 31 percent in motor engineering, 33 percent in joinery, 38 percent in equine, 44 percent in hairdressing and 45 percent in retail meat.

Industry trainees aged 40 years and over accounted for over half of all learners in local government (56 percent), 57 percent in extractives, 57 percent in fire and rescue, 61 percent in apparel and textile, 62 percent in building service contractors, 65 percent in Te Kaiawhina Ahumahi (the social services industry training organisation) and 70 percent in community support services.

Source: Tertiary Education Commission.

Figure 6.9// **Distribution of learners by selected industry and age group (December 2006)**



IMPROVING ACCESS TO QUALIFICATIONS

Figure 6.10// **Distribution of learners by previous highest qualification**

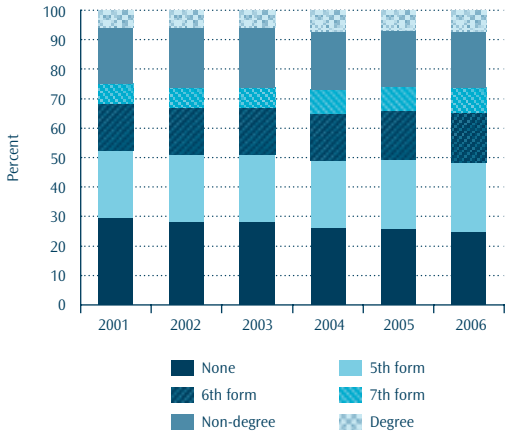
A key goal of industry training is to improve access to training and to nationally recognised qualifications. About half of industry trainees have no qualifications or low-level qualifications before entering training. The proportion of industry training participants with no previous qualifications is decreasing, while the share of participants in most of the other categories has risen slightly.

In 2006, 25 percent of industry trainees had no previous qualifications, while 7 percent had a degree. Approximately 34 percent of Māori trainees and 35 percent of Pasifika trainees had no previous qualifications.

Notes:

1. This is an estimate based on the participants whose previous qualification is known. Previous qualification data is self-reported and unvalidated.
2. Qualification categories used here include equivalent qualifications: 5th form refers to attainment at year 11 or equivalent, 6th form at year 12 or equivalent, and 7th form at year 13 or equivalent..

Source: Tertiary Education Commission.



MOST INDUSTRY TRAINING IS AT LEVELS 3 AND 4

Figure 6.11// **Distribution of programmes by National Qualifications Framework level and ethnic group**

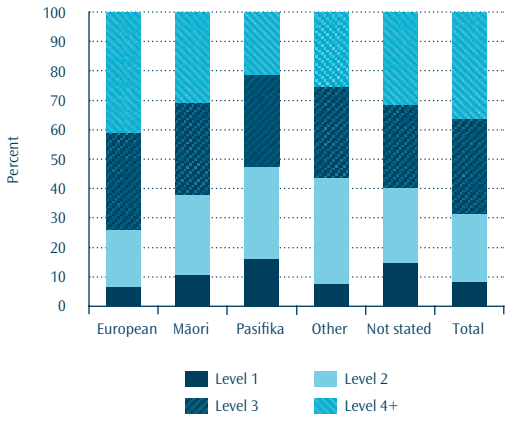
Sixty-eight percent of industry training participants in 2006 were enrolled at levels 3, 4 or above on the National Qualifications Framework and 34 percent were enrolled at level 4. Sixty-four percent were enrolled in qualifications at levels 1 to 3. Only 2 percent studied for qualifications at level 5 or higher.

Māori, Pasifika peoples, and trainees in the Other ethnic group are more likely than European learners to be participating in programmes at level 1 or 2 on the National Qualifications Framework.

Notes:

1. Ethnic group is based on the single prioritised method of reporting.
2. Trainees may be enrolled in programmes at more than one level.

Source: Tertiary Education Commission.



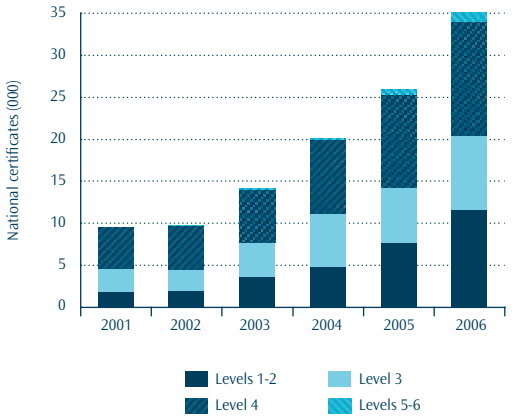
INCREASED QUALIFICATION ACHIEVEMENT

Figure 6.12// **National certificates awarded by qualification level**

There were 35,000 national certificates awarded to industry training learners in 2006. This constituted a 35 percent increase in the number of qualifications achieved over 2005. Fifty-eight percent of national certificates were awarded at levels 1 to 3 and 39 percent at level 4. Only 3 percent were awarded at level 5 or higher.

Increasingly, national certificates are awarded at levels 1 to 3. The number of people completing national certificates at level 4 also increased in 2006, but it declined as a proportion of the total awards.

Source: Tertiary Education Commission.



SHIFTS IN THE LEVEL OF ACHIEVEMENT

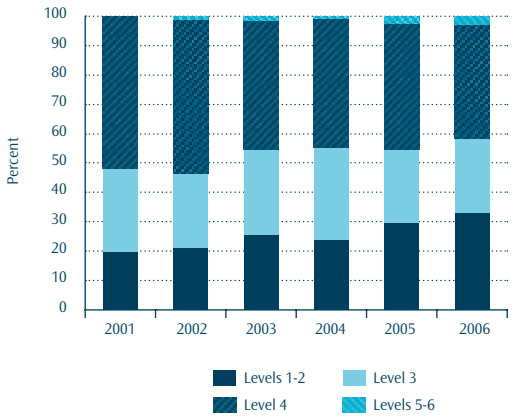
Figure 6.13// **Distribution of national certificates awarded by qualification level**

The number of national certificates awarded increased by 35 percent from 2005 to 2006. Level 1 to 2 national certificate attainment has risen as a proportion of total achievement from 20 percent in 2001 to 33 percent in 2006. Over the same period, level 3 national certificate attainment has remained at around 25 to 30 percent of the total. Achievement at level 4 has decreased proportionately in recent years even though there was a 176 percent rise in the number of level 4 awards made. Level 5 and over attainment has grown as a proportion of the total.

The number of national certificates awarded:

	2005	2006	% change from 2005
Total	25,900	35,100	35
Levels 1-2	7,740	11,600	50
Level 3	6,470	8,810	36
Level 4	11,100	13,600	23
Level 5 and over	596	985	65

Source: Tertiary Education Commission.



INCREASED ACHIEVEMENT BY TRAINEES WITH LOW PREVIOUS QUALIFICATIONS

Figure 6.14// **National certificates awarded by previous highest qualification**

The distribution of national certificate achievement across previous highest qualification level has been relatively stable. About 45 percent of national certificates are awarded to trainees with no, or lower-level, previous qualifications, up on 41 percent in 2004.

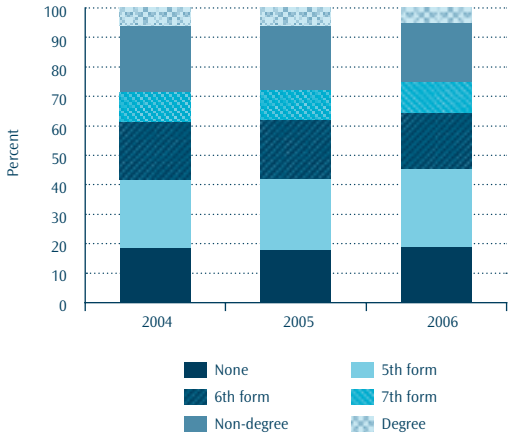
The proportion of national certificates awarded by previous qualification level:

	2004 %	2005 %	2006 %
None	18	18	19
5th form	23	24	26
6th form	20	20	19
7th form	10	10	10

Notes:

1. This is an estimate based on the participants whose previous qualification is known. Previous qualification data is self-reported and unvalidated.
2. Qualification categories used here include equivalent qualifications: 5th form refers to attainment at year 11 or equivalent, 6th form at year 12 or equivalent, and 7th form at year 13 or equivalent.

Source: Tertiary Education Commission.



CREDIT ACHIEVEMENT INCREASED IN 2006

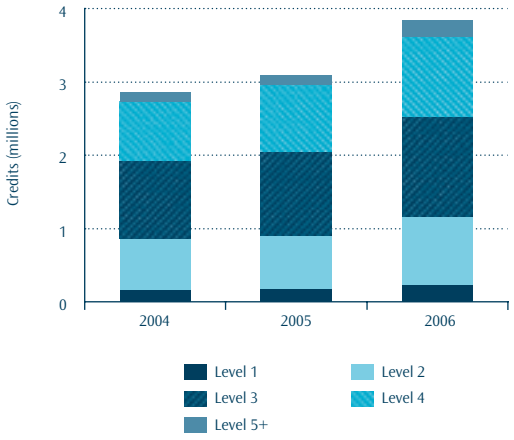
Figure 6.15// **Credit achievement by qualification level**

Industry training learners achieved 3.8 million credits towards national qualifications in 2006. This represents a 22 percent increase over the number of credits achieved in 2005. Overall, the distribution by levels of credit achievement as a proportion of the total has remained relatively stable from 2004.

The proportions of credits achieved by qualification level:

	2004 %	2005 %	2006 %
Levels 1-2	32	29	30
Level 3	35	37	36
Level 4	28	29	28
Level 5 and over	5	4	6

Source: Tertiary Education Commission.



MORE MODERN APPRENTICES[2]

There has been a steady increase in the participation in Modern Apprenticeships. Since 2002, growth in the number of apprentices has averaged 19 percent per year. The estimated proportion of workers aged 15 to 19 years in Modern Apprenticeships using the *Household Labour Force Survey* was 5.1 percent in 2006, up from 4.7 percent in 2005.

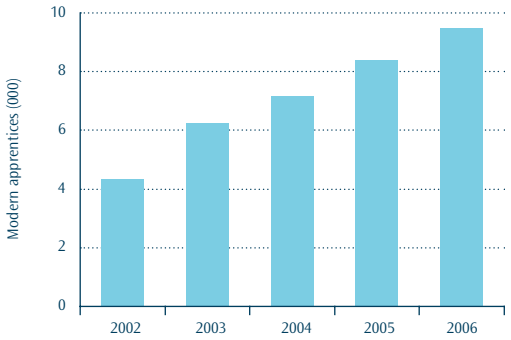
The number of modern apprentices:

	2002	2003	2004	2005	2006
Modern apprentices	4,340	6,260	7,180	8,390	9,470
Change from previous year (%)	-	44	15	17	13

Note: Data relates to the total number of modern apprentices at 31 December.

Source: Tertiary Education Commission.

Figure 6.16// **The number of modern apprentices**



APPRENTICES BY ETHNIC GROUP

The participation by ethnic group has remained similar over time. The slight fall in the European group as a proportion of the total coincides with a corresponding rise in apprentices who have not stated their ethnic group. The great majority are European males aged 17 or 18 years in level 4 training programmes while 10 percent are in level 3 training programmes.

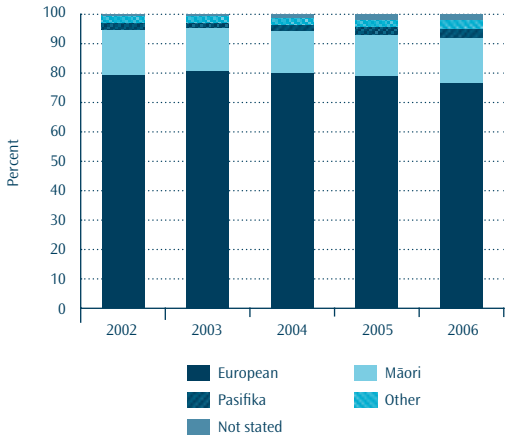
The proportions of modern apprentices by ethnic group in 2006:

European	77%	(80% in 2002)
Māori	15%	(15% in 2002)
Pasifika	3%	(2% in 2002)
Other	3%	(3% in 2002)

Note: Ethnic group is based on the single prioritised method of reporting.

Source: Tertiary Education Commission.

Figure 6.17// **Distribution of modern apprentices by ethnic group**



MORE FEMALE MODERN APPRENTICES

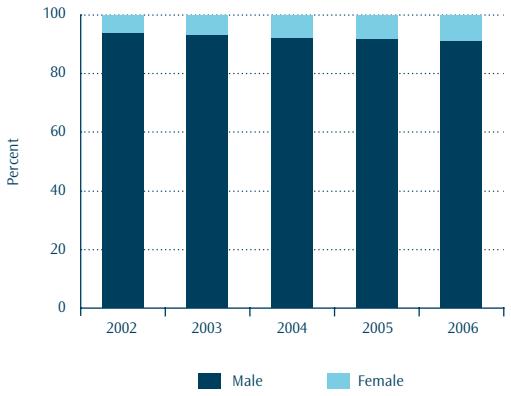
While females represent only a small proportion of modern apprentices in 2006, their numbers have been increasing more quickly in recent years than those of male apprentices. The number of women participating in Modern Apprenticeships in 2006 has increased by 20 percent compared with a year earlier.

The proportion of modern apprentices by gender in 2006:

Male	91%	(94% in 2002)
Female	9%	(6% in 2002)

Source: Tertiary Education Commission.

Figure 6.18//**Modern apprentices by gender**



2. Unless otherwise stated, Modern Apprenticeship numbers are at 31 December of each year.

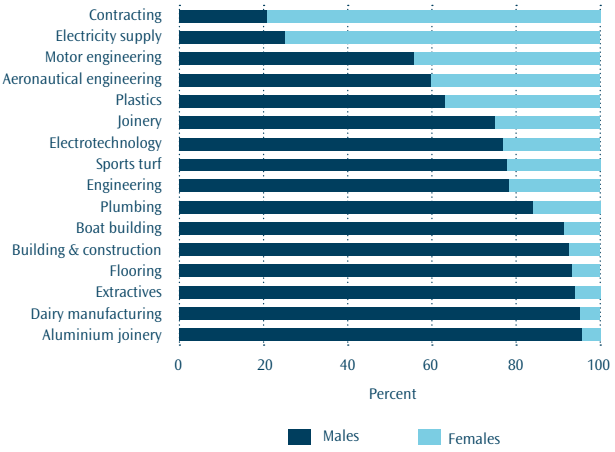
FEMALE APPRENTICES CONCENTRATED IN CERTAIN INDUSTRIES

There is variation in the gender distribution of Modern Apprenticeships across industry training areas. Female learners accounted for over 30 percent of all learners in the industry areas of hospitality (37 percent), seafood (40 percent), retail (44 percent), public sector (75 percent) and tourism (79 percent).

Female learners were not represented in Modern Apprenticeships for the industry areas of aluminium joinery (architectural), dairy manufacturing, extractives and flooring.

Source: Tertiary Education Commission.

Figure 6.19// **Distribution of apprentices in selected industries by gender**



INCREASE IN OLDER PARTICIPANTS

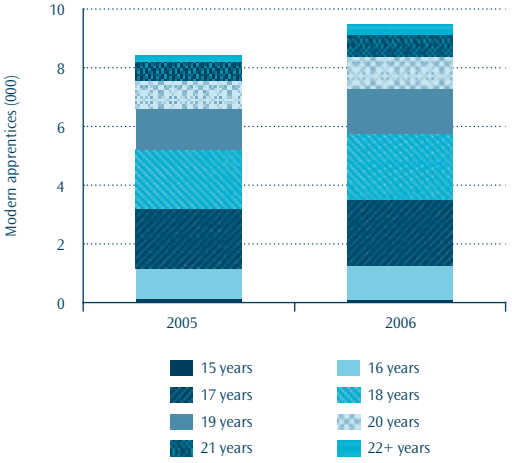
The average age of apprentices in 2006 was 18 years, with over half of all trainees aged 17 or 18 years.

Almost 90 percent of the growth in the number of apprentices in 2006 was in the age group of 21 years or younger. Two-thirds of the total increase was in people at the beginning of their apprenticeship – those aged 15 to 19 years.

Although aimed at younger people, older people seeking a change of career may also be accepted. As a result of this, there were 312 apprentices aged 22 years or over in 2006, an increase of 70 percent from 2005 – the highest-growing age group between 2005 and 2006 but this only accounted for 12 percent of the overall growth. The second highest-growing age group was 21 year-olds, up 19 percent in 2006 compared with a year earlier.

Source: Tertiary Education Commission.

Figure 6.20// **Distribution of apprentices by age group**



APPRENTICESHIP DISTRIBUTION BY INDUSTRY

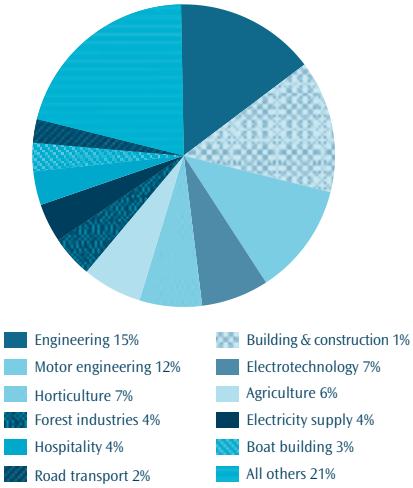
Modern Apprenticeships are available in 30 industries and in 2006 there was an average of 315 apprentices in each industry.

The highest increases and decreases in the number of apprentices in 2006 were in the following industries:

	Number of apprentices	
Road transport	217	(up 140% on 2005)
Aluminium joinery	5	(up 67% on 2005)
Joinery	210	(up 67% on2005)
Baking	200	(down 2% on 2005)
Forestry	412	(down 3% on 2005)
Dairy manufacturing	12	(down 8% on 2005)
Seafood	10	(down 17% on 2005)
Retail	77	(down 20% on 2005)

Source: Tertiary Education Commission.

Figure 6.21// **Distribution of apprentices by selected industries**



MORE GATEWAY STUDENTS

The Gateway programme was introduced in 2001 to provide school students with workplace experience while learning. There has been a steady increase in participation in Gateway. The programme was originally established for decile 1 to 5 schools. Gateway is now being expanded to include all decile 1 to 6 schools by 2008 and by 2010 it will include all decile 7 to 10 schools from 1 January 2008.

The number of Gateway students:

	2002	2003	2004	2005	2006
Gateway students	1,170	2,670	4,310	5,620	6,680
Change from previous year (%)	15	128	61	30	19

Note: Data relates to trainees with a placement start date during the year.

Source: Tertiary Education Commission.

Figure 6.22// **Gateway students by age group**

GATEWAY STUDENTS ACHIEVE MORE CREDITS

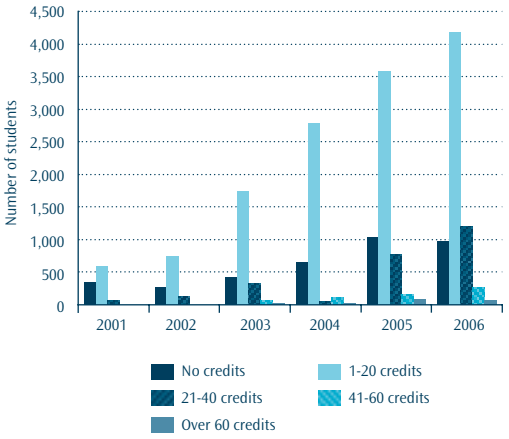
There has been a steady increase in the number of students achieving credits in Gateway. In 2006, 85 percent of students gained credits on the National Qualifications Framework, up from 82 percent in 2005. Sixty-three percent gained between 1 and 20 credits and a further 22 percent gained more than 20 credits. Fifteen percent of Gateway students did not gain credits in 2006, a decrease from 19 percent in 2005.

The number of students attaining credits:

	2002	2003	2004	2005	2006
Gateway students	892	2,180	2,980	4,600	5,710
Change from previous year (%)	34	145	37	54	24

Source: Tertiary Education Commission.

Figure 6.23// **Gateway students by credits attained**



BETTER OUTCOMES FROM GATEWAY

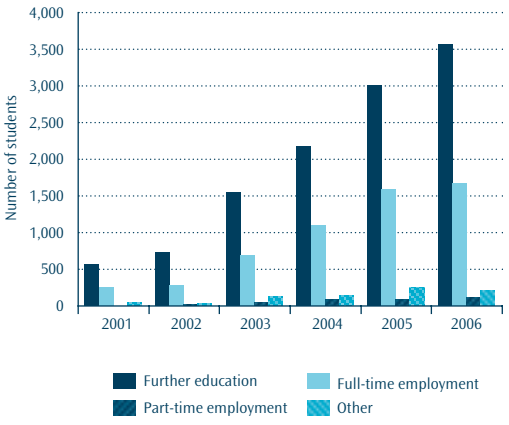
There has been an increase in the number and proportion of students achieving positive outcomes in Gateway. In 2006, 96 percent of students completing a Gateway placement carried on to further education or employment, up from 95 percent in 2005. Sixty-four percent of students carried on to further education at school or with a tertiary provider, while 32 percent entered employment.

The proportion of students going on to further education or employment:

	2002	2003	2004	2005	2006
	%	%	%	%	%
Education	69	64	62	61	64
Employment	29	30	34	34	32

Source: Tertiary Education Commission.

Figure 6.24// **Gateway students by outcome achieved**



THE VARIETY OF INDUSTRY TRAINING PROGRAMMES

Learners in industry training can undertake a variety of qualification pathways. Each participant undertakes a programme of learning, set out in an agreement with the industry training organisation responsible for training in that industry. A programme of learning can be either classified as a qualification, such as a national certificate, national diploma or a trade certificate, or as a limited credit or supplementary credit programme. The mix of learning that occurs depends on the requirements of each industry and the individual needs of the employer and the employee. This article explains the purpose of each of the programme types, reports on their use and examines the differences in participation for the three-year period from 2004 to 2006.

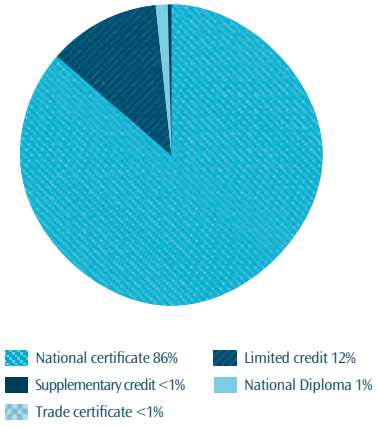
The data considered in this section amalgamates information on all programmes between 2004 and 2006. This data is collected by the Tertiary Education Commission for funding purposes. This analysis may differ from those of the Tertiary Education Commission in several important ways. It reflects the total volume of participation in each programme type, rather than the number of programmes that are available.[3]

Workplace-based learning was restructured into industry training programmes in 1992 to assist in the development of an internationally competitive and highly skilled workforce. The 1992 Industry Training Act provided the framework for industry to lead the development, implementation and management of industry training programmes. It created industry training organisations, responsible for setting skill standards and arranging training programmes for the industries they represent. When learners participate in workplace-based learning, the appropriate industry training organisation, employer and trainee sign an agreement or plan that outlines the programmes of study.

Limited credit programmes are short, flexible, stand-alone programmes of study that do not in themselves result in a national qualification. They are collections of unit standards on the National Qualifications Framework, developed by industry training organisations to cater for the training needs of industry. Until recently, limited credit programmes constituted the majority of industry training programmes. Their appeal to industry and learners alike is clear: they are linked to the framework, enabling learners to 'staircase' to higher qualifications if they wish to, and, as they are generally shorter in duration than full qualifications, they can be completed quickly and hence enable industries to keep their employees up to date with changes that result from emerging technologies. They may also be used for 'compliance' courses of study, such as for health and safety in the workplace learning requirements. More recently they have become tied in to national certificates and now function as a step into national certificate study.

In recent years, the government has made the attainment of qualifications such as national certificates and national diplomas in industry training a key priority. The majority of enrolments in industry training are now in programmes of study which lead to national certificates.[4] Industry training organisations have also found that national qualifications motivate learners to persist with workplace-based learning. Limited credit programmes are used less as stand-alone programmes of study and are now used more as pathways through which learners attain their national certification. Modern apprentices may only study in programmes leading towards national certificates, unlike industry training learners, who can undertake supplementary and limited credit programmes.

Figure 6.25 // Participation in industry training (2004 to 2006) by programme type[5]



Source: Tertiary Education Commission.

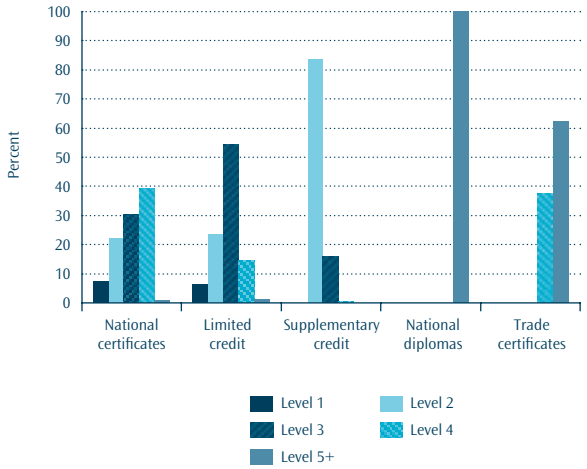
Between 2004 and 2006, national certificates were the core of workplace-based learning programmes, accounting for 86 percent of all industry training provision. National qualifications, supplementary and limited credit programmes can be set at a variety of levels on the National Qualifications Framework. The majority of national certificate programmes in industry training are set at level 4 of the framework.

3. The total participation approach was taken because it allows simple comparisons between categories to be made. It should be noted that this approach differs considerably with Tertiary Education Commission's performance measures and should not be considered to be a replacement of the Commission's performance measures. For example, the number of enrolments reported for industry training, as used for analysis purposes in this report, over-estimates the actual participation in industry training for funding purposes. This is because a new enrolment record is created whenever a significant change is made to a programme.

4. It should be noted that the use of 'programme' in industry training does not align with its use in other parts of the tertiary education sector. A programme in industry training refers to a specific course of study, developed by an industry training organisation. Learners may take several programmes in order to fulfil the requirements of their training agreement or plan.

5. Unless otherwise specified, the following points should be considered for each graph in this section of the report: (a) the data relates to all programmes undertaken in a year, (b) Modern Apprenticeships are included, and (c) learners can study in more than one programme in a year.

Figure 6.26 // Distribution of enrolments (2004 to 2006) by National Qualifications Framework level and by programme type



Source: Tertiary Education Commission.

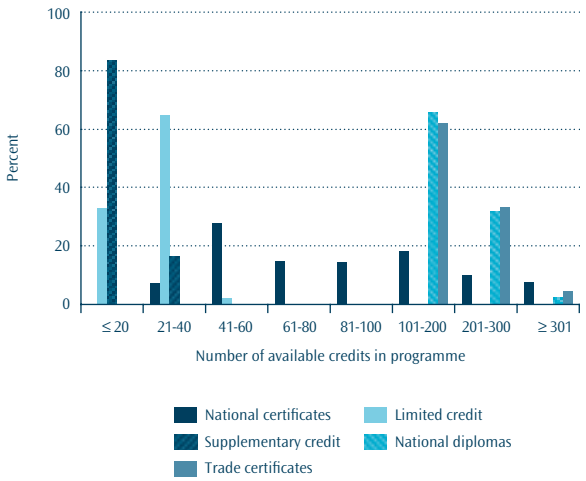
Note: Data represents the distribution of enrolment for each programme type by National Qualifications Framework level. It does not reflect the total number of enrolments in each programme type.

National diplomas are mostly at levels 5 to 7 of the framework. They accounted for just 1.3 percent of industry training programmes in the period from 2004 to 2006.

Between 2004 and 2006, some industry training organisations introduced supplementary credit programmes. These programmes are intended to be an adjunct to national certificates. They operate as a supplement to the knowledge and skills gained by learners through the completion of their national certificate, as technological and other change in industry practice demands that employees learn new skills. During the period under review, supplementary credit programmes accounted for less than 1 percent of total participation in industry training, but their share is gradually increasing. A supplementary credit programme must contain a minimum of 20 credits in order to be funded by the Tertiary Education Commission.

Trade certificates are a vestige of the previous system of trade training that existed before the Industry Training Act was introduced in 1992. Trade certificates are slowly being phased out in favour of national certificates. Trade certificates do not sit on the National Qualifications Framework but are administered by the New Zealand Qualifications Authority. They consist of some unit standards on the framework, so a credit value can be attached to them. However, with only 45 participants in trade certificate courses between 2004 and 2006, they accounted for a very small proportion of programme types.

Figure 6.27 // Participation in industry training (2004 to 2006) by programme type and available credits

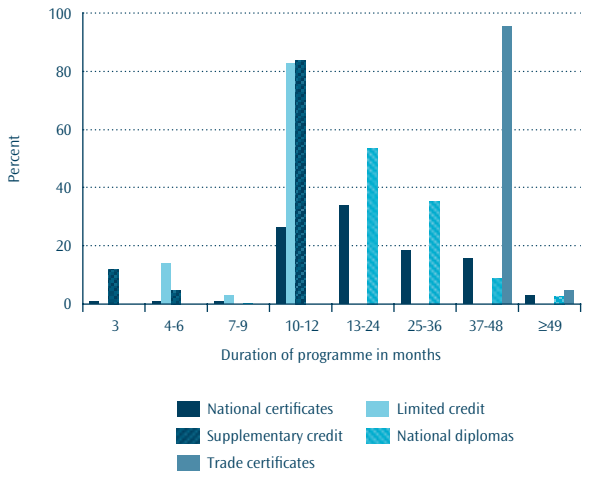


Source: Tertiary Education Commission.

The number of credits attached to a programme also differed by programme type. Between 2004 and 2006, learners undertaking limited credit programmes were more likely to do so in programmes consisting of between 20 and 40 credits in total, while the majority of study in supplementary credit programmes consisted of 20 credits. National certificates are usually registered between levels 1 and 4, and require a minimum of 40 credits, at or above the level at which the qualification is registered. Over the period from 2004 to 2006, the study load for national certificate programmes averaged 60 to 100 credits, but as Figure 6.27 illustrates, they could also comprise many more or fewer credits. Some industry training organisations have designed smaller national certificates, consisting of 30 or 40 credits, perhaps as an alternative to using limited credit programmes.

During the period from 2004 to 2006, national diplomas and trade certificates shared roughly similar credit load profiles, with the majority of programmes consisting between 100 and 300 credits.

Figure 6.28 // Participation in industry training (2004 to 2006) by programme duration and type



Source: Tertiary Education Commission.

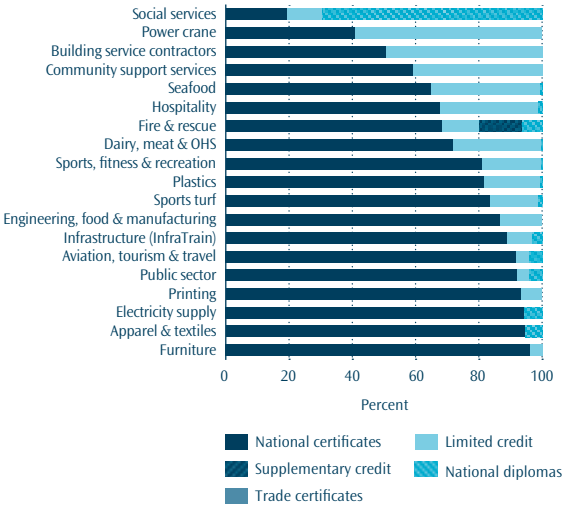
Just as programme types can vary in level and credit load, the length of time for which they are expected to run also varies. The duration of the programme does not mean that the industry training organisation is contracted to arrange the learning for this entire period rather it is the length of time most trainees would be expected to take to complete the programme. The expected duration is flexible, therefore, and some learners may proceed at a faster or slower pace than others. Figure 6.28 illustrates that the majority of limited credit programmes between 2004 and 2006 were expected to last for 10 to 12 months, although a small proportion was expected to run for a shorter period of time.

Supplementary credit programmes were expected to take a similar length of time to complete as limited credit programmes. The expected duration of national certificates was more widely spread, with many expected to last between 10 and 12 months and many also between 19 and 24 months. This may reflect that some industry training organisations have responded to industry need for change in employee learning by adapting national certificate programmes to be of variable lengths. The majority of national diploma programmes were contracted to last for between 22 and 24 months, while trade certificates were mainly contracted to run for between 46 and 48 months.

Industries differed in the way they favoured some types of programmes over others. Each industry training organisation covers a certain range of industries, and their programme portfolio varied in order to meet the differing demands of the industries they serve. Figure 6.29 illustrates that the majority of learners enrolled in industry training between 2004 and 2006 studied in national certificate programmes (approximately 86 percent). However, in some industries, such as power crane, building service contracting, community support services and seafood, learners were more likely to be studying in limited credit programmes. The numbers studying in limited credit programmes peaked at 59 percent of learners in the power crane industry, while the overall proportion was approximately 12 percent.

Learners in the social services industry were more likely to be studying in a national diploma programme than learners in other industries, while supplementary credit programmes have only really been used, to any great extent, in the fire and rescue and agriculture industries.

Figure 6.29 // Distribution of industry training learners (2004 to 2006) by selected industries and programme type

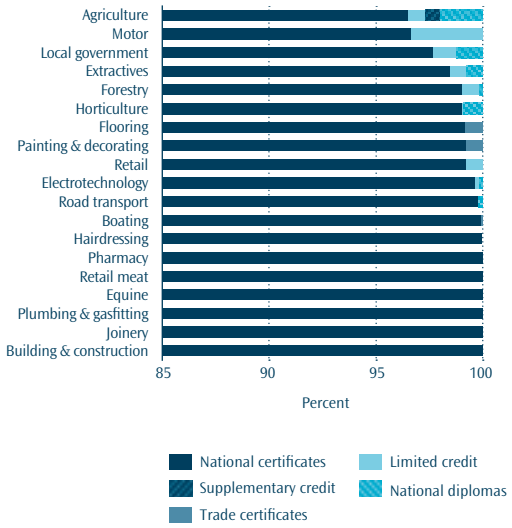


Source: Tertiary Education Commission.

Note: OHS refers to occupational health and safety.

The industries in which learners studied only in national certificate programmes include building and construction, joinery, plumbing and gasfitting, hairdressing, flooring, horticulture, equine, retail meat and pharmacy.

Figure 6.30 // Distribution of programme completions (2004 to 2006) by selected industry and programme type

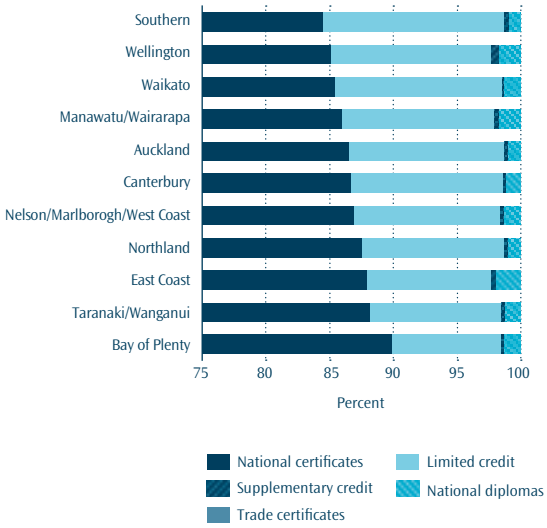


Source: Tertiary Education Commission.

Note: The axes on Figures 6.29 and 6.30 are not comparable. The axis on Figure 6.30 begins at 85 percent. This has been done to illustrate that learners in some industries mostly study in national certificate programmes.

There were also regional differences in the programme portfolios. Industry training learners based in the Bay of Plenty region were less likely to be studying in a limited credit programme than those based in the southern region (encompassing the area from Timaru down to Invercargill). These regional variations may reflect the different regional industry concentrations, leading to distinctive industry training provisions based on location.

Figure 6.31 // Distribution of learners (2004 to 2006) by region and programme type



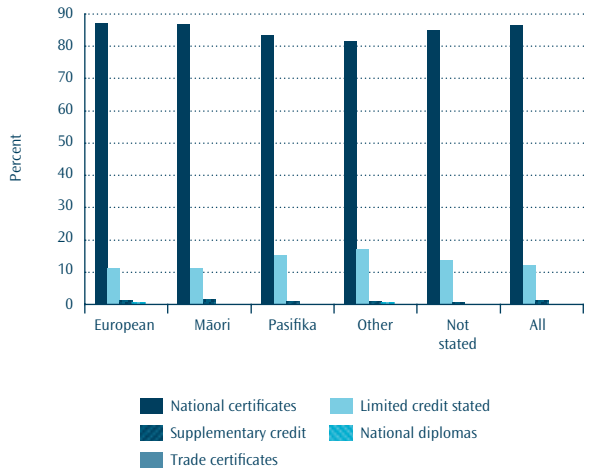
Source: Tertiary Education Commission.

Note: The axis on Figure 6.31 begins at 75 percent. This has been done to more effectively illustrate the regional variation in programme types.

There was also evidence of variation in the programme types used across ethnic groups.[6] Between 2004 and 2006, Pasifika, the Other ethnic group and the Not stated group were more likely than European or Māori to be studying in limited credit programmes. These ethnic groups were also less likely to be studying in national diploma and certificate programmes than European or Māori learners. The differences between the groups were small, and the trend for all groups was to participate mainly in national certificate programmes. There may be many reasons for these differences, including differences in participation in each industry by ethnic group, and prior qualifications. Some ethnic groups may, for example, be concentrated in particular industries which make more use of limited credit programmes, while some ethnic groups may also have lower-level qualifications, and limited credit programmes may be used to staircase learning up to national certificate level.

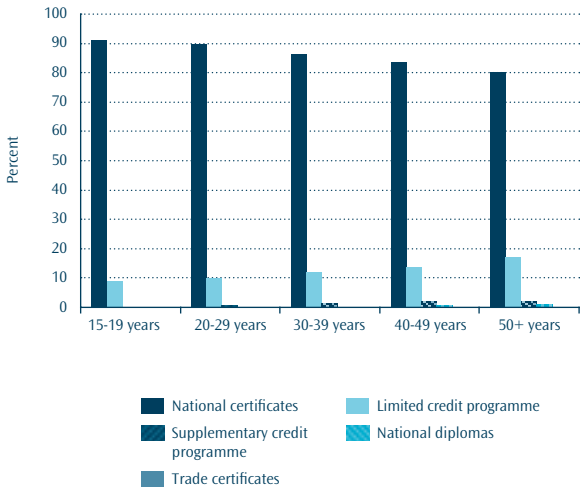
6. It should be noted that ethnic group is a self-selection. Where industry training learners have stated different ethnic groups across different enrolments, the latest ethnic group reported has been used. Similarly, if the learner has not stated their ethnic group but has previously stated an ethnic group, then this has been used.

Figure 6.32 // Participation in industry training (2004 to 2006) by programme type and ethnic group



Source: Tertiary Education Commission.

Figure 6.33 // Participation in industry training (2004 to 2006) by programme type and age group



Source: Tertiary Education Commission.

Another difference in the type of programme learners participated in between 2004 and 2006 related to their age groups.[7] Across all age ranges, industry training learners were mainly involved in learning leading to national certificates. However, older learners were more likely than younger learners to undertake limited credit programmes or supplementary credit programmes.

This is consistent with the hypothesis that older learners are less concerned than younger ones with gaining national qualifications because they have more experience in the workplace, and may already be suitably qualified, or have previously gained national qualifications. They may be more likely than younger learners to wish to restrict their learning to programmes that keep them abreast of change in their industries, as limited credit programmes and supplementary credit programmes are best suited to do. Older workers may also have more responsibilities outside of work, such as family commitments, that would make shorter programmes of study more appealing to them.

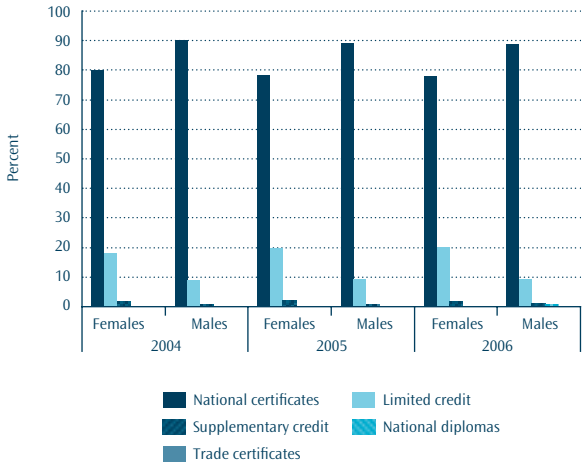
It may also be a reflection of the need of people in the younger age groups to acquire credentials or qualifications. Alternatively, the difference could be a feature of the industry coverage and the level of qualifications in the particular industries covered, and not that older workers have less interest in completing a qualification.

7. Each year, the ages of learners are calculated as at 1 July.

There were also gender differences in the utilisation of programme type. Between 2004 and 2006, women were more likely to be studying in limited credit programmes and national diplomas than men. One factor contributing to this finding may be that women were more likely than men to participate in learning in industries such as hospitality, community support services, and social services: learners in these industries were less likely than others to be in national certificate programmes.

In particular, learners in social service industries were highly likely to be studying in national diplomas, and were also more highly likely to be female. Labour market statistics (such as the *Quarterly Employment Survey*) indicate that women are also more likely than men to be working part-time. They may have other responsibilities outside of work, such as caring for children, that would make limited credit programmes more appealing to them because of the shorter time commitment required.

Figure 6.34 // Participation in industry training (2004 to 2006) by programme type and gender



Source: Tertiary Education Commission.

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CHAPTER SEVEN

AN OVERVIEW

Enrolments in levels 1 to 3 have peaked. After rising strongly in recent years, enrolments in levels 1 to 3 decreased significantly in 2006. The number of students in foundation education has been decreasing since 2004. Student numbers in vocational education have started to decrease. The numbers in short courses also decreased in 2006. Youth training numbers have continued to decline; however, training opportunity numbers have increased for the first time in several years.

The improved labour market is one of the reasons for the decrease in student numbers. Most students coming into study at this level were employed in the previous year. Students are less likely now to complete or continue in study after a year and, of those who do complete, fewer are going on to higher-level studies. These trends are likely to be influenced by the improved employment opportunities that make employment a more attractive option than study. The stronger labour market also tends to reduce the need to complete a qualification once a student has attained the skills or knowledge sought from study.

The Tertiary Education Commission conducted several reviews of provision in 2005 which resulted in reductions and/or reallocations of provision in 2006. The largest in terms of the amount of provision affected was the review of A1 and J1 classified courses. This review resulted in a reduction in the number of students in A1 and J1 courses and an increase in the numbers enrolled in courses in other classifications. A third of private training provider provision was also reviewed, with the aim of strengthening quality provision within this sub-sector. Dive-related courses were also reviewed. An article on *Improving the relevance of tertiary education* is included later on in this chapter.

Provision at levels 1 to 3 was also affected by policy changes to restrict funding available for short awards. This resulted in a significant drop in the number of students taking courses of one week or less.

The large number of students who participated at this level over the last five years provides an opportunity to look in more depth at their pathways and progression to further education. Students enter study from a range of different backgrounds, including school, other tertiary study, employment and unemployment. Most just study towards one certificate. About a third of these go on to further study and most of them end up studying at a higher level. Different subjects lead to different levels of study, with trade-related subjects feeding into level 4 certificates and more professionally oriented subjects leading to diplomas and degrees. A study of the pathways and progression to further education of students in level 1 to 3 certificates is included later on in this chapter.

THE 2007 YEAR

The further results of the Tertiary Education Commission reviews are likely to be evident in the 2007 provision. As the review of the A1 and J1 provision resulted in some qualifications being phased out, student numbers in these qualifications will continue to decrease. It also resulted in providers looking to increase provision in areas of greater relevance and with a higher probability of good labour market outcomes. Another third of private training establishment provision was reviewed in 2006, which had an impact on funding decisions for 2007.

The continued strong labour market is also likely to have an ongoing impact on provision at this level, with fewer students seeking study and more students likely to leave study without completing a qualification.

The second tertiary education strategy requires providers to give increased attention to progression from level 1 to 3 qualifications to higher levels of study. Increasing the progression of students aged under 20 years from levels 1 to 3 to higher levels is one of the measures that will contribute to the government's priority of increased success for young New Zealanders. Progression into level 4 and above trade, technical and professional qualifications will contribute to the priority of increasing achievement in these qualifications to meet regional and national needs. The strategy also requires a greater focus on ensuring that learners have good literacy, numeracy and language skills. This can occur both through specialised foundation education and as part of vocational qualifications.

Level 1 to 3 qualifications are the equivalent of senior secondary school education. These qualifications provide foundation skills and entry-level trade and vocational skills. The only type of qualification that can be issued at this level is a certificate. Certificates are generally used to prepare learners for employment or further education and training.

ANALYTICAL TABLES: An associated set of tables on the students in level 1 to 3 provider-based qualifications is available on the Education Counts website, Tables ENR1-40, EFT1-38, PPN1-13, PRG1-15, TTP1-2, STR1-3, COM1-36, TTA1-2, CSC1-10 and ARN1-18. Detailed technical information on the data presented here can be found in chapter 18.

STUDENTS IN FOUNDATION EDUCATION

Figure 7.1// **Students in foundation education by sub-sector**

Foundation education qualifications include those in mixed field programmes (with a focus on foundation skills), English language, English as a second or other language, and te reo and tikanga Māori.

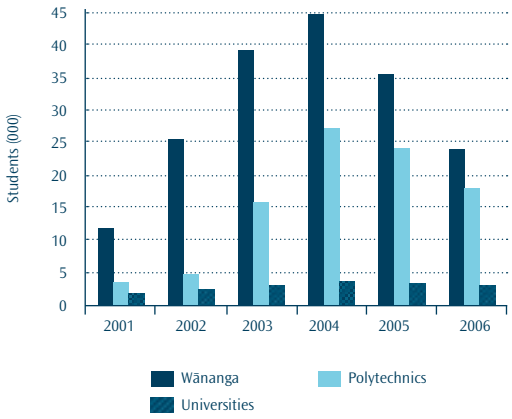
After peaking in 2004, the numbers enrolled in foundation education qualifications has decreased significantly.

This is in part due to reviews that have resulted in shifting foundation education provision away from general life skills towards more intensive, higher-quality provision.

Students in foundation education in 2006:

Total	44,900	(down 28% on 2005)
Wānanga	24,000	(down 32% on 2005)
Polytechnics	18,000	(down 25% on 2005)

Expressed as equivalent full-time students, enrolments in foundation education totalled 14,700 in 2006, down 20 percent from 2005.



THREE MAIN FOUNDATION PROGRAMMES

Sixty percent of students, and 52 percent of equivalent full-time students, were in three national programmes:

Mauri Ora, Te Wānanga o Aotearoa	(9,280 students / 3,330 equivalent full-time students)
KiwiOra, Te Wānanga o Aotearoa	(9,110 students / 2,290 equivalent full-time students)
LifeWorks, The Open Polytechnic of New Zealand	(8,450 students / 2,060 equivalent full-time students)

BACKGROUND OF FOUNDATION STUDENTS

Figure 7.2// **Students in foundation education qualifications by prior activity**

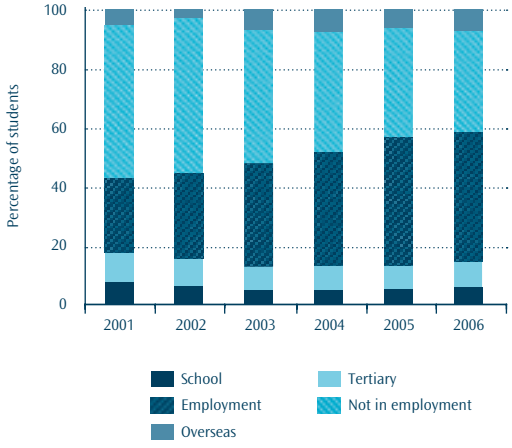
In 2006, nearly half of the students in foundation qualifications (44 percent) were employed prior to study rather than being school leavers or entering study from unemployment. This compares to 24 percent in 2001.

Background of foundation education students in 2006:

Enrolled for less than 13 weeks of equivalent full-time study	67%
No school qualifications	48%
Female	67%

Aged 25 years and over 81%, aged 40 years and over 42%.

European 38%, Māori 32%, Asian 26%, Pasifika 5.3%.



STUDENTS IN VOCATIONAL QUALIFICATIONS

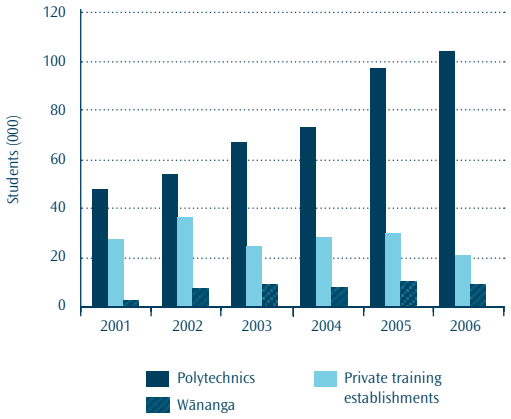
Vocational qualifications provide entry-level trade skills.[1] The number of students enrolled in vocational qualifications increased steadily from 2001 to 2005 and decreased slightly overall in 2006.

Students in vocational qualifications in 2006:

Total	139,000	(down 1.5% on 2005)
Polytechnics	104,000	(up 7.1% on 2005)
Private training establishments	21,300	(down 29% on 2005)
Wānanga	9,470	(down 12% on 2005)

Expressed as equivalent full-time students, enrolments in vocational qualifications totalled 38,800 in 2006, down 8.0 percent from 2005.

Figure 7.3// **Students in vocational certificates by sub-sector**



MORE IN SHORTER VOCATIONAL CERTIFICATES

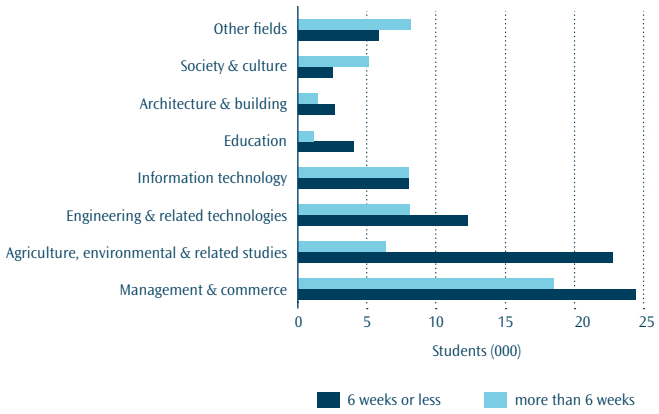
The number of students enrolled in vocational certificates for less than six full-time equivalent weeks has continued to increase. These students are concentrated in management and commerce, agriculture and transport (which is included under engineering).

Students enrolled in vocational qualifications in 2006 for:

6 weeks or less	81,200	(up 5.3% on 2005)
More than 6 weeks	57,900	(down 10% on 2005)

Note: Information in this section and Figure 7.4 is presented in terms of study in vocational level 1 to 3 certificates expressed as full-time equivalent weeks (based on a 32-week academic year).

Figure 7.4// **Students in vocational certificates by field of study and annual study load**



BACKGROUND OF VOCATIONAL STUDENTS

Background of students in vocational qualifications in 2006:

Employed in the year prior to enrolment	64%
No school qualifications	38%
Female	47%
Aged 25 years and over 75%, aged 40 years and over 41%.	
European 69%, Māori 22%. Asian 6.2%, Pasifika 6.1%.	

1. Vocational qualifications are defined here as those not classified as foundation education qualifications and described earlier in this chapter.

FEWER ENROL IN SHORT COURSES

Figure 7.5// **Students in courses of one week or less**

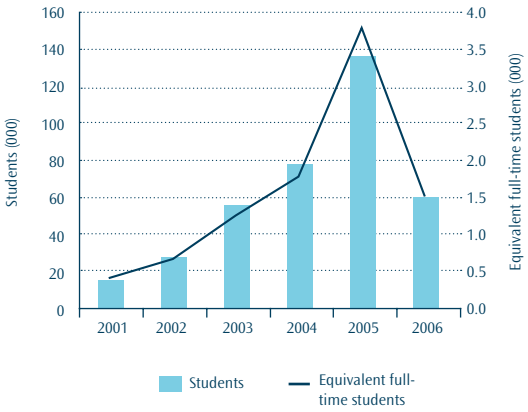
The number of students enrolling for a week or less during the year has decreased significantly, after peaking in 2005.[2] Most of the decrease was in first-aid courses, which were no longer funded by government.

Students enrolled in short courses in 2006:

Total	60,000	(down 56% on 2005)
Polytechnics		97%
Architecture and building (mostly construction site safety)		55%
Management and commerce (mostly computer use)		14%

Expressed as equivalent full-time students, enrolments in courses of a week or less totalled 1,490 in 2006, down 60 percent from 2005.

Courses were provided by all 20 polytechnics, 18 private training establishments, two wānanga, one university and one other tertiary education provider.



FEWER STUDENTS STAY TO COMPLETE[3]

Figure 7.6// **First-year retention rates in level 1 to 3 certificates by sub-sector**

The proportion of students who either complete or continue in study after a year has been decreasing since 2003 as the labour market has improved and students choose work over completing study.

First-year retention rates in 2006 (for students starting in 2005):

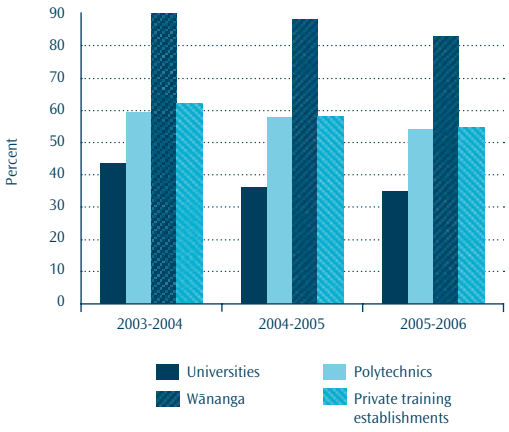
All students	59%	(down from 64% for students starting in 2004)

Wānanga had the highest rate at 83%

Women had a higher rate at 63%, compared to 54% for men.

Asian students had the highest rate at 74%, followed by Māori at 60%.

Students aged 25 to 39 years had the highest rate at 63%.



MORE QUALIFIED YOUNGER STUDENTS

Figure 7.7// **Five-year completion rates in level 1 to 3 certificates by age group**

The proportion of students completing qualifications within five years has increased. There have been notable increases for students under 25 years.

Five-year completion rates in 2006 (for students starting in 2002):

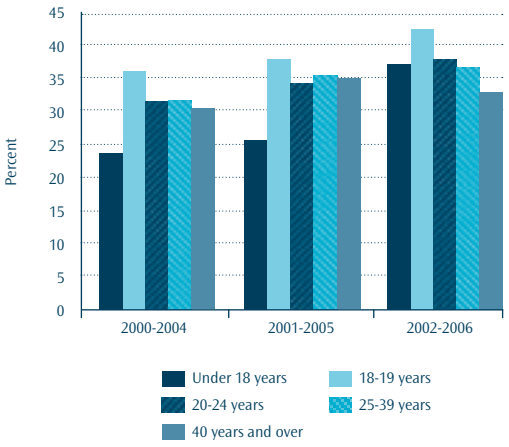
All students	36%	(up from 34% for students starting in 2001)

Universities and wānanga had the highest rate at 40%.

Women had a higher rate at 40%, compared to 31% for men.

Asian and Māori students had the highest rate at 41%.

Students aged 18 to 19 years had the highest rate at 42%.

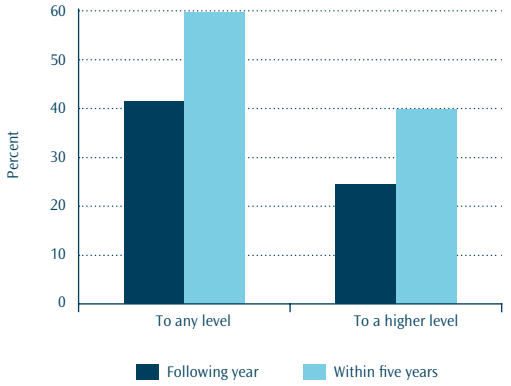


2. These include students enrolling in one-week qualifications and students enrolling for one-week courses which are provided as part of longer qualifications.
3. The following statistics on retention, completion and progression cover all provider-based provision of level 1 to 3 certificates, excluding enrolments of one week or less.

STUDENTS GOING ON TO FURTHER STUDY

Figure 7.8// **Progression rates for students completing level 1 to 3 certificates in 2001**

Proportion of students completing a level 1 to 3 certificate in 2001 going on to further study:	
Following year at any level	42%
Within five years at any level	60%
Following year at a higher level	24%
Within five years at a higher level	40%



FEWER GOING DIRECTLY TO HIGHER LEVELS

Figure 7.9// **Direct higher-level progression rates for students completing level 1 to 3 certificates by sub-sector**

The proportion of students moving on to higher-level study the year after completing a level 1 to 3 certificate is decreasing overall. The rates are increasing for students completing at universities and decreasing for those completing at polytechnics.

Direct higher-level progression rates in 2006 (for students who completed in 2005):

All students 18% (down from 22% for students who completed in 2004)

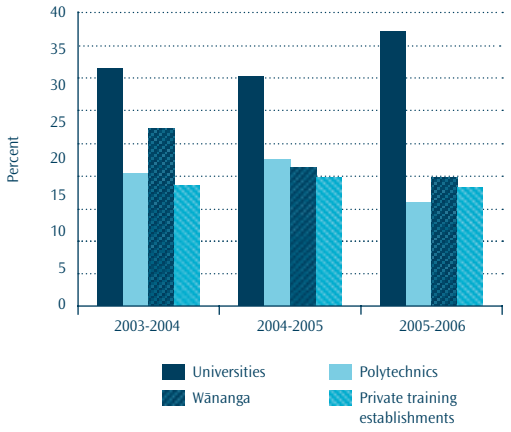
Universities had the highest rate at 42%.

Women had a higher rate at 21%, compared to 14% for men.

Māori had the highest rate at 25%, followed by Pasifika at 20%.

Students aged 18 to 19 years had the highest rate at 33%.

An in-depth study of the pathways and progression to further education of students in level 1 to 3 certificates is provided later on in this chapter.



MOVING TO HIGHER LEVELS OVER FIVE YEARS

Figure 7.10// **Five-year higher-level progression rates for students completing level 1 to 3 certificates by age group**

The proportion of students moving on to higher-level study within five years of completing a level 1 to 3 certificate has remained fairly steady.

Five-year higher-level progression rates in 2006 (for students who competed in 2001):

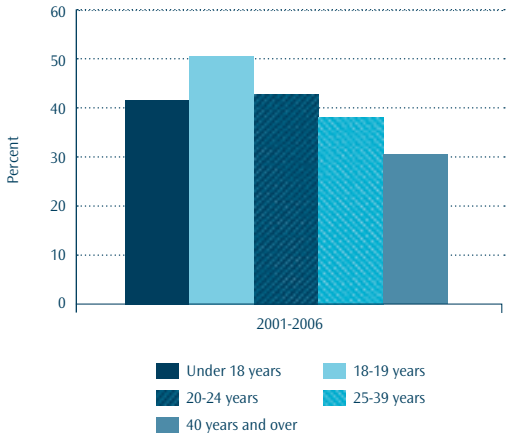
All students 40% (up from 39% for students who completed in 2001)

Wānanga had the highest rate at 66%.

Women had a higher rate at 42%, compared to 36% for men.

Māori had the highest rate at 45%, followed by Asian students at 41%.

Students aged 18 to 19 years had the highest rate at 51%.



TRAINING OPPORTUNITIES NUMBERS

Training Opportunities is a full-time, fully funded labour market programme providing foundation and vocational skills training to people who are disadvantaged in terms of employment and educational achievement.

The number of trainees in Training Opportunities fell over the period from 2001 to 2005 as unemployment fell. In 2006, the number of learners in Training Opportunities increased.

Trainees in 2006:

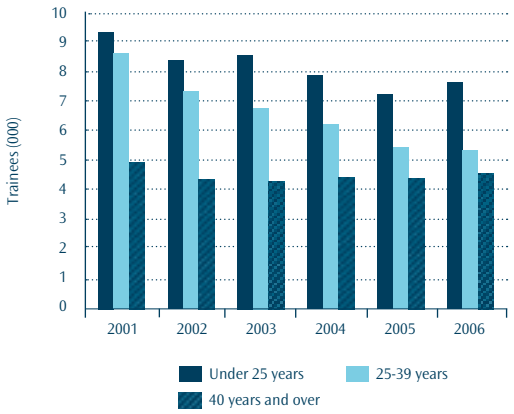
Total	17,000	(up 3.2% on 2005)

Māori 41%, European 36%, Pasifika 11%, Asian 5.8%.

Women 52%.

Aged 18 to 24 years 42%, aged 25 to 39 years 31%, aged 40 years and over 26%.

Figure 7.11// **Trainees in Training Opportunities by age group**



CREDITS GAINED IN TRAINING OPPORTUNITIES

The proportion of trainees attaining credits on the National Qualifications Framework through training opportunities has increased slightly.

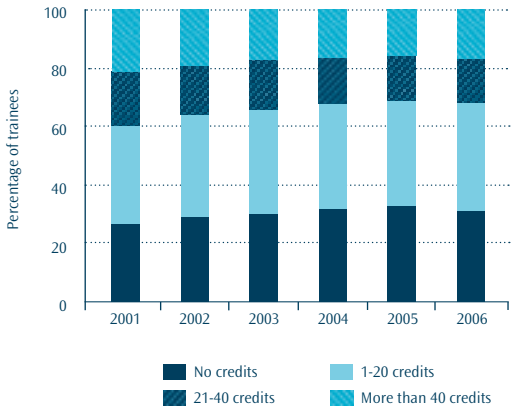
Credits gained in Training Opportunities in 2006:

No credits	31%	(down from 33% in 2005)
1-20 credits	37%	(up from 36% in 2005)
More than 20 credits	32%	(up from 31% in 2005)

Asian trainees were more likely than other trainees to gain 20 or more credits and less likely to gain none.

Women were more likely than men to gain 20 or more credits and less likely to gain none.

Figure 7.12// **Credits gained by trainees in Training Opportunities**



OUTCOMES OF TRAINING OPPORTUNITIES

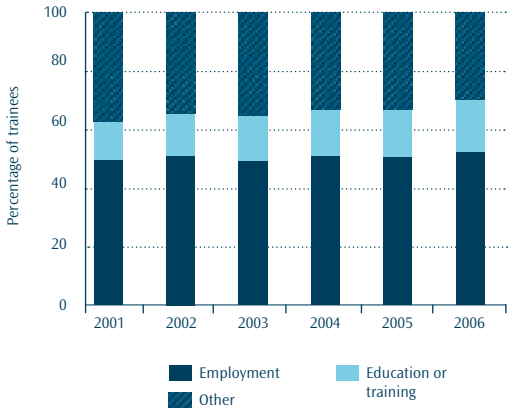
An increased proportion of trainees went on to employment or further education and training within two months of finishing their course.

Outcomes of Training Opportunities programmes in 2006:

To employment	52%	(up from 50% in 2005)
To education or training	18%	(up from 16% in 2005)

European trainees were more likely to move to employment and Asian trainees were more likely to move to further education than trainees in other ethnic groups. Men were more likely than women to move to employment and less likely to move to further education.

Figure 7.13// **Outcome achieved by trainees in Training Opportunities**



YOUTH TRAINING

Youth training provides full-time, fully funded foundation and vocational skills training to young people who have left school with no or very few qualifications.

The number of trainees in Youth Training continued to decrease in 2006, in response to continued falls in the unemployment rate.

Learners in Youth Training in 2006:

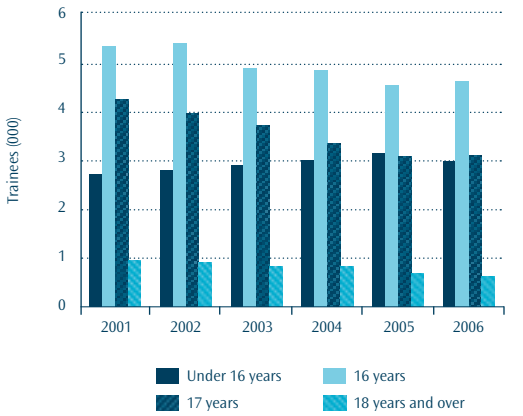
Total	11,000	(down 0.8% on 2005)

Māori 46%, European 40%, Pasifika 11%, Asian 1.2%.

Female 55%.

Aged under 16 years 26%, aged 16 years 41%, aged 17 years 27%, aged 18 years and older 5.5%.

Figure 7.14// **Trainees in Youth Training by age group**



CREDITS GAINED IN YOUTH TRAINING

The proportion of youth trainees gaining 20 or more credits on the National Qualifications Framework has increased, while the proportion gaining none has decreased.

Credits gained in Youth Training in 2006:

No credits	26%	(down from 30% in 2005)
1-20 credits	41%	(up from 40% in 2005)
More than 20 credits	33%	(up from 30% in 2005)

Pasifika trainees were less likely than other trainees to gain 20 or more credits.

Females were more likely than males to gain 20 or more credits.

Figure 7.15// **Credits gained by trainees in Youth Training**

OUTCOMES OF YOUTH TRAINING

An increased proportion of trainees went on to employment or further education and training within two months of finishing their course.

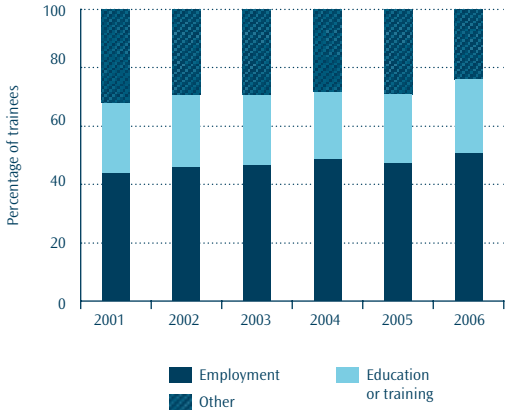
Outcome achieved in Youth Training in 2006:

To employment	51%	(up from 47% in 2005)
To education or training	25%	(up from 23% in 2005)

European trainees were more likely to move to employment than other trainees and Asian trainees were more likely to move to further education.

Males were more likely than females to move to employment but less likely to move to further education.

Figure 7.16// **Outcome achieved by trainees in Youth Training**



SECONDARY-TERTIARY ALIGNMENT RESOURCE

The Secondary-Tertiary Alignment Resource (STAR) assists schools to meet the needs of their senior secondary students by providing funding to access a wide range of courses that provide greater learning opportunities. Courses can be work-based and/or lead towards credits on the National Qualifications Framework. Funding can be used to purchase courses from tertiary education providers or to help schools provide courses themselves.

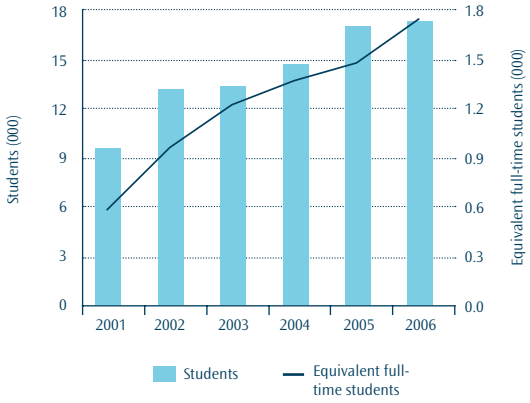
The number of students enrolled in STAR-funded courses at tertiary education providers continues to increase and students are enrolling for longer periods.

STAR students in 2006 at tertiary education providers:

Total	17,200	(up 1.7% on 2005)

Expressed as equivalent full-time students, secondary school students in STAR-funded courses totalled 1,720 in 2006, up 18 percent on 2005.

Figure 7.17// **Students in STAR courses at tertiary education providers**



STAR PROVIDERS AND FIELDS OF STUDY

STAR students in 2006:

At 19 polytechnics	83%
At 10 private training establishments	18%
At 4 universities	3.1%
In food, hospitality and personal services courses	24%
In engineering and related technologies courses	21%
In management and commerce courses	19%

STAR students represented 11% of senior secondary school students (year 11 and over).

Note: Students are counted in each type of programme they enrol in, so the sum of components will not add

See also Gateway – chapter 6.

IMPROVING THE RELEVANCE OF TERTIARY EDUCATION PROVISION

One of the key aims of the Tertiary Education Strategy 2002-07 and associated reforms was to increase the alignment between tertiary education provision and New Zealand's broad economic, social, cultural and environmental goals.

In November 2004, the government asked the Tertiary Education Commission to identify areas to review where there may be qualifications of low relevance in terms of the national goals as set out in the tertiary education strategy. Relevance refers to the degree to which qualifications contribute to the current and future skill, knowledge and development needs of New Zealand's communities, regions and industries.

The Tertiary Education Commission identified four areas of provision for review in 2005:

- non-degree qualifications with a majority of courses classified in funding categories A1 (non-degree arts, social sciences and general education) and J1 (non-degree business and law education)
- private training establishment provision – one-third of this provision was reviewed in 2005, focusing on the four largest areas of provision in terms of the number of equivalent full-time students: tourism, business and management, philosophy and religion and personal services (including hairdressing, beautician and cosmetics)
- dive-related provision, and
- trades-related training where there may be overlaps in provision by industry training organisations and institutes of technology and polytechnics.

The reviews were undertaken in 2005. The first three directly influenced funding decisions for 2006. The review of overlapping trades provision resulted in an agreement between industry training organisations and institutes of technology and polytechnics. This agreement set out common principles to guide providers and industry training organisations on how to work together to meet the needs of industry without creating undesirable competition and duplication. Overlapping provision is being looked at again in the context of the new roles of organisations in the current tertiary education reforms.

In 2004 and 2005, the government also made changes to funding policy in the areas of adult and community education in tertiary education institutions and short awards.

Funding for adult and community education in institutions was reduced and capped for the period 2004 to 2006, and a reduced per-student funding rate introduced. In 2006, funding was transferred from the Student Component Fund and ring-fenced within the Adult and Community Education Funding Pool for allocation to institutions. From 2007, funding for all adult and community education provision will be allocated through this single pool of funding.

Funding for short awards, qualifications of fewer than 40 credits, was capped at $22.8 million for 2006 and ring-fenced within student-component funding.

This article looks at the overall impact of the first three of the above reviews and the changes to adult and community education and short awards in terms of the distribution of provision in 2006. The impact of the reviews and policy changes is assessed in terms of the changes in the overall shape and distribution of provision following the review or policy change. Changes in the distribution of students by age, gender and ethnic group are also examined. However, there will be other factors that also influenced these changes, such as the improving labour market, changes in demand for particular areas of education and other reorganisations of provision within providers.

Review of A1 and J1 funding categories

A1 and J1 refer to course funding categories that cover non-degree provision in 'arts, social sciences and general education' and 'business and law education'. From the period from 2001 to 2005, there was considerable growth of provision in this area. There were suggestions that some of this provision could be of low relevance and/or poor quality. The review set out to ensure that provision in these categories would be of good quality, relevant and value for money.

In order to be manageable, the review of A1 and J1 provision focused on qualifications that had:

- high growth – as qualifications that are growing rapidly are likely to face greater challenges in maintaining quality teaching
- low or no fees – since low or no fee courses may be subject to less scrutiny from students (who have invested less personally)

- large components of self-directed learning, and
- generated a high level of public interest or comment.

Areas for review were initially identified by the Tertiary Education Commission through data analysis and then discussed with providers. Providers with qualifications within the scope of the review were required to provide evidence to demonstrate the strategic relevance. The evidence was then assessed by the commission and decisions made on funding for 2006.

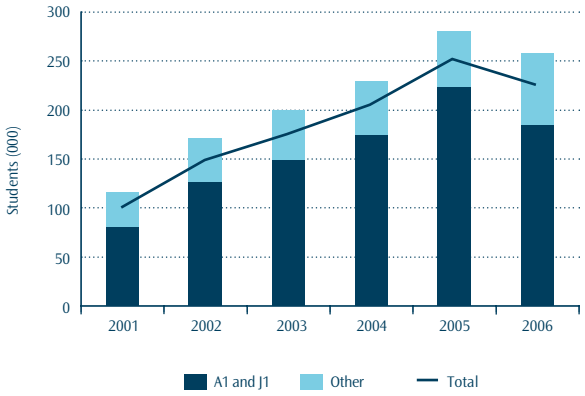
Student component-funded provision through private training establishments, within adult and community education and short awards were excluded from the review as these areas were subject to other reviews and policy changes.

Overall effect of the review for 2006

Following the review, 2006 has seen a decrease in the total number of students and equivalent full-time students[4] in A1- and J1-funded courses, while the number of students and equivalent full-time students in courses from other non-degree funding categories has increased. It should be noted that as of 2006, the effects of the review decisions are only partly evident, in that there were several qualifications where it was decided that no new students should be enrolled but existing students could continue to be funded. Conversely, areas recommended for development may take several years to gain new students. In addition, it is difficult to identify exact points of cause and effect for enrolment shifts as some of the changes may have happened anyway. The full effect of the review will be more apparent over a period of two or three years.

From 2001 to 2005, the number of students enrolled in courses in the A1 and J1 funding categories increased by 175 percent, while the number of students in other non-degree funding categories increased by only 62 percent. The growth in A1 and J1 courses was driven by a few qualifications with very large numbers of students. By 2005, students in courses in the A1 and J1 categories made up 89 percent of students in non-degree funding categories.[5]

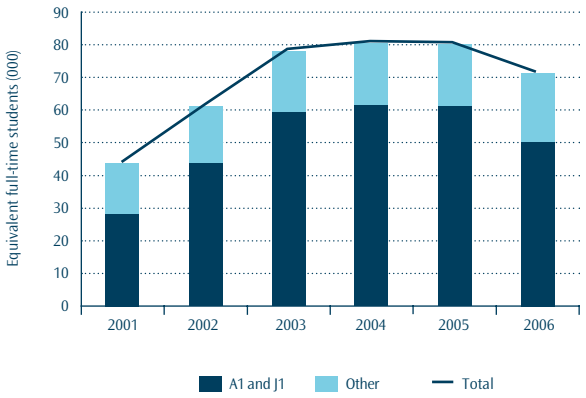
Figure 7.18 // Students in non-degree courses in tertiary education institutions by funding category



The number of equivalent full-time students in A1 and J1 courses grew by 111 percent from 2001 to 2003, while the number in other non-degree courses grew by only 22 percent. From 2003 to 2005 the number of equivalent full-time students for A1 and J1 and other non-degree courses remained steady, as policies for managing growth were put into place. Students in A1 and J1 courses made up 77 percent of equivalent full-time students in 2005.

4. Throughout this article, 'equivalent full-time students' refers to the number of students enrolled, rather than the number of students funded. In several areas, enrolment values are manually adjusted by the Tertiary Education Commission to come in line with funding and growth caps in order to calculate the amount that is eligible for funding.
5. This analysis covers non-degree courses funded from the student component in tertiary education institutions, excluding adult and community education and short awards. Private training establishments have been excluded as they were not within the scope of this review.

Figure 7.19 // Equivalent full-time students in non-degree courses in tertiary education institutions by funding category



Following the reviews there has been an apparent shift in provision. The number of students enrolled in A1 and J1 courses decreased by 17 percent, while the number of students enrolled in other non-degree courses increased by 30 percent. In 2006, students in A1 and J1 courses made up 82 percent of students in non-degree funding categories. The number of equivalent full-time students in A1 and J1 courses decreased by 18 percent, while in other courses these increased by 12 percent. In 2006, students in A1 and J1 courses made up 70 percent of equivalent full-time students.

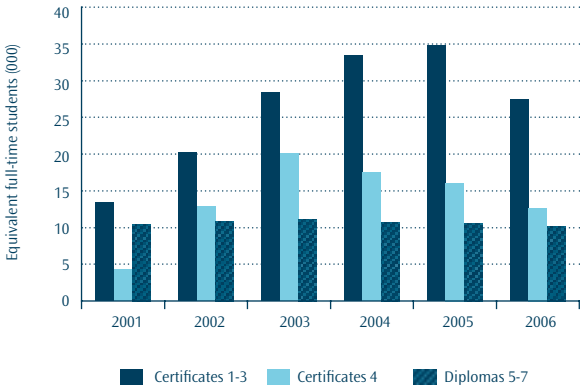
Changes within the A1 and J1 categories for 2006

Following the review there was a reduction in the equivalent full-time student count in low-level, generic courses and in areas of high growth. The main reductions have been in certificate-level qualifications in mixed field programmes, management and commerce and society and culture. A recent report of people's earnings in the years following tertiary study showed study at this level and in these areas to have quite low benefits to individuals in terms of income gain (Nair 2007).

The impact of the changes has been fairly even across age and ethnic groups. However, the changes have resulted in greater decreases in the number of women enrolled in courses in these categories than the number of men.

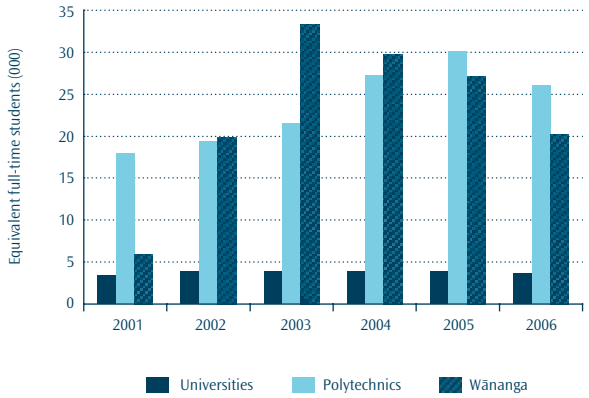
More than half of the equivalent full-time students in the A1- and J1-funded courses have been in courses contributing to level 1 to 3 certificates. Equivalent full-time students at this level had been steadily growing since 2001. This level had the largest decrease in equivalent full-time students following the reviews, of 21 percent. Equivalent full-time students in level 4 certificates grew from 2001 to 2003 and then decreased, and continued to decrease in 2006. The equivalent full-time student count at diploma level has remained fairly steady and was not affected by the review.

Figure 7.20 // Equivalent full-time students in A1 and J1 courses by level of qualification



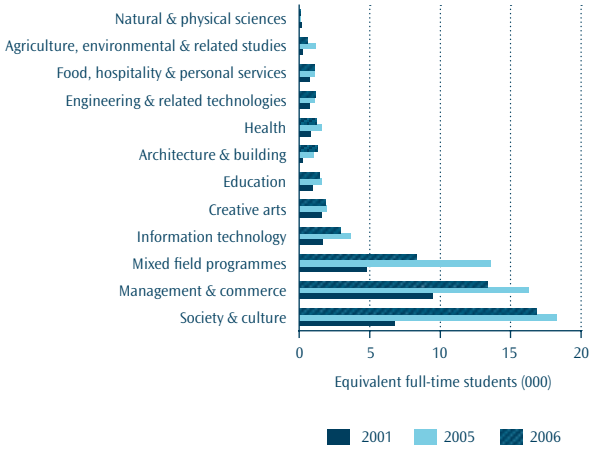
Courses in the A1 and J1 categories are mostly delivered through polytechnics and wānanga. The number of equivalent full-time students at wānanga peaked in 2003 and declined somewhat in 2004 and 2005. In 2006, there was a greater decrease following the review. This decline also resulted from reorganisation of provision within the wānanga. At polytechnics, equivalent full-time students grew steadily from 2001 to 2005 and then decreased by 14 percent in 2006. Equivalent full-time students at universities have remained steady and overall numbers were unaffected following the review.

Figure 7.21 // Equivalent full-time students in A1 and J1 courses by sub-sector



Most of the A1- and J1-funded courses are within qualifications in the fields of society and culture, management and commerce, and mixed field programmes. However, they are also included in qualifications across other fields of study. From 2001 to 2005, the greatest growth in equivalent full-time students was in qualifications in mixed field programmes and society and culture. Equivalent full-time students in all three fields decreased in 2006, with the largest decrease being in mixed field programmes. Mixed field programmes covers qualifications in social skills, life skills and employment skills, including some literacy and numeracy.

Figure 7.22 // Equivalent full-time students in A1 and J1 courses by qualification field of study



From 2001 to 2004, the number of women in A1- and J1-funded courses increased faster than the number of men. In 2005, there was a jump in the number of men in these courses. From 2005 to 2006, the number of women has decreased notably, while the number of men has decreased only slightly.

Figure 7.23 // Students in A1 and J1 courses by gender

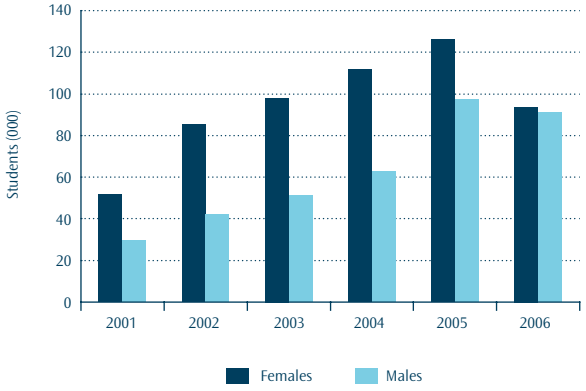
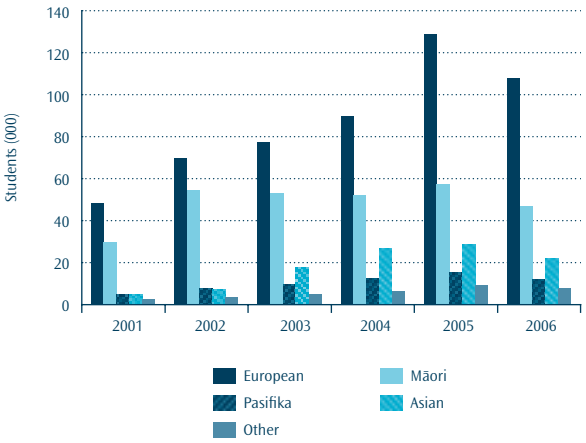


Figure 7.24 // Students in A1 and J1 courses by ethnic group



From 2001 to 2005, the main growth in enrolments in A1 and J1 courses by age group was in students aged 25 years and over. In 2005, students aged 25 years and over made up 74 percent of students in these courses. From 2005 to 2006, there has been a fairly even proportional decrease across age groups, so that those aged 25 years and over represented 75 percent of students in 2006.

The largest growth in the number enrolments in A1 and J1 courses by ethnic group was in European students, while the largest proportional growth was in Asian and Pasifika students. From 2005 to 2006, there have been fairly even proportional decreases across ethnic groups.

Review of private training establishments' provision

The 2005 review of private training establishment provision was the first of three annual reviews each examining one-third of student component-funded qualifications within private training establishments. The purpose of the reviews was to shift funding from areas of low relevance to areas of high relevance in the context of operating a capped fund for student component-funded private training establishments. The 2005 review examined qualifications in the areas of personal services, tourism, business and management, and philosophy and religion. These were selected on the basis of being the four largest areas of private training establishments' provision by equivalent full-time student volume.

The primary aim of the review was to ensure that student component-funded private training establishment provision is well performing and relevant; meets the educational needs of students and the needs of stakeholders such as industry; complements existing provision by public tertiary education institutions; and builds on the strengths of establishments. The establishments were required to submit evidence to demonstrate that the qualifications under review:

- met a demonstrated need, which could include employment and economic outcomes, Māori development, Pasifika development, and/or social, community, environmental or cultural development

- were achieving graduate outcomes consistent with the approved course statement or programme document
- could demonstrate performance in terms of participation and completion of qualifications, and
- established a point of difference and augmented or complemented similar qualifications provided by the public tertiary education institutions in the same area.

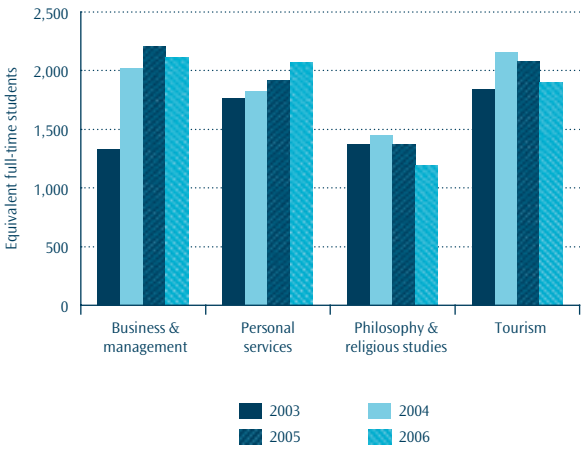
It is intended that the three annual reviews will assist the sector's transition to the 'investing in a plan' process. Any funding released as a result of these reviews will be made available for redistribution to higher relevance provision at establishments.

Impact of the review

As the focus of this review was on assessing the relevance and performance of provision and redistributing funding within the private training establishment student component funding pool, it had a fairly small effect on the overall amount of provision. The areas under review in 2005 had experienced considerable growth over the period from 2003 to 2005 – 20 percent in equivalent full-time student terms. Over the same period the other two-thirds of private training establishment provision had grown by only 4.6 percent. Following the review, the areas under review decreased by 4.0 percent. However, other areas of private training establishment provision also decreased in equivalent full-time student terms by 2.0 percent. Therefore, it is difficult to judge if the decrease in provision is a response to the review or to an overall decrease in demand for privately provided tertiary education.

Looking at the four areas that were reviewed, there are quite different patterns of change before and after the review. Business and management decreased in equivalent full-time student terms after a period of considerable growth. Personal services continued to grow. Philosophy and religious studies and tourism continued to decrease.

Figure 7.25 // Equivalent full-time students in areas of private training establishment provision reviewed in 2005



There have been no significant changes in the distribution of enrolments by level of qualification or by age, gender and ethnicity following the review.

The main result of the review has been to set benchmarks for quality provision that are agreed between the Tertiary Education Commission and private training establishments. This has set the basis for ongoing decisions for strengthening provision. A number of private training establishments have entered into improvement plans. Many are giving closer attention to aspects of quality that previously had not been greatly focused on. In several cases, qualifications have been withdrawn and new qualifications are being developed.

Review of dive-related provision

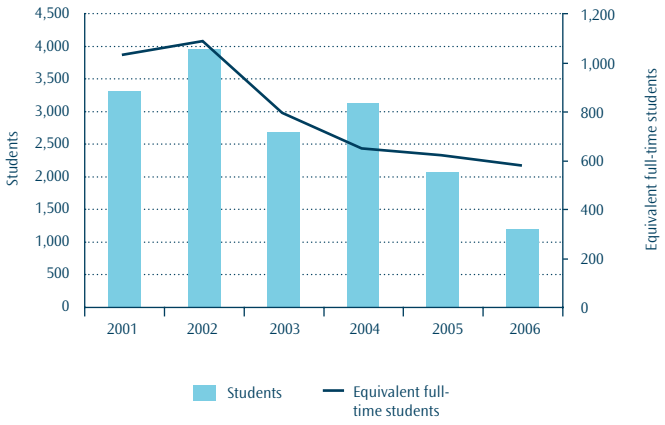
Dive qualifications were identified as an example of broadly vocational education that had not always had good employment outcomes. The purpose of the review was to ensure a better match between the level of funded dive education and current and expected demand for dive skills in the labour force. The review examined the volume and type of provision and evidence of need in the labour market for the qualifications.

Impact of the review

The number of students and equivalent full-time students in dive-related provision had been decreasing overall since 2002. However, in 2004 there had been an increase in the number of students, while the number of equivalent full-time students continued to fall. Following the review, the number of equivalent full-time students in dive-related provision decreased by 6.8 percent, while the number of students decreased by 42 percent. This indicates a shift from part-time, often recreationally focused, provision to full-time provision that is more likely to be vocationally focused.

Out of the 18 qualifications that had been funded in 2005, five had no students enrolled in 2006, nine had a decrease in equivalent full-time students and four had an increase in equivalent full-time students.

Figure 7.26 // Students in dive-related qualifications



Adult and community education through tertiary education institutions

In response to rapid growth in adult and community education provision through tertiary education institutions and the need to fund other higher priority areas, the government made a series of policy changes. In 2004, a cap was introduced on funding for the 2004 to 2006 period which represented approximately a 30 percent reduction in funding over this period. The per-student funding rate was also reduced from $5,700 to $5,000 per equivalent full-time student for 2005. In 2005, funding for adult education in institutions was further reduced and transferred from the Student Component Fund to a ring-fenced fund within the Adult and Community Education Funding Pool of $35.6 million for that year only. From 2007 onwards, the funding available to support adult education in institutions will further reduce to $17.8 million, and institutions will be in a common Adult and Community Education Funding Pool with other providers. The total value of the pool in 2007 is $40.3 million.

Over the period since 2005, tertiary education institutions have been required to bring their provision in line with the national adult and community education priorities of:

- targeting learners whose initial learning was not successful
- strengthening social cohesion
- raising foundation skills
- encouraging lifelong learning, and
- strengthening communities by meeting identified community learning needs.

Impact of the changes

The policy changes have led to a dramatic reduction in the number of adult and community education students enrolling in tertiary education institutions, bringing it back down to around 2001 levels in 2006. The largest reductions have been at polytechnics and in the field of 'office studies'. The effects of the reductions have differed across student groups, so that the proportion of Asian and Pasifika adult and community education students has increased, as has the proportion of women, while the proportion aged 24 to 39 years has decreased.

From 2001 to 2004, the number of students in adult and community education at tertiary education institutions increased by 230 percent to nearly 280,000 students, and equivalent full-time students increased by 250 percent to around 20,000. There were significant decreases in 2005 and 2006 in the number of students, and in terms of equivalent full-time students, as the new policy was implemented. From 2004 to 2006, the number of students has decreased by 63 percent to just over 100,000 and the number of equivalent full-time students by 67 percent to 6,300. Provision in 2006 was at a similar level to the provision in 2001.

Figure 7.27 // Students in adult and community education at tertiary education institutions

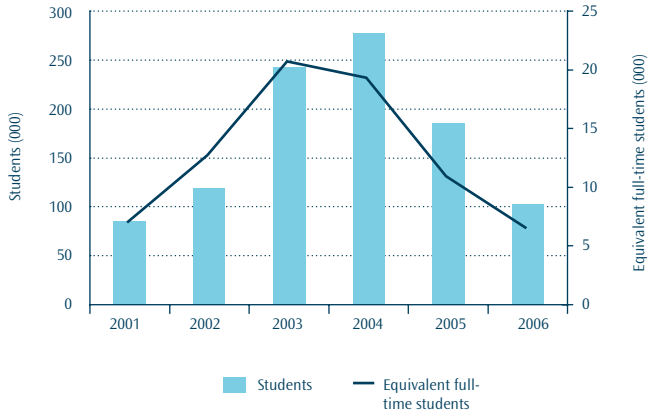
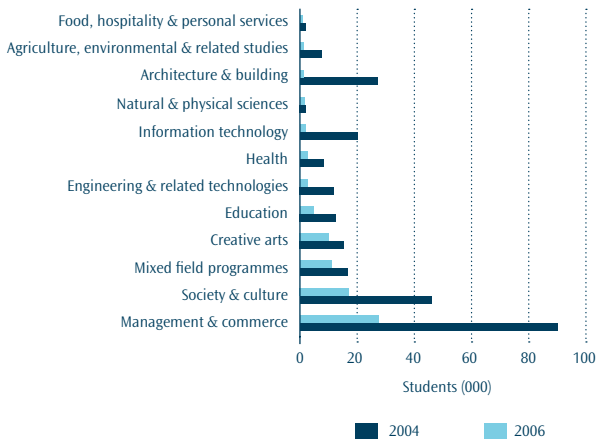


Figure 7.28 // Students in adult and community education at tertiary education institutions by largest 12 subject areas



The largest decrease in student numbers was at polytechnics, which had 84 percent of adult and community education students in 2004. The number of students at polytechnics decreased by 69 percent from 2004 to 2006, so that by 2006 their share of adult and community education students had decreased to 70 percent. There was a similar proportional decrease at wānanga of 67 percent. However, only one of the three wānanga was offering substantial provision in this area. The number of students at universities decreased by 23 percent.

The subject area with the largest decrease in students was office studies, which included introductory computer application courses. The number of students in office studies decreased from 86,000 in 2004 to 24,800 in 2006.

From 2004 to 2006, the number of European and Māori students in adult and community education courses decreased by the same proportion, 63 percent. There were smaller proportional decreases for Pasifika and Asian students of 58 percent and 47 percent, respectively. This means that Pasifika and Asian students as a proportion of adult and community education students increased from 4.5 and 4.7 percent to 5.0 and 6.6 percent, respectively.

The number of men enrolled in adult and community education courses decreased by 67 percent from 2004 to 2006, while the number of women decreased by only 60 percent. This resulted in an increased proportion of women in adult education courses of 60 percent in 2006, compared to 55 percent in 2004. There were fairly even decreases across age groups, with the exception of 25 to 39 year-olds, where the decrease from 2002 to 2004 was 66 percent, compared to 63 percent overall.

Short awards

Short awards are qualifications of fewer than 40 credits.[6] A one-year, full-time course is worth 120 credits. Private training establishments are ineligible for student component funding for short awards, unless they are recognised as 'other tertiary education providers' under section 321 of the Education Act 1989. This means that short awards are only funded at the public tertiary education institutions and the 11 other tertiary education providers.

6. For the purposes of this analysis, short awards are classified as those with 40 credits or fewer, or an equivalent full-time student value of less than 0.3, where the credit points were not recorded. This is the equivalent of around 10 to 12 weeks' full-time study. In 2006, the new 5.3 short awards funding category was used to identify enrolments.

The awards generally focus on specific areas of vocational skill and are mostly offered at certificate level. From 2002 to 2003 there was sudden growth in the number of students and equivalent full-time students in short awards, particularly in the provision of first-aid training. There was also concern that restrictions on adult and community education funding could lead to providers shifting courses into short awards.

From 2006, funding for short awards was capped at $22.8 million (excluding goods and services tax) and ring-fenced within the Student Component Fund. First-aid and public sector knowledge short-awards were no longer eligible for funding as stand-alone qualifications. These decisions reflected the role of tertiary education funding rather than the value of these courses.

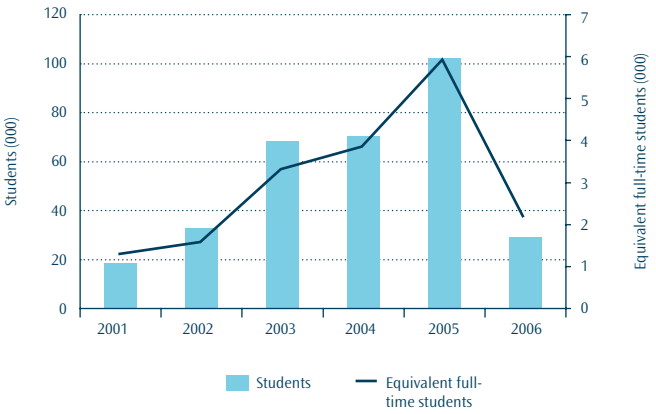
Impact of the changes

The policy change has led to a dramatic drop in the number of students and equivalent full-time students in short awards in 2006, bringing provision back to around 2002 levels. The largest reductions have been in courses of less than two weeks' full-time equivalent study and in the area of health, particularly first-aid courses. The largest reductions have been at polytechnics and in level 1 to 3 certificates.

From 2002 to 2003, the number of equivalent full-time students in short awards more than doubled from 1,530 to 3,260, and the number of students enrolling increased from 32,800 to 68,230. From 2003 to 2004, equivalent full-time students increased by a smaller amount, while student numbers remained about the same. In 2005 there was a further increase in both equivalent full-time students and student numbers, peaking at 5,880 and 102,000, respectively.

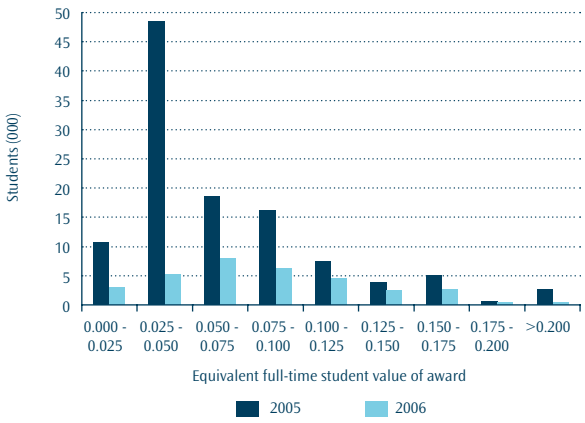
The funding limits introduced in 2006 have resulted in a major reduction in equivalent full-time students and in students, bringing numbers down to levels similar to 2002. Equivalent full-time students dropped by 64 percent to 2,140 and student numbers dropped by 72 percent to 29,100.

Figure 7.29 // Students and equivalent full-time students in short awards



The most significant impact of the policy change has been to drastically reduce the number of students enrolled in awards of less than two weeks' full-time equivalent study. In 2003, enrolments in awards of less than two weeks' full-time equivalent study accounted for 58 percent of enrolments in short awards. In 2006, the proportion decreased to 28 percent.

Figure 7.30 // Students in short awards by the equivalent full-time student value

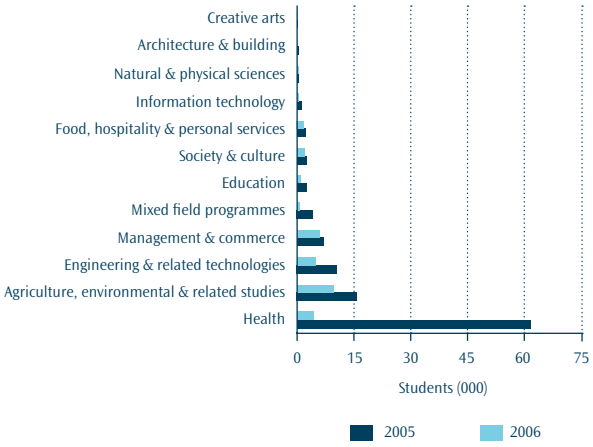


A large proportion of the decrease in enrolments was in health-related courses, which were mostly first-aid certificates. Enrolments in the field of health decreased from 61,500 in 2005 to 4,300 in 2006. There were more moderate decreases across other fields of study.

In 2005, 97 percent of students enrolled in short awards were at polytechnics. The number of students at polytechnics decreased by 73 percent from 2005 to 2006, compared to decreases of around 50 percent for universities and wānanga. As a result, the proportion of students in short awards enrolled at polytechnics dropped to 92 percent in 2006.

In 2005, 94 percent of students in short awards were enrolled in level 1 to 3 certificates. From 2005 to 2006, the number of students at this level decreased by 73 percent, while the numbers at higher levels decreased by less than 50 percent. As a result, the proportion of students in short awards enrolled in level 1 to 3 certificates dropped to 88 percent in 2006.

Figure 7.31 // Students in short awards by field of study



There was a slightly disproportionate decrease in the number of females enrolled in short awards. In 2005, 49 percent of students in short awards were female. The number of females decreased by 77 percent from 2005 to 2006, while the number of males decreased by 67 percent. This resulted in the proportion of females decreasing to 41 percent in 2006.

The decreases were also weighted more towards students aged under 40 years. In 2005, 54 percent of students in short awards were aged under 40 years. The number of students under 40 years decreased by 75 percent from 2005 to 2006, compared to a decrease of 67 percent for students aged 40 years and over. This resulted in the proportion of students aged under 40 years decreasing to 47 percent in 2006.

The proportional decreases were fairly even across ethnic groups.

WHERE TO FROM LEVEL 1 TO 3 CERTIFICATES?

The year 2002 marked the start of considerable growth in enrolments in level 1 to 3 certificates. This article examines the educational outcomes of students who enrolled in level 1 to 3 certificates funded through the student component.

In this article, a cohort of students whose first enrolment in 2002 was in a student component-funded level 1 to 3 certificate is examined in terms of further study and qualification completion in the period to 2006. Further study included all formal tertiary study, including industry training and study funded from other sources, such as targeted training programmes. Further study was counted whether or not students completed the level 1 to 3 certificates they first enrolled in.

This article presents descriptive data on the proportions of students in various groups progressing to further study. This is underpinned with commentary based on logistic regression models that examined which factors had the most influence on the students' progression. The purpose of these models is to confirm the degree to which progression was related to the factor under consideration, or whether it was influenced by other factors. Both progression to a higher level and progression to diploma or degree studies were considered. The models were run with and without completion of the level 1 to 3 certificate in which the student had first enrolled, to judge the effect of this on progression. The factors are presented here in order of importance for progression to higher-level study.[7]

As with most studies looking at factors influencing success in tertiary education, the explanatory power of information recorded through the enrolment process is fairly low.[8] This suggests there is a range of other factors that influence decisions to carry on in study beyond those discussed in this article. One of the most important is likely to be the purpose for which students are engaging in study at this level.

Not included in this study were students in targeted training and industry training. Additionally, students who started the year in a higher-level programme or were concurrently enrolled in a higher-level programme were also excluded from this study. This exclusion removed a group of students, enrolled in higher-level qualifications, who were enrolled in level 1 to 3 certificates to attain additional skills in areas such as computing.

Level 1 to 3 students in 2002

In 2002, there were 86,000 students whose first enrolment in the year was in a level 1 to 3 certificate. Eighty percent of them were enrolled in vocational certificates and 20 percent in foundation education qualifications.[9] Forty-one percent of the students in vocational courses, and 46 percent of those in foundation courses, were enrolling in tertiary education for the first time.

The vocational students were mostly enrolled with polytechnics (52 percent) and private training establishments (37 percent). The majority of foundation students (69 percent) were enrolled with wānanga. Around 15 percent of vocational students enrolled extramurally. However, 72 percent of foundation students were in extramural programmes, mostly through the wānanga.

Twenty percent of vocational students were under 20 years of age and 13 percent entered tertiary study directly from school. Only 10 percent of foundation students were aged under 20 years and 6.4 percent entered straight from school. The majority of vocational students (54 percent) were employed prior to study. The majority of foundation students (52 percent) were unemployed or not in the labour market prior to study.

Vocational students were fairly evenly split between men and women, whereas 75 percent of foundation students were women. Among vocational students, European students made up 68 percent of students and Māori 22 percent. Among foundation students, Māori made up 61 percent of students – perhaps reflecting the dominance of the wānanga in provision of this type – and European 31 percent. Pasifika students made up 8.4 percent of foundation students and 7.8 percent of vocational students.

The largest numbers of vocational students were enrolled in the fields of management and commerce and information technology. These areas included courses on the use of computers. Women made up a greater proportion of students in these fields of study. The next largest field of study was engineering and related technologies, where the majority of students were men.

Key findings

Most students who studied a level 1 to 3 certificate in 2002 either left and did no further study or continued and progressed to a higher level by 2006. There was only a very small proportion who continued

7. Importance is estimated by the Wald Chi-square for the factor as a proportion of the total Wald Chi-square for the model. The order was taken from the models for progression to a higher level, which did not include completion of the first level 1 to 3 certificate.
8. The R-squared values for the models were in the range of 14 to 17 percent for vocational students and 19 to 23 percent for foundation students.
9. See the highlights in chapter 7 for definitions of vocational and foundation education qualifications.

studying at levels 1 to 3 without progressing to a higher level within the next four years. This finding dispels the idea of there being considerable recirculation of students in level 1 to 3 certificates.

The most important factor influencing progression from both vocational and foundation certificates was whether students studied full-time, full-year or not. Students who studied full-time, full-year in tertiary education in 2002 were much more likely to progress to further study, including to degree-level study.

Previous educational experience had a strong effect on a student's chance of progression. Students who had had previous tertiary enrolments were more likely to progress to higher-level study. Students with higher levels of school education were more likely to go on to degree studies. Being in school or tertiary education the previous year was also important in some cases.

The variety of pathways involved in level 1 to 3 study is evident. Students entered study from a range of different prior activities, covering school, tertiary study, employment and unemployment. Not everyone studied with the intent of progressing to higher-level study. Pathways differed among subjects, with trade subjects more often leading only as far as level 4 certificates, while other subjects provided pathways to diploma and degree study.

Completing the first level 1 to 3 certificate that students enrolled in did make a difference as to whether students were more likely to progress to higher levels of study. However, completion was by no means essential to progression, with many students who did not complete still progressing to higher levels. Students who progressed to diploma- and degree-level study tended to enrol for shorter periods at levels 1 to 3 than those who did not.

In general, students under 20 years of age were more likely to progress to higher levels of study than students aged 20 years and over. However, there were distinct differences between students who entered study under the age of 18 years and those who entered aged 18 to 19 years. The former were much less likely to go on to degree-level studies.

Māori students were more likely to go on to higher-level study than other students, even once other factors have been controlled for. Women were more likely to go on to higher levels than men. This gender difference was even stronger once other factors were controlled for.

In general, the factors influencing progression were similar for vocational and foundation qualifications. Students in foundation qualifications were more likely to go on to further study, which reflects the intent of these qualifications. This greater likelihood of progression remained, even when other factors were held constant.[10] However, the difference was not large, indicating that vocational certificates provided similarly robust pathways for study at higher levels.

Educational outcomes for vocational students

Thirty percent of students who studied vocational level 1 to 3 certificates in 2002 went on to further study at a higher level in the period to 2006. In addition, 2.6 percent of students undertook further level 1 to 3 studies but did not study at any higher level.

Two-thirds of the students who went on to higher-level study went on to study at diploma level and above, with about a third going on to study at bachelors level and above.[11] Out of the students who went on to further study:

- 38 percent studied their highest level at a polytechnic, mostly in level 4 certificates and level 5 to 7 diplomas
- 22 percent studied their highest level at a university,[12] mostly in bachelors degrees
- 17 percent studied their highest level at a private training establishment,[13] mostly in level 4 certificates and level 5 to 7 diplomas
- 13 percent studied their highest level through an industry training organisation, mostly in level 4 certificates, and
- 10 percent studied their highest level at a wānanga, mostly in level 4 certificates.

The most important factor for whether students went on to study at a higher level was whether they were full-time, full-year in tertiary education in 2002. Students who were full-time for the full year were much more likely to go on to further study at a higher level, including study at diploma and degree level, than those enrolled part-time and/or part-year. One in two full-time, full-year students went on to higher-level study, compared to only one in four of other students.

10. This conclusion is based on a final set of two models run for all students, with type of qualifications (vocational or foundation) included in place of field of study.
11. Level of progression here refers to the highest level of study undertaken in the period 2002 to 2006.
12. Colleges of education have been included with universities for this study, as the remaining four of them were merged or merging with universities over the time period.
13. Other tertiary education providers have been included with private training establishments.

Figure 7.32 // Proportion of vocational students going on to further study by study status in 2002 and highest level studied

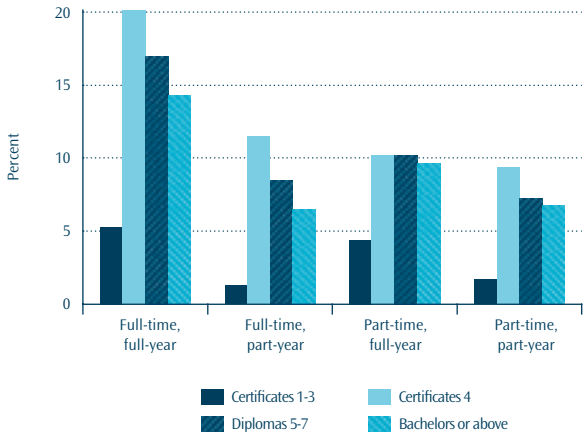
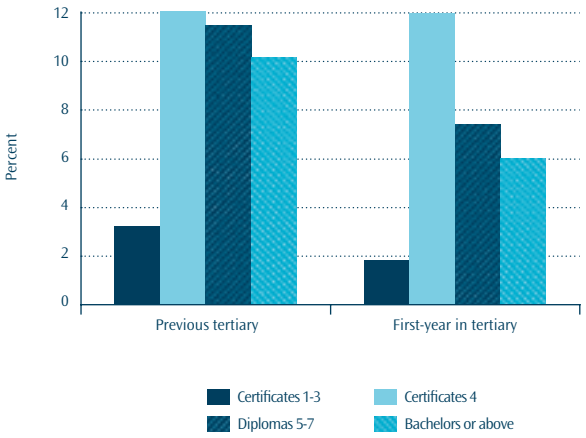


Figure 7.33 // Proportion of vocational students going on to further study by previous tertiary study and highest level studied



Students who had studied previously at tertiary level were more likely to go on to further study, with 34 percent going on to higher-level study within the four-year period, compared to only 25 percent of those who were first time in tertiary study. The major difference between those with and without previous tertiary study experience was in the proportion studying at diploma- and degree-level, as shown in Figure 7.33.

The proportions of students going on to higher-level study varied considerably by field of study. Students in sciences had the highest rate of progression and were most likely to reach degree level, but only made up 1.9 percent of vocational students in 2002. Students in engineering had the lowest rate of progression and made up 14 percent of students.

Field of study was the most important factor for whether students went on to diploma- and degree-level studies. Students in professional disciplines, such as education and health, were more likely to move into degree studies. Students in trade and technical areas, such as building, agriculture and engineering, were more likely to go only as far as a level 4 certificate. This reflects the differing qualification pathways in different fields of study.

Figure 7.34 // Likelihood of vocational students going on to diploma- and degree-level study by field of study of level 1 to 3 certificate

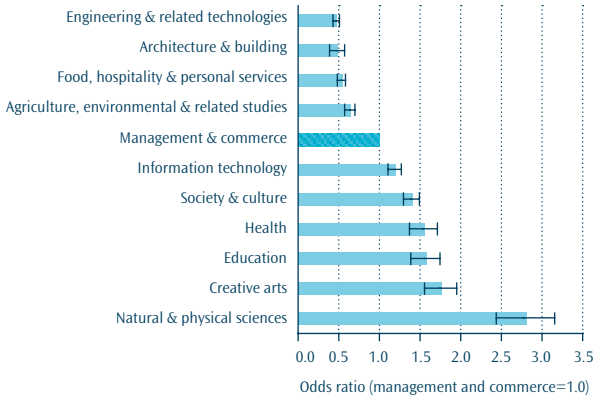
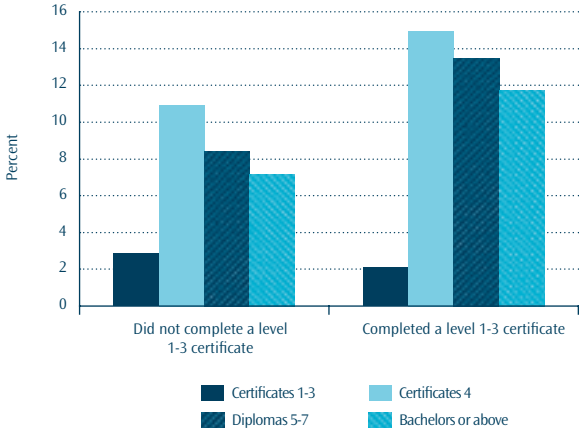


Figure 7.35 // Proportion of vocational students going on to further study by highest level studied



Students who completed the first level 1 to 3 certificate they enrolled in were more likely to go on to further study than those who did not complete. Forty percent of students who completed their certificate went on to higher-level study, compared to 26 percent of those who did not complete.

The logistic regression models confirmed that students who completed their level 1 to 3 certificate were more likely to progress than those who did not. However, it was not a strong determinant and when this factor was added to the models, it only made a small difference to most of the other factors, with the exception of gender as discussed below. Completion was also less important for explaining the differences for students who progressed to diploma and degree level. Adding completion to the models did not add much to the overall explanatory power of the models.

Note: Here, the odds ratio for a subject is the probability of a student in that subject progressing to further study divided by the probability of a student in 'management and commerce' progressing to further study, after controlling for differences among students across subjects. Therefore, it shows the likelihood of progression for each subject relative to 'management and commerce', which is set at 1.0. The error bars show the 95 percent confidence interval for the estimated ratio for each subject.

The age of students has a significant effect on likelihood to go on to further study. In general, younger students were more likely to go on to higher-level studies than older students. Forty-six percent of 18 to 19 year-olds went on to study at a higher level and 15 percent at degree level, compared to only 12 percent and 5.1 percent, respectively, for students aged 40 years and over. The exception to the pattern was students who entered tertiary education before they turned 18 years of age. Of this group, 41 percent went on to further study at a higher level, mostly in level 4 certificates. Eighty percent of students in this youngest age group had left school with no qualifications or school certificate only. This compared to only 48 percent of 18 to 19 year-olds. Under-18-year-olds made up 9.3 percent of vocational students in 2002.

Figure 7.36 // Proportion of vocational students going on to further study by age group and highest level studied

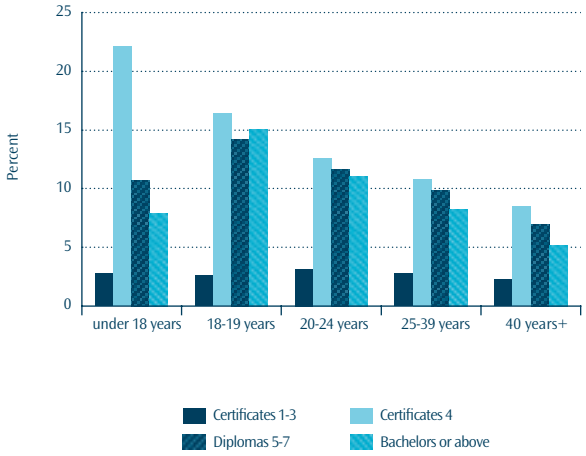


Figure 7.37 // Proportion of vocational students going on to further study by highest school qualification and highest level studied

Students with higher school qualifications were more likely to progress to higher levels of study. School qualification was the second most important factor for progressing to diploma and degree levels after field of study. It didn't have a strong relationship to progression to level 4 certificates.

In 2002, 10 percent of students had attained higher school certificate or bursary and, of them, 39 percent went on to higher-level study, with 17 percent going as far as degree level. By contrast, 37 percent of students had no school qualifications, and only 24 percent went on to higher-level study, with only 3.6 percent going as far as degree level.

Students who were in school or tertiary study in 2001 and studied a vocational certificate in 2002 were more likely to progress to higher-level study than those who had not been in study. Nearly half of those who were in school or tertiary study progressed to higher-level study, compared with only a quarter of those who were employed, unemployed or not in the labour force.

Students who studied for a level 1 to 3 certificate at a university were most likely to go on to higher-level studies, particularly a bachelors degree. However, these students represented only 4.2 percent of vocational level 1 to 3 certificate students in 2002. This higher level of progression reflects the fact that university level 1 to 3 certificates are designed as entry points for higher-level qualifications. There was less difference in progression rates across the other sub-sectors, with 26 to 32 percent going on to higher-level study and 14 to 19 percent going on to study at diploma level and above.

The overall progression rates were similar across ethnic groups, ranging from 29 percent of European students going on to higher-level study to 34 percent of Māori students. However, there were much more marked differences in the proportion going on to diploma and degree level, with 14 percent of both Asian students and students in the Other ethnic group going on to degree level, compared to 6.8 to 8.4 percent for European, Māori and Pasifika students.

Some of these differences reflect other influences such as subject choice and the age and gender distributions across ethnic groups. Once these factors were controlled for, Māori students were more likely to go on to higher-level study than any other ethnic group.[14] Asian students and students in the Other ethnic group were more likely to progress to diploma- and degree-level study and Pasifika students were less likely to go on to these levels.

Around 15 percent of students were enrolled in their first level 1 to 3 certificate extramurally. There was little difference between extramural and intramural in the overall proportion progressing to further study. However, extramural students were more likely to progress only to another level 1 to 3 certificate rather than go on to a level 4 certificate. The proportions of intramural and extramural students moving up to diploma and degree levels were very similar.

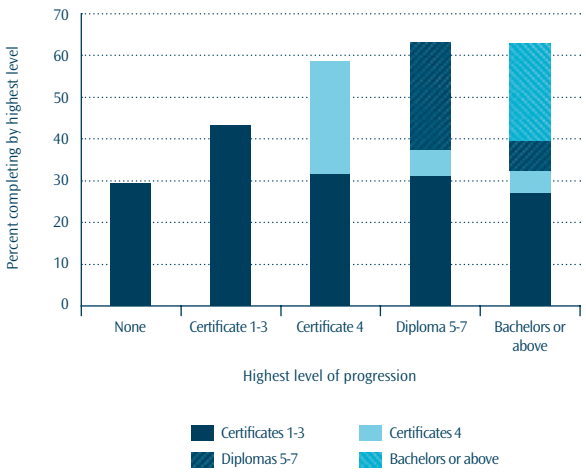
The overall proportions of male and female students going on to higher levels of study were similar. However, female students were more likely to go on to diploma- and degree-level studies than male students. These differences remained once other factors were taken into account, including the greater representation of female students in fields of study that lead towards diploma or degree level.

When completion of the level 1 to 3 certificate was introduced to the models, gender differences became statistically insignificant. This suggests that men who completed their level 1 to 3 certificate were just as likely as women to progress to further study, once other factors were taken into account. However, men were less likely than women to complete and this reduced their probability of progression.

The period of four years is too short to provide a full picture of qualification completion, especially for students who moved into three-year diploma or degree programmes. However, within this time period it was evident that students who moved on to further study were more likely to complete a qualification. Only 29 percent of those students who did no further study completed the qualification they were enrolled in. However, 44 percent of those who went on only to another level 1 to 3 certificate completed at least one of the certificates they were enrolled in. For students who went on to higher levels, around a quarter had completed the highest-level qualification they had enrolled in within the four-year period. This will include students who would have started studying towards a higher-level qualification previously, taken a break and then enrolled in a level 1 to 3 certificate as a pathway back into study again.

14. Ethnicity was recorded and analysed on the basis of multiple response. Each ethnic group was tested independently in the models against all other students who did not identify with that group.

Figure 7.38 // Proportion of vocational students completing qualifications by highest level of progression



Educational outcomes for foundation students

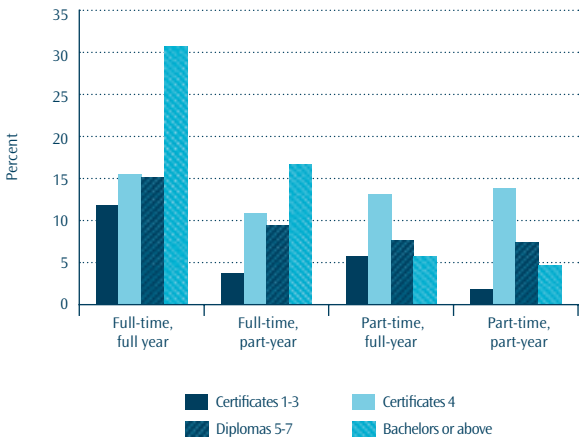
Thirty-two percent of students who studied foundation level 1 to 3 certificates in 2002 went on to further study at a higher level in the period to 2006. In addition, 4.6 percent of students undertook further level 1 to 3 study but did not go on to study at a higher level.

Two-thirds of the students going on to higher-level study went on to study at diploma level and above and about a third went on to study at bachelors level and above. Out of students who went on to further study:

- 30 percent studied their highest level at a wānanga, mostly in level 4 certificates
- 28 percent studied their highest level at a polytechnic, mostly in level 4 certificates and level 5 to 7 diplomas
- 23 percent studied their highest level at a university, mostly in bachelors degrees
- 12 percent studied their highest level at a private training establishment, mostly in level 4 certificates and level 5 to 7 diplomas, and
- 6 percent studied their highest level through an industry training organisation, mostly in level 4 certificates.

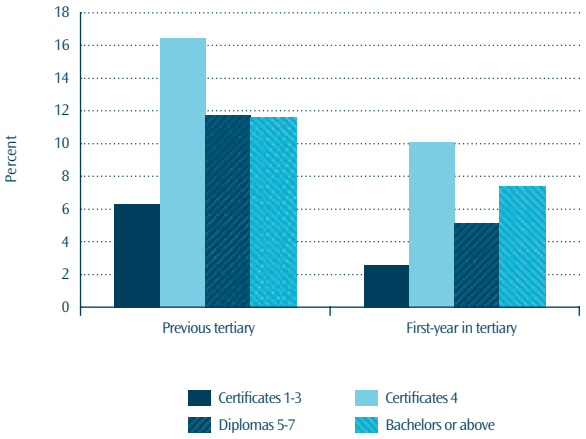
As with vocational students, the most important factor for whether foundation students went on to study at a higher level was whether they were full-time, full-year in tertiary study in 2002. Sixty-one percent of full-time, full-year foundation students went on to study at a higher level, compared to 26 percent of part-time, part-year students. Full-time students, particularly those studying full-year, were much more likely to go on to degree-level studies than other students.

Figure 7.39 // Proportion of foundation students going on to further study by study status in 2002 and highest level studied



Students who had studied previously at a tertiary level were also more likely to go on to further study, with 46 percent going on to higher-level study within the four-year period, compared to only 25 percent of those who were first time in tertiary study. Those who had studied previously were also more likely to go on to diploma and degree levels than those who were first time in tertiary study.

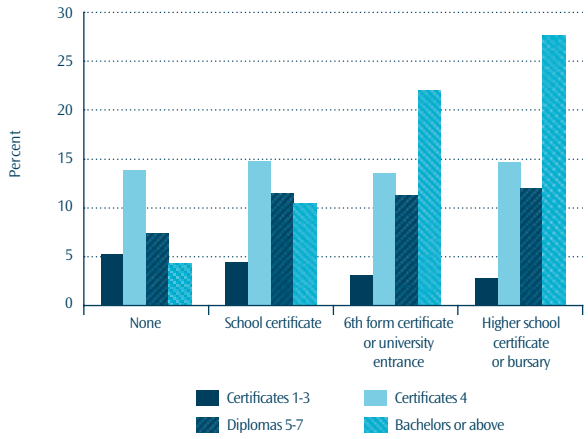
Figure 7.40 // Proportion of foundation students going on to further study by study status in 2002 and highest level studied



Foundation students with higher school qualifications were more likely to progress to higher levels of study. As with vocational students, school qualifications were the second most important factor for progressing to degree studies. It did not have a strong effect on whether students progressed to level 4 certificates.

In 2002, 59 percent of foundation students had no school qualifications. Of these students, 25 percent went on to higher-level study and 4.3 percent as far as degree level. By contrast, 4.1 percent of students had higher school certificate or bursary. Of these students, 54 percent went on to higher-level study and 28 percent to degree level.

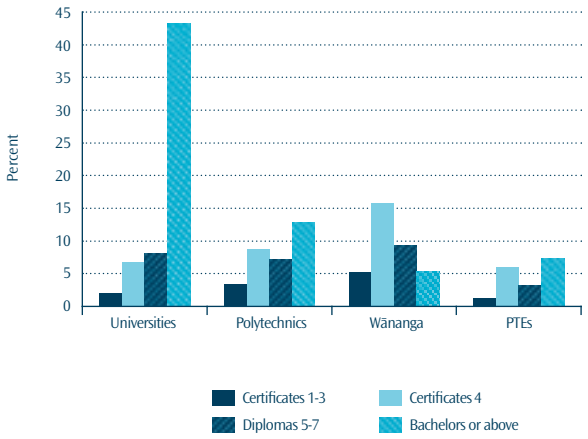
Figure 7.41 // Proportion of foundation students going on to further study by highest school qualification and highest level studied



Students who studied a level 1 to 3 certificate at a university were much more likely to go on to degree-level studies. This reflects the fact that these certificates at universities were mostly designed to support entry into degree studies. However, university students made up only 7.1 percent of foundation students.

Students at wānanga were more likely than students at polytechnics to go on to a level 4 certificate, just as likely to go on to a diploma and less likely to go on to degree-level studies. Students at private training establishments were less likely than students at polytechnics to go on to higher-level studies at any level. These patterns were confirmed by the models, even once other differences were controlled for.

Figure 7.42 // Proportion of foundation students going on to further study by sub-sector of level 1 to 3 certificate and highest level studied



Across ethnic groups, Asian students were most likely to go on to higher-level study, at 39 percent, and Māori next most likely at 34 percent. Asian students were the most likely ethnic group to go on to degree level, whereas Māori were more likely to only go as far as level 4 certificates.

When other factors were controlled for, fewer differences were found among ethnic groups. However, Māori students were substantially more likely than other students to progress to higher levels and to diploma level and above. Students from the Other ethnic group were found to be somewhat less likely to go on to diploma- and degree-level studies. Statistically significant differences were not found for other ethnic groups, including Asian students.

Figure 7.43 // Proportion of foundation students going on to further study by ethnic group and highest level studied

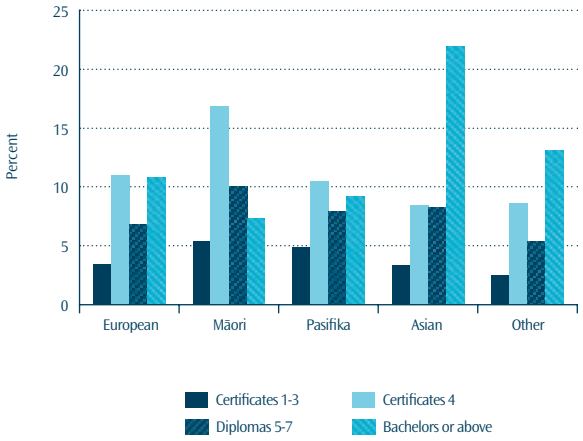
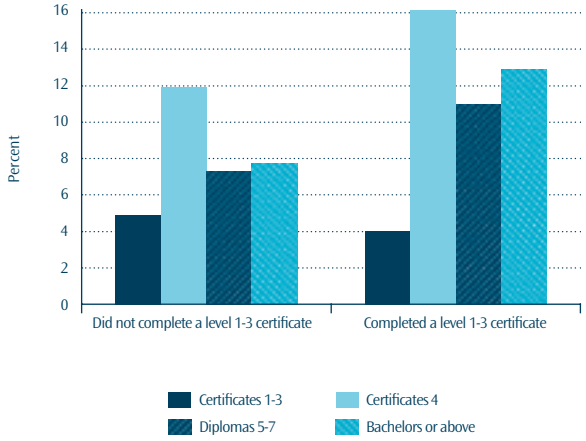


Figure 7.44 // Proportion of foundation students going on to further study by highest level studied



Students who completed the first level 1 to 3 certificate they enrolled in were more likely to go on to further study than those who did not complete. Forty percent of students who completed their certificate went on to higher-level study, compared to 27 percent of those who did not complete.

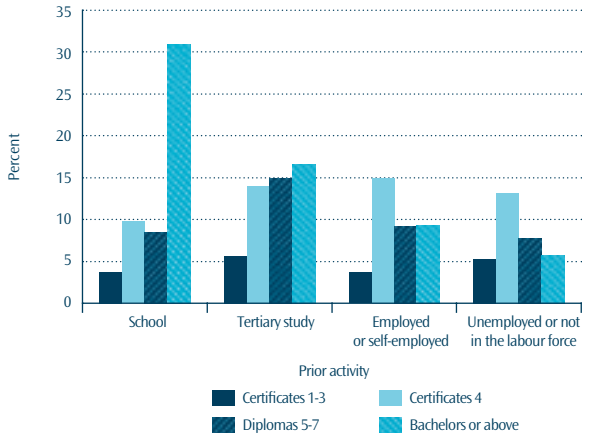
The models confirmed that students who completed their level 1 to 3 certificate were more likely to progress than those who did not. However, as with vocational certificates, this was not a strong determinant, and when added to the models only made a small difference to most of the other factors and did not add significant explanatory power. The one area it did affect was extramural versus intramural study, as discussed below.

Students who were in school or tertiary study in 2001 and studied a foundation education certificate in 2002 were more likely to progress to higher-level study than those who were employed, unemployed or not in the labour force. Students coming from school were most likely to go on to degree-level study within four years. Students who were employed, unemployed or not in the labour market were more likely to only go as far as a level 4 certificate.

When other factors were controlled for, there was no statistically significant difference in the likelihood of progression to higher levels among students coming from school, other tertiary study or employment. However, students who had been unemployed were much less likely to progress than other students. Students coming from school were shown to be much more likely to go on to diploma and degree studies. However, there was no statistically significant difference between students coming from tertiary study and students who had been employed. Students who had been unemployed were much less likely to go on to diploma- and degree-level studies.

There were fairly small differences in progression rates between males and females. Females were slightly more likely to progress to higher-level study than males. Once other factors were controlled for, females were shown to be more likely than males to progress to higher-level study and also to diploma- and degree-level study.

Figure 7.45 // Proportion of foundation students going on to further study by prior activity and highest level studied



Students aged 18 to 19 years were much more likely than other students to go on to degree-level study. The proportion going as far as diploma level was similar across all age groups. Once other factors were controlled for, it was shown that students aged under 20 years were more likely to go on to higher-level study and 18 to 19 year-olds to diploma and degree levels.

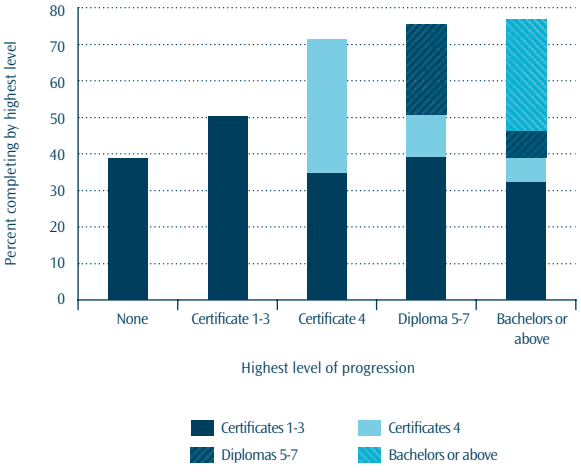
There were clear differences in the proportions of intramural and extramural students going on to higher levels of study. Forty percent of intramural students went on to higher-level study, compared to 29 percent of extramural students. Twenty-one percent of intramural students went on to degree study compared to 5.1 percent of extramural students.

Once other factors were controlled for, it was still evident that extramural students were less likely to progress to further study than intramural students, particularly to diploma and degree levels. However, adding completion of the first level 1 to 3 certificate to the model removed extramural status as a significant factor for progression to a higher level. That is, students who completed their certificate were as likely to progress no matter which mode of study they had engaged in. However, completion only slightly improved the probability of progressing to diploma and degree levels.

As noted in the discussion on vocational qualifications, four years is too short for providing a full picture of qualification completion, particularly for students moving into multi-year qualifications. However, as with vocational qualifications, students who moved on to further study from a foundation certificate were more likely to complete a qualification. Also, completion rates for students progressing from foundation certificates were generally higher than those for students progressing from vocational certificates. This is expected as many students would have enrolled in a foundation certificate for the purposes of entry into, and success at, higher-level studies – this is not necessarily the case in vocational certificates.

For students who went on to higher-level studies, between a quarter and a third completed a qualification at the highest level they studied within the four-year period. These will include students who had already studied at that level, taken a break and then enrolled in a level 1 to 3 foundation certificate as a pathway back into study again.

Figure 7.46 // Proportion of foundation students completing qualifications by highest level of progression



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