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NEW ZEALAND'S TERTIARY EDUCATION SECTOR



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A supporting set of analytical tables is available for this report.
For further information on this report and to view the tables visit:
<http://educationcounts.edcentre.govt.nz/publications/tertiary/p&t-2005.html>

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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 2005 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 17.

FOREWORD BY THE SECRETARY FOR EDUCATION

Profile & Trends 2005: New Zealand's Tertiary Education Sector is the eighth annual publication released by the Ministry of Education giving a picture of the tertiary education sector. It provides a comprehensive overview of the performance and key characteristics of the tertiary education system in 2005. Brief forward-looking commentary is also provided throughout the report and in the postscript on 2006.

In 2005, New Zealand's third statement of tertiary education priorities was released and tertiary education organisations developed their profile for the period 2006 to 2008 stating how they will give effect to the latest statement of priorities and the tertiary education strategy. Another major event was the review, led by the State Services Commission, of the education sector agencies. The review highlighted the scale of change over the last 15 years across education, including tertiary education. It noted the impact of these changes on students, teachers, parents, communities and employers, as well as education providers.

Profile & Trends 2005 looks in detail at the tertiary education system and its agencies, at tertiary education organisations and at the options available for students in tertiary education. The financial performance of tertiary education organisations is discussed, as is government funding for tertiary education. The report considers the outcomes of tertiary education. It looks at enrolments and student achievement, both at tertiary education providers and in workplace training programmes. The types of tertiary education providers are considered in the light of their capability and changes occurring in 2006. There is information on the human resources in tertiary education providers and there are descriptions of the type of financial support available for students. There is a chapter that explores the research undertaken by tertiary education providers and another on the funding of research in tertiary education.

At the time of writing this report, consultations on the discussion document on the next tertiary education strategy were being held and the proposals for system reforms, announced by the Minister for Tertiary Education in April 2006, were being worked through. This work aims to allow the tertiary education system to contribute to New Zealand's goals in such areas as economic transformation, families – young and old, and national identity. The main theme of the reforms is improving the quality and relevance of tertiary teaching and learning – quality-driven provision, clearer focus on the distinctive contribution of each provider and multi-year funding to give the government and the sector more certainty.

The statistics provided in this report are derived mainly from reports provided to the Ministry of Education by tertiary education organisations. Information and statistics have also been provided by the Tertiary Education Commission, the New Zealand Qualifications Authority, the Ministry of Social Development, Inland Revenue, Career Services rapuara, Statistics New Zealand and a range of other government agencies, as well as the Industry Training Federation and quality assurance agencies.

I would like to thank all contributors for the data, time and assistance they have provided in helping the ministry to prepare this report.

I trust you will find the information presented in *Profile & Trends 2005* to be relevant and useful to your understanding of the tertiary education sector as a whole.



Karen Sewell

SECRETARY FOR EDUCATION

Key findings and 2005 year in brief

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2005

NEW ZEALAND'S TERTIARY EDUCATION SECTOR



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AN OVERVIEW

A key focus for the tertiary education sector in 2005 has been the consolidation of the reforms of the previous three years. The emphasis in the Statement of Tertiary Education Priorities 2005/07, released during 2005, was on lifting the quality and relevance of what the sector offers students, research users and wider stakeholders and, consequently, improving outcomes for learners. A tertiary education system with a focus on quality and relevance will improve the value learners get for the time and money they invest in tertiary education, while it improves the return to society for its investment in the system.

Educational achievement has increased in recent years; proportionally more people hold a tertiary qualification – degree, postgraduate or vocational. Recent research on the employment outcomes of tertiary education shows that those with tertiary qualifications have higher earnings than others. However, between 2002 and 2005, those with school qualifications and qualifications below degree level have seen their earnings rise. This reflects the strong labour market, which has the effect of reducing unemployment among groups whose highest qualification is below degree level.

More people enrolled in tertiary education in 2005, although the full-time equivalent student count declined slightly. There was a significant decline in community education – a consequence of the government's wish to refocus community education on a small number of priority areas and its move to strengthen the quality and relevance of tertiary education provision below degree level. Student retention at degree and postgraduate levels continued to improve in 2005. Some disparities in tertiary education outcomes between ethnic groups persist. While the proportion of Māori holding a tertiary qualification below degree level is close to that for the rest of the population, growth in the proportion with a bachelors or higher degree has levelled off. The proportion of Pasifika students with degrees is growing but the proportion with tertiary qualifications is only just over half the proportion for the rest of the population. Completion rates among Pasifika students are lower than the rates in other ethnic groups. University research contract income from non-government sources increased in 2005.

LOOKING TO 2006

Early in 2006, the government announced proposals to take further steps to improve the tertiary education system's contribution to New Zealand's goals of economic transformation, families – young and old, and national identity.

New Zealand's second strategy, the Tertiary Education Strategy 2007/12, is expected to be published in December 2006. The strategy is expected to build on the reforms that began with the creation of the Tertiary Education Advisory Commission, set up to advise government on future directions for tertiary education.

At the same time, the government set about making further changes to systems for planning, funding, monitoring and quality assurance. These reforms are designed to support the new strategy and will take effect from 2008.

In addition to aligning the tertiary sector more closely with national development goals, these changes aim to build public confidence in the sector and to give government and the sector more certainty. More information about these changes to the tertiary education system are outlined in the postscript to this report and in the forward-looking commentaries included in the chapters that follow.

STATISTICS AND RESEARCH

Profile & Trends 2005 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, attrition rates, progression rates, and outcomes.

More tertiary education material, including information on the tertiary education strategy, providers, students and other relevant material can be found on the Education Counts website and on the websites of the Ministry of Education and the Tertiary Education Commission.



Key findings and 2005 year in brief

The statistics in *Profile & Trends 2005* are for the year ended 31 December 2005 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. Almost 70 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 is funded through the Student Component Fund, which covers 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 all the skills, knowledge, attitudes and values needed to do something. 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.

GROWTH IN ENROLMENTS SLOWS

In 2005, there were 504,000 students enrolled in study programmes at tertiary education providers. Forty-seven thousand of these were international students. In addition, over 162,000 trainees were engaged in industry-based training, including 8,400 Modern Apprentices. There were 161,000 students enrolled in short courses in 2005. Non-formal education such as adult and community education attracted an estimated 360,000 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 2005, including 5 percent undertaking formal learning in the workplace.

While more people studied in 2005, there was actually a decline of 1.2 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 in recent years was the increase in international students. This count trebled from 16,600 in 2000 to 50,500 in 2004. But in 2005, the number of international students fell by 3,060. By contrast, domestic enrolments increased by 20,700.

In 2005, 292,000 domestic students, or 58 percent, enrolled in government-funded tertiary education organisations participated in certificate-level study, compared with 69,000, or 14 percent, in diploma study, 153,000, or 30 percent, in bachelors-level study, and 36,000, or 8 percent, in postgraduate study. However, when converted to equivalent full-time student units, then bachelors-level study had the highest participation at 42 percent.

Around 119,000 domestic students completed 130,000 formally recognised qualifications in 2005. This represents an 11 percent increase on the previous year in the number of students who completed qualifications. An estimated 39 percent of domestic students who had started a qualification in 2001 had completed it by the end of 2005. The first-year attrition rate of students in government-funded tertiary education organisations who started a qualification in 2004 was 29 percent, up from 27 percent in the previous year.

OUTCOMES OF TERTIARY EDUCATION

More New Zealanders have been participating in tertiary education in recent years and in 2005 there was a significant increase, from the previous year, in students completing a tertiary qualification. The overall rise was largely a result of an increase in the number of sub-degree qualifications awarded. There was also a significant increase in the number of students completing a postgraduate qualification, while the number of students completing bachelors degrees fell by 3.5 percent from the previous year.

One in two people in the New Zealand working-age population held a tertiary qualification in 2005. The group comprising all 'other' ethnicities had the highest proportion of its people with a bachelors degree or higher, followed by Europeans, Māori and Pasifika people.

The unemployment rate fell in 2005 for holders of bachelors and higher qualifications, other tertiary qualifications and school qualifications, while it remained unchanged for those without any qualifications. A stronger economy has led to the lower rates of unemployment in recent years. New Zealand's unemployment rates for the tertiary qualified are well below the average for the Organisation for Economic Co-operation and Development (OECD), according to the most recently available international comparisons.

International comparisons also showed that the New Zealand population's overall tertiary attainment in 2004 was well above the OECD average for females and slightly below the average for males. The New Zealand population's attainment of bachelors or higher qualifications was below the OECD average for both males and females, while the gender gap in New Zealand for tertiary qualifications, in favour of females, is now the second largest in the world, after Finland.

In 2006, the OECD calculated the internal rate of return to tertiary education for New Zealand for the first time. Rates of return were calculated for the individual (the private internal rate of return) and for the government (the public internal rate of return). The private tertiary return in 2003 was above the bond rate, meaning that even in a narrow financial sense, tertiary education is a good investment for a private individual. While the return to New Zealanders was higher than to the Danes and Swedes, it was below that of the Americans and the English. The relatively low rate of return in New Zealand reflects the fact that

there is less income disparity in New Zealand than in countries like the United States and the United Kingdom. The public return to tertiary education in New Zealand was again positive – it is financially a good investment for the government.

Another recent analysis looked at the earnings of students with loans who recently left study. This showed that those who completed a tertiary qualification had a higher median income, five years post-study, than those who did not complete their qualification. The income premium was higher for bachelors qualifications than for other tertiary-level qualifications. Analysis has also shown that the level and field of study and employment are factors influencing earnings.

The University of Auckland's economic contribution to the Auckland region was estimated to be \$4.4 billion in 2005 in a recent study. Similar studies in other regions have also shown that the presence of a major tertiary education provider carries a financial benefit for the community. Other recent studies on the outcomes of tertiary education showed that, on average, an additional year of education increases future income somewhere between 5 and 15 percent. Tertiary education also continues to contribute positively to New Zealand's health, social and family outcomes. In addition to making workers more productive, it leads to the creation of knowledge, ideas and technological innovation. In the area of health, for example, studies show that those with post-school qualifications have lower mortality rates than those with no, or only school, qualifications.

LEVEL 1 TO 3 QUALIFICATIONS

Provision of qualifications at levels 1 to 3 of the New Zealand Register of Quality Assured Qualifications has continued to grow in a number of areas. Level 1 to 3 qualifications are equivalent to a senior secondary school education. The number of students enrolled in student component-funded level 1 to 3 certificates has continued to increase, although the volume of provision has stabilised when counted in terms of equivalent full-time students. Within this area, the number of students studying for less than six weeks has grown the fastest. There has been a decrease in the number of students in foundation education qualifications, offset by an increase in those in vocational qualifications. The number of students in courses of a week or less has also continued to increase.

There has been a continued increase in the provision of tertiary education opportunities in schools through the Secondary-



Key findings and 2005 year in brief

Tertiary Alignment Resource funding and Gateway. The number of students in school and tertiary education institution-based adult and community education courses has decreased in response to policy changes.

In 2005, there were 483,000 students enrolled in formal education at levels 1 to 3. The largest number were student component-funded students (206,500) followed by students in courses of one week or less (136,000) and those in industry training (121,200). Up to 360,000 learners participated in non-formal education at this level. The actual total number is not known precisely as many learners will have participated in more than one area during the year. Of the non-formal learners, the largest numbers were involved in adult and community education through tertiary education institutions and schools.

Students accessing education at this level tend to be aged 25 and over. There has been a definite shift towards older-aged students in student component-funded provision. Approximately half of the students accessing adult and community education and courses of one week or less are aged 40 years or over.

There has been an increase in the proportion of students accessing student component-funded qualifications who are already in employment, and a corresponding decrease in the proportion unemployed or on benefits. The numbers of students in Training Opportunities and Youth Training (both targeted to people who are unemployed) have continued to decrease.

MID-REGISTER QUALIFICATIONS AND WORKPLACE LEARNING

The recent substantial increases in level 4 qualifications and in workplace learning are notable features of the tertiary education system at a time when overall learner growth is slowing.

The number of learners in level 4 qualifications in provider-based learning increased significantly between 2004 and 2005. This contrasts with a relatively lower increase for those in level 5 to 7 diplomas and certificates and a slight fall in those enrolled in bachelors qualifications. From 2001 to 2005, the relative growth in the number of learners in level 4 qualifications in provider-based learning was 10 times greater than for those in bachelors qualifications. Over the same period, learners in level 5 to 7 certificate and diploma qualifications increased slightly more than for bachelors qualifications.

The number of learners in workplace learning, industry training and Modern Apprenticeships increased very significantly from 2004 to 2005. Between 2000 and 2005, the numbers of learners in the workplace increased twice as fast as those in provider-based tertiary education. This is in part due to the increased focus by industry and government on skills development and productivity growth in the workplace. Also, the success of the Modern Apprenticeships scheme, and its popularity with industry and young people, is reflected in the significant growth in participation.

BACHELORS-LEVEL QUALIFICATIONS

The number of domestic students enrolled in bachelors-level study decreased slightly from 2004 to 2005, for the second consecutive year, after many years of steady growth. The decrease was mainly driven by a decreased participation rate of older students studying at bachelors level.

The number of domestic students completing bachelors degrees decreased from 2004 to 2005 as a result of a small drop in the completion rate. An estimated 41 percent of domestic students who started a bachelors degree in 2001 had completed after five years, compared with 42 percent for those who started in 2000. Asian and European domestic students had the highest rates of five-year completion of bachelors degrees, while Pasifika students had the lowest rates.

While international students enrolled in bachelors study continue to make up a growing proportion of bachelors-level students, the growth in international students enrolled in bachelors-level study slowed during 2005. International students completed bachelors degrees within five years at a higher rate than domestic students, with 48 percent of international students who started a bachelors degree during 2001 having completed after five years.

POSTGRADUATE QUALIFICATIONS

The number of domestic students enrolled in postgraduate study increased between 2004 and 2005, continuing the steady growth in the number of postgraduate students over the last 10 years. The increase was driven by increased participation in postgraduate certificate and doctorate study.

The number of domestic students completing postgraduate qualifications also increased between 2004 and 2005. There was

a marked difference in the five-year completion rates of domestic students in the different postgraduate qualifications, largely reflecting the duration and the nature of the study for each of these qualifications. Domestic students starting a postgraduate certificate or a bachelors degree with honours in 2001 had the highest five-year completion rates.

After 10 years of strong growth, the number of international students enrolled in postgraduate study declined from 2004 to 2005. The largest drop was in students studying for postgraduate diplomas. New Zealand has one of the highest proportions in the OECD of foreign students enrolled at postgraduate level. International students generally have higher rates of qualification completion than their domestic counterparts.

STUDENT SUPPORT

In 2005, the number of student loan borrowers fell for the first time since the Student Loan Scheme was introduced in 1992. On average, students borrowed \$150 more in 2005 than in 2004.

Higher tuition subsidy rates for the year ended June 2006 led to an increase in government's total financial support for students participating in tertiary education. Both the drop in the equivalent full-time student count and the greater proportion of students enrolling in courses that attract a lower per student funding rate were more than offset by the increase in the tuition subsidy base rates.

Uptake of student allowances for the year ended June 2006 fell slightly from the previous year, in spite of the new parental income limits introduced in 2005, which were intended to enable larger numbers of students to qualify. This may reflect increased enrolments by part-time students, plus more enrolments in shorter vocational courses, many of which do not attract student allowances.

RESEARCH CONTRIBUTION

The research performance of the tertiary sector improved in several areas in 2005. In the area of research training, enrolments in doctoral degrees continued their rising trend in 2005. The number of people completing a doctorate of philosophy also rose in 2005, but at a slower rate than in previous years. The research contract income earned by the universities per academic staff member rose in real terms between 2004 and 2005. In addition, the share of the funding

won by the universities from contestable funds in Vote Research, Science and Technology increased between 2002 and 2004.

A study by the Ministry of Research, Science and Technology of indexed research publications by university authors, between 1997 and 2003, showed that total research publications produced by researchers in universities increased over the period, resulting in a greater share of New Zealand-authored papers originating from universities. Despite the rise in total research publications, a faster rise in the number of academic staff resulted in a decline in research productivity – measured by publications per full-time equivalent academic staff member – between 1999 and 2003.

SECTOR CAPABILITY

The collective financial performance of the 33 tertiary education institutions was moderately strong during 2005. Liquidity and cash flow were both above the benchmark set for prudent operation of a tertiary education institution.

However, when compared to the performance between 2002 and 2004, performance in 2005 fell as the operating environment changed. The aggregate operating surplus fell to 2.3 percent of revenue – below the benchmark of 3 percent for the first time since 2000. At the same time, the indicators of liquidity and cash flow both worsened.

In large part, this decline in financial performance reflected factors such as the reduction in international student enrolments, changes to the funding of community education and the slowdown in the growth of enrolments in the wānanga.

While aggregate financial performance was moderately strong, there was considerable variation among the tertiary education institutions, with some recording a very strong performance, while nine institutions had an operating deficit in 2005, compared with six in 2004 and none in 2003.

Overall, the universities performed more strongly than the other sub-sectors. They experienced only a relatively small decline in international students, their income was more diversified than that of the other sub-sectors and they have had only relatively small community programmes, so their performance was not especially affected by the changes in funding of these programmes. The universities' collective surplus – 3.2 percent of revenue – was above the benchmark.



Key findings and 2005 year in brief

By contrast, the polytechnics experienced a fall in income as international enrolments dropped and, as a result of community education funding changes, their combined operating surplus was 1.6 percent of revenue, while five polytechnics recorded an operating deficit.

The size of the workforce in public tertiary education institutions remained stable in 2005 compared to 2004.

A fall in academic staffing at universities in 2005 was offset by an increase in non-academic staff. While the number of students at universities also fell in terms of full-time equivalent students, the student per academic staff ratio increased slightly in 2005.

Staffing and student numbers fell at wānanga in 2005 with a small decrease in the student per academic staff ratio.

At institutes of technology and polytechnics, staffing levels remained stable in 2005 while the student per academic staff ratio fell due to a decline in equivalent full-time students.

The number of 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 for public tertiary education institutions increased in 2005, while personnel costs declined slightly as a percentage of total expenditure.

INVESTING IN KNOWLEDGE AND SKILLS

Total government spending on tertiary education increased in the year ended June 2006. Expenditure on tertiary education, including operating and capital expenditure, was \$4,046 million in 2006. As a percentage of gross domestic product, both total expenditure and operating expenditure increased in 2006.

Total tertiary education expenditure accounted for 2.6 percent of gross domestic product while operating expenditure accounted for 1.9 percent.

The number of equivalent full-time student places funded by government decreased between 2004 and 2005. This is the first decrease in recent years and comes after a slowdown in growth in 2004. Despite the latest decrease in student numbers, government spending on tuition subsidies continued to increase in 2005, due to an increase in the base funding rates.

In 2005, the average domestic fee per equivalent full-time student increased for the second consecutive year, following two years of decreases. The latest increase reflected the transition from the fee stabilisation scheme to policies that will allow some modest fee increases. It also reflects a move away from enrolments in low or zero fee courses. There was a slowdown in international student enrolments in 2005 and, as a result, total international fees revenue decreased from 2004 to 2005.

THE YEAR 2005 IN BRIEF

JANUARY

The Tertiary Education Commission publishes its Performance-Based Research Fund 2004 Annual Report. Tertiary education organisations are to receive more than \$43 million from the fund in 2005.

Unitec New Zealand, an Auckland-based polytechnic, files papers in the High Court in a \$3.5 million action against the Minister of Education and the New Zealand Qualifications Authority over a five-year delay in determining its application for university status.

The government announces that the Hon Russell Marshall will be the new chair of the Tertiary Education Commission. Mr Marshall is a former Minister of Education and, at the time of his appointment, he was New Zealand's High Commissioner to the United Kingdom.

The New Zealand University Students' Association releases its three-yearly income and expenditure survey of the financial and socio-economic situation of students at tertiary education institutions.

EdCentre, the online portal to education information, is launched. The portal is a cross-sector collaboration of the main government agencies responsible for managing the education system.

Nominations open for peer review panels to steer the 2006 Performance-Based Research Fund quality evaluation.

FEBRUARY

The government announces that New Zealand's third off-shore education counsellor will be located in Brussels, to help build links with European educators and policy leaders.

Forty-four students are awarded Top Achiever Doctoral Scholarships, worth nearly \$4.4 million, by the Tertiary Education Commission.

The Tertiary Education Commission releases the *Review of community education in selected tertiary education institutions* on the appropriate use of community education funding by institutions.

The Tertiary Education Commission announces reviews of education and training provision to increase the strategic relevance of government-funded tertiary education.

The reviews will cover: selected non-degree qualifications in funding categories A1 and J1; the student component provision for one-third of private training establishments (the first part of a comprehensive three-year review); dive education; and overlapping provision issues between industry training and the student component.

The Teaching Matters Forum, a sector group appointed by Cabinet, held their inaugural meeting to discuss the proposal for a national centre for tertiary teaching excellence.

The government announces a package of actions, including the appointment of a Crown observer, in response to concerns raised about the tertiary education provider Te Wānanga o Aotearoa.

MARCH

The Tertiary Education Commission appoints Professor John Hattie as principal moderator, and Professor Carolyn Burns and Professor Mason Durie as deputy moderators, for the 2006 Performance-Based Research Fund quality evaluation.

The Ministry of Education publishes two reports on student loans: *Living with a student loan, a profile of student loan debt and repayment, post-study income and going overseas* and *Income of student loan scheme borrowers*.

The Ministry of Education publishes the report of a major research study conducted by Massey University: *Impact of student support services and academic development programmes on student outcomes in undergraduate tertiary study: a synthesis of the research*.

The Association of University Staff takes legal action against the University of Auckland after the university's failure to attend a preliminary national employment agreement negotiation.

Industry training figures (including Modern Apprenticeships) show that approximately 140,000 trainees were involved in 2004 (up by 13,000 on 2003).

The Tertiary Education Commission announces Janice Shiner, director general of Lifelong Learning at the Department of Education and Skills in England, will be its new chief executive. Janice Shiner takes up the position in July 2005.



Key findings and 2005 year in brief

The New Zealand Vice-Chancellors' Committee publishes its *University Graduate Destinations 2004*. The report, based on a survey of the 29,000 people who became eligible to graduate in 2003, shows that the make-up of New Zealand's university graduate population is changing. There are more international graduates and greater ethnic diversity.

Five new projects are funded under the growth and innovation pilot initiatives programme. The programme was set up to further develop the linkages between tertiary education providers and industry in the biotechnology, design and information and communication technology sectors.

Dr Sondra Stein, project manager for the *Equipped for the Future Work Readiness Credential* in the United States, leads workshops in Auckland, Wellington and Dunedin, introducing the draft descriptive standards for the adult foundation learning sector.

The ministry produces and issues two discussion documents on learning outcomes in tertiary education for feedback: *Learning for living: draft descriptive standards and key competencies in tertiary education*.

The government announces the State Services Commission will review the way the Ministry of Education, the Tertiary Education Commission and the New Zealand Qualifications Authority work together in policy on senior secondary and tertiary education.

APRIL

The Employment Relations Authority refers a dispute between the Association of University Staff and the University of Auckland to the Employment Court, after mediation fails. The dispute relates to the university's refusal to meet with unions and other university employers for preliminary national employment agreement negotiations.

The government releases its Statement of Tertiary Education Priorities (2005/07). The statement will guide funding for the sector, and focuses on improving the quality and relevance of tertiary education.

The University of Canterbury and the Christchurch College of Education councils support a merger of the college with the university by January 2007.

The Tertiary Education Commission announces appointments to the chairs of 12 peer review panels for the 2006 Performance-Based Research Fund quality evaluation.

The Tertiary Education Commission calls for public submissions on whether it is in the national interest for Unitec New Zealand to become a university.

The Tertiary Education Commission starts public consultation on a proposed funding framework for Adult and Community Education.

The Teaching Matters Forum begins consultation with the tertiary sector on options for the form and function of the proposed national centre for tertiary teaching excellence.

The ministry publishes the *Tertiary Education Strategy 2002/07 Monitoring Report 2004*. This is the first annual report measuring progress towards the goals of the government's tertiary education strategy.

The government makes a pre-budget announcement of an extra \$21 million over the next four years for international education. The funding will lower the cost of doctoral study for new international students in New Zealand, and speed up the establishment of the off-shore education counsellor network with three new counsellors.

The government signs an education cooperation arrangement with India.

MAY

The chair of the board of the New Zealand Qualifications Authority, Professor Graeme Fraser, and the authority's chief executive, Karen Van Rooyen, resign. The board releases an independent report into its role and responsibilities for the 2004 scholarship examinations. The government appoints Catherine Gibson as interim chair for a three-month period.

An Employment Court decision requires the University of Auckland to participate with other universities in bargaining for multi-employer collective employment agreements.

The government provides Te Wānanga o Aotearoa with a short-term loan of \$20 million and starts the statutory process under the Education Act 1989 to dissolve the wānanga's council and appoint a commissioner.

The government calls for expressions of interest from groups to provide a tertiary education savings scheme. Under this scheme families would be able to make savings to be used to support their children in their tertiary education.

The government announces an additional 200 TeachNZ Scholarships for early childhood education teachers.

The third round of growth and innovation pilot initiatives is announced. The scheme makes \$4 million available for tertiary education organisations to build partnerships with industry.

The Association of University Staff publishes research findings on gender and promotion at Massey University, as a case study of human resources practices within universities. The work was completed by the New Zealand Council for Educational Research.

The University of Auckland and unions agree on staff pay increases, following mediation.

Budget 2005 provides an additional \$340 million over the next four years across the tertiary sector. It includes:

- \$45 million over four years to expand Modern Apprenticeships and industry training
- a \$76 million increase for the Performance-Based Research Fund over four years, raising it to \$190 million by 2009
- an increase in funding rates for strategically relevant subject areas, including science, trades, technical subjects, agriculture and horticulture – following a review of funding categories
- a 2.6 percent increase in student component funding rates to reflect inflation, and
- an additional \$57 million over four years to widen eligibility for student allowances and improve student support, including \$13 million for new bonded merit scholarships.

Fourteen students are awarded Enterprise Scholarships. The scholarships will support the students while they work on research degrees involving projects that are centred on and partially funded by a business.

Regional meetings are held to discuss and collect views from tertiary providers, tutors and learners on the proposed national centre for tertiary teaching excellence.

JUNE

The government appoints Karen Sewell, chief executive and chief review officer of the Education Review Office, as acting chief executive of the New Zealand Qualifications Authority.

The government approves the Tertiary Education Commission's refinements to the 2006 Performance-Based Research Fund, which include additional grades to identify new and emerging researchers.

A university tripartite forum, comprising the Minister of Education, vice-chancellors and union representatives, will be established to consider and resolve issues related to salaries in the universities. The group will focus on high-level strategic salary issues, and provide information to inform future budget and bargaining strategies.

Negotiations for new national collective employment agreements between university unions and vice-chancellors break down, and universities face national strike action.

The ministry publishes four reports on research performance: *The measurement of the research performance of tertiary education organisations: an analysis of the impact of weightings in the Performance-Based Research Fund*; *Research measures: comparing the old with the new*; *Research measures: comparing seven new measures of research performance in tertiary education*; and *An analysis of funding allocations for staff and research degree completions in the Performance-Based Research Fund*.

Government commits \$51 million over the next four years to adult foundation learning. The initiative is aimed at raising the quality of provision and building a sustainable infrastructure, and expanding access for adults currently not in foundation learning programmes.

The ministry publishes a report called: *How long do people spend in tertiary education?* The report includes new data on the differences in the duration of, attrition and completion among students in tertiary education in New Zealand.

The government announces its preliminary decision to dissolve the council of Te Wānanga o Aotearoa and appoint a commissioner.



Key findings and 2005 year in brief

JULY

Thailand signs education agreements with the Universities of Canterbury, Otago and Waikato and with Lincoln and Massey Universities.

The High Court finds the government breached the Bill of Rights and the rules of natural justice in its handling of Unitec New Zealand's application for university status.

The Tertiary Education Commission appoints 172 academics as peer reviewers for the 2006 Performance-Based Research Fund quality evaluation. The appointees will form 12 panels to assess 41 subject areas.

The government approves a loan of \$4.8 million for the Western Institute of Technology in Taranaki. The institute's Crown loans rise to a total of \$9.3 million.

The Nelson Marlborough Institute of Technology receives \$0.5 million through the tertiary sector's Innovation and Development Fund to create new seafood training and education courses.

The State Services Commission's education sector review is published. It calls for the Ministry of Education, the New Zealand Qualifications Authority and the Tertiary Education Commission to work more closely together in order to build capability and leadership and to raise the quality of, and confidence in, senior secondary and tertiary education.

The government announces changes in tertiary education aimed at strengthening regional provision, and shifting funding to high-quality courses. The package includes:

- a quality reinvestment fund of \$180 million over five years to help polytechnics and wānanga align with core priorities
- increases in industry trainee and Modern Apprenticeship numbers
- changes to the funding framework for adult and community education
- improved monitoring systems in government agencies to ensure that both existing, and new, tertiary education provision is both relevant and of high quality, and
- a limit on growth in individual certificate or diploma qualifications – Tertiary Education Commission approval is to be required for increases above 200 equivalent full-time students per year.

The 2005 tertiary teaching excellence awards are announced. Dr Roger Moltzen, from human development and counselling at the University of Waikato, receives the supreme award.

Staff strike at the Universities of Auckland, Waikato and Canterbury and at Lincoln, Massey and Victoria Universities, following a breakdown in pay negotiations.

The Tertiary Education Commission announces 12 providers will receive \$0.8 million from the adult and community education new provider fund in the 2006 financial year. The fund was established in May 2004 to support previously unfunded and emerging providers whose programmes align well with the government's adult and community education priority areas.

The Teaching Matters Forum provides its final report to government, following consultation with the sector, on the proposed national centre for tertiary teaching excellence.

The Ministry of Education publishes a report of a research study and an accompanying summary: *Analysis of New Zealand data from the International Adult Literacy Survey – demographic predictors of low literacy proficiency*. The research provides a greater understanding of New Zealanders affected by literacy problems.

AUGUST

Operating principles for working together have been agreed by the Tertiary Education Commission, institutes of technology and polytechnics, and industry training organisations, in order to help address overlapping provision issues.

The government announces it will increase tuition subsidy rates for veterinary education.

The ministry publishes two reports on patterns of repayment of student loans: *Who doesn't pay back – the characteristics of borrowers who make no progress in reducing their student loans*, and *Paying off a student loan*.

Successful applicants from the 2004 to 2006 funding round of the government's partnerships for excellence programme are announced. They included the establishment of:

- an information and communications technology institute by the University of Canterbury in partnership with Jade Software and ICT companies

- an institute of health and innovation by the University of Auckland in partnership with private sector companies
- a centre for plastics innovation and technology also by the University of Auckland in conjunction with Plastics New Zealand and private sector companies
- an initiative by Massey and Lincoln universities to enhance research in the agricultural and life sciences (private sector partners include Meat and Wool New Zealand, the Agricultural Marketing and Research Development Trust, and key companies in the dairy and horticultural industries), and
- a research-based partnership between Massey University, Bomac Laboratories Ltd, Matamata Veterinary Services Ltd and other key companies in the equine industry.

The government announces that it has decided that Unitec New Zealand will not become a university.

A New Zealand Qualifications Authority working group releases a consultation document on its review of the common standard for school leaver entry into university.

University staff unions and vice-chancellors make a national umbrella agreement for resolving current industrial problems and working together to address major funding and salary issues.

The New Zealand Universities Academic Audit Unit publishes its report on its audit of Victoria University of Wellington.

SEPTEMBER

The government announces the science and technology qualifications that will attract Step Up Scholarship funding for students from middle- and low-income backgrounds.

Fifteen projects are awarded a total of \$6.7 million from the e-Learning Collaborative Development Fund.

The Innovation and Development Fund provides grants to 12 projects (worth \$8.4 million collectively) to tertiary education organisations for projects designed to develop their capacity to lift the skill base of the population and the relevance of the skill base to the New Zealand economy.

The combined university unions and the New Zealand Vice-Chancellors' Committee meet to discuss a joint paper on salaries and resourcing.

The Learning for Living project begins the second round of its exploratory projects that focus on professional development for adult foundation learning tutors.

OCTOBER

The New Zealand Qualifications Authority approves a new fee schedule for quality audits of private training establishments, government training establishments, wānanga and Unitec New Zealand.

The ministry publishes a report called: *What factors make a difference to getting a degree in New Zealand?* This report examines the demographic and study-related factors that are associated with successful completion of degree study.

The government introduces a bill to Parliament to give effect to its no-interest student loan policy. Interest charges for all students and New Zealand-based student loan borrowers will be abolished from 1 April 2006. An amnesty on loan penalties is also to be provided for borrowers who return to New Zealand or enter into acceptable arrangements with Inland Revenue for repayment during 2006.

Massey University, Dunedin College of Education and the Christchurch College of Education apply to the Tertiary Education Commission to raise fees above 5 percent in 2006.

Hon Dr Michael Cullen becomes the Minister for Tertiary Education, taking over from the Hon Trevor Mallard.

The Annual Report on the Student Loan Scheme is tabled in Parliament. It shows that loan borrowing in 2005 was \$980 million, down by \$22 million on 2004.

NOVEMBER

Six students are awarded Enterprise Scholarships by the Tertiary Education Commission.

Nineteen polytechnics and wānanga receive \$4 million from the Tertiary Education Commission's quality reinvestment programme to help them to make changes to their portfolios of provision.

The New Zealand Qualifications Authority consults with university councils and vice-chancellors on changes to the



Key findings and 2005 year in brief

literacy requirement of the common standard for school leaver entry into university.

The New Zealand Universities Academic Audit Unit publishes its report on its audit of the University of Canterbury.

The Ministry of Education publishes the report: *What determines the research performance of staff in New Zealand's tertiary education sector?* The report applies statistical modelling to determine what demographic and employment-related factors are associated with high research performance, as measured in the 2003 Performance-Based Research Fund quality evaluation.

The Tertiary Education Commission announces the areas of provision that will be included in year two of its three-year review of private training establishment qualifications.

DECEMBER

The Office of the Auditor-General publishes the report *Inquiry into certain aspects of Te Wānanga o Aotearoa*. The inquiry found unacceptable practices for a public entity, including poor record-keeping and a consistent lack of documentation.

Private training establishments will receive \$2 million in reinvestment funding in 2006 to support qualifications of high strategic relevance.

The Tertiary Education Commission declines applications by the Dunedin College of Education, the Christchurch College of Education and Massey University to raise fees above 5 percent in 2006.

Seven tertiary education providers, the Tertiary Education Commission and New Zealand Trade and Enterprise sign agreements to provide more design internships.

The Tertiary Education Commission confirms the outcomes of four education and training reviews and one policy review (Aviation). The reviews looked at certificates and diplomas, the provision of dive and aviation training and overlapping of provision of vocational training.

The Tertiary Education Commission approves the profiles of 700 tertiary education organisations. These include 33 public tertiary education institutions, 360 private training establishments, 195 secondary schools and 15 other tertiary education providers, 13 rural education activities programmes and 38 industry training organisations.

Sue Suckling is appointed as chair of the New Zealand Qualifications Authority Board, effective from 1 April 2006.

Two research reports and their summary versions are published by the Ministry of Education: *Working in the light of evidence, as well as aspiration: adult literacy, numeracy and language teaching*, and *Pedagogy in practice: an observational study of literacy, numeracy and language teachers*.

Parliament passes amendments to the legislation on the Student Loan Scheme. The legislation provides for interest-free student loans and for the amnesty for borrowers non-resident on 31 March 2006. The amnesty will run from 1 April 2006 to 31 March 2007.

New Zealand's tertiary education system and what the sector provides

Profile & Trends

2005

NEW ZEALAND'S TERTIARY EDUCATION SECTOR



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AN OVERVIEW

Early in 2005, New Zealand's third statement of tertiary education priorities was released by the government. The statement set the priorities for the tertiary education system for 2005/07, in line with the current tertiary education strategy. Its focus is to ensure that funding will target the provision of education that is of a high quality and relevant to New Zealand's needs. The statement also looks towards the achievement of greater collaboration within the sector.

The profiles developed by tertiary education organisations in 2005 for the period 2006 to 2008 described how they will give effect to the latest statement of priorities and the tertiary education strategy. A recent study examining the influence of the strategy on profiles shows that three strategies stand out as being consistently addressed by providers:

- Skills for our knowledge society
- Te rautaki mātauranga Māori – contribute to the achievement of Māori development aspirations, and
- Capability and quality.

During 2005, the State Services Commission led a review of how the main tertiary education agencies work together. To address the review recommendations, the agencies are now collaborating on a strategic work programme.

LOOKING TO 2006

The Minister for Tertiary Education announced proposals in April 2006 to take further steps in the tertiary education reforms. His announcement included three themes designed to improve the system's contribution to New Zealand's goals including those of economic transformation, families and national identity:

- a clearer focus on the distinctive contribution of each type of tertiary education organisation
- a shift in funding towards an investment approach, with multi-year funding provided on the basis of plans, and
- strengthening quality assurance across the sector.

Work has also started on developing the second tertiary education strategy. The strategy will set the government's goals and priorities for the tertiary education system for 2007/12. The Education Act 1989 also requires the strategy to address

the economic, social and environmental contexts and the development aspirations of Māori and other population groups.

Tertiary education in New Zealand

Tertiary education includes:

- 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
- postgraduate qualifications, many of them requiring students to conduct substantial original research, and
- programmes delivered in secondary schools, such as Gateway and the Secondary-Tertiary Alignment Resource (STAR).

UNIQUE CONTRIBUTION

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, it gives people the opportunity to build careers, it contributes to social cohesion and it 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 (for example, the New Zealand School of Dance), also deliver programmes of national significance and receive government funding. In addition, there are 850 registered private training establishments that cater for a range of learners.



New Zealand's tertiary education system and what the sector provides

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 2005, the eight universities collectively enrolled 168,000 students, including 140,000 domestic students. These enrolments represented 128,000 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 2005 was 214,000, including 202,000 domestic students. These enrolments represented 79,500 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, pathways for Māori learners into other tertiary education institutions and promote the development of kaupapa Māori provision. There are three wānanga. Wānanga had 62,200 students or 30,900 equivalent full-time students in 2005.

Colleges of education

Colleges of education provide training and research mostly related to early childhood, compulsory and post-compulsory education. The number of colleges has reduced over the past decade, from six in the early 1990s to two in 2005, as they have merged with nearby universities. In 2005, there were discussions between the two colleges and neighbouring universities about mergers, leading to formal public consultation on the possible mergers. During 2006, the government agreed to merge the Christchurch College of Education with the University of Canterbury and the Dunedin College of Education with the University of Otago. In 2005, there were 6,990 students at colleges of education, or 3,930 equivalent full-time students.

Private training establishments

Registered private training establishments must meet financial, educational and management quality requirements set by the New Zealand Qualifications Authority to provide some safeguards for learners. They must also meet the financial and management requirements set by the Tertiary Education Commission. Some are funded by the government for the delivery of targeted training programmes and others have arrangements with industry training organisations to deliver programmes funded through the industry training fund. Some private training establishments receive tuition subsidies through the student component of the Integrated Funding Framework, and some receive no Crown funding at all. In all, some 220 private training establishments received government funding in 2005 through the Student Component, while about 400 received funding through Youth Training and Training Opportunities, the two largest targeted training programmes funded by the Tertiary Education Commission. Many of those that receive no funding are English language schools that cater to full-fee-paying international students. Others offer training for specific employers on a full cost-recovery basis.

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 2005 there were 41 organisations in New Zealand, established by particular industries or groups of industries.

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 or off-job through a registered training provider, or a combination of both. 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 2005, industry contributed \$55.5 million in cash to industry training, representing 29 percent of the total cost.

THE TERTIARY EDUCATION STRATEGY

The government's goals for tertiary education are set out in the tertiary education strategy. This is a high-level strategy that articulates the key goals and targets for New Zealand's tertiary education system and defines how the system will help give effect to the government's vision and goals for New Zealand. During 2006, the government released a discussion document leading to the creation of the strategy for 2007 to 2012.

The current tertiary education strategy covers the period 2002 to 2007 and lists six national goals:

1. Economic transformation
2. Social development
3. Māori development
4. Environmental sustainability
5. Infrastructural development, and
6. Innovation.

The Tertiary Education Strategy 2002/07 is based around six main strategies, each of which includes a number of subordinate and more detailed objectives.

1. Strengthen system capability and quality
2. Te rautaki mātauranga Māori – contribute to the achievement of Māori development aspirations
3. Raise foundation skills so that all people can participate in our knowledge society
4. Develop the skills New Zealanders need for our knowledge society
5. Educate for Pacific peoples' development and success, and
6. Strengthen research, knowledge creation and uptake for our knowledge society.

More detailed guidance about achieving the goals and objectives of the strategy comes from the statement of tertiary education priorities that the Minister of Education releases every one to three years. The development of each new statement incorporates the priorities sought by government from the goals of the tertiary education strategy. Its development follows extensive consultation with the sector, government agencies and other key stakeholders. It applies across the entire tertiary education system, and sets out the government's immediate priorities for the performance of the system.



New Zealand's tertiary education system and what the sector provides

The current Statement of Tertiary Education Priorities 2005/07 focuses on four major connected themes:

1. Investing in excellence in teaching, learning and research
2. Increasing the relevance of skills and knowledge to meet national goals
3. Enabling students and learners to access excellent and relevant tertiary education, and progress to higher levels of study and achievement, and
4. Enhancing capability and information quality in the tertiary system to support learning, teaching and research.

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 and the statement of tertiary education priorities
- describes the basis for the funding of tertiary education, and
- defines the constitution and functions of different types of public tertiary education institutions.

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 co-ordinate their

work. To address the review recommendations, the agencies are now collaborating on a strategic work programme.

The Ministry of Education

The Ministry of Education 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

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. The commission is responsible for:

- giving effect to the statement of tertiary education priorities
- 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 and the statement of tertiary education priorities, sector activities and the performance of the sector
- providing advice to the Minister on tertiary education policy
- negotiating a system of charters and profiles 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, Unitec New Zealand and colleges of education
- 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.

Career Services rapuara

New Zealand Career Services 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 interest write-off entitlements for borrowers.

In addition, Inland Revenue is responsible for the administration of 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
- steering the system – using the assessment of charters and profiles to improve alignment between the work of tertiary education organisations and the government's strategic goals for tertiary education
- 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:



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

The New Zealand Qualifications Authority

The New Zealand Qualifications Authority 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. Its approval and accreditation functions are exercised by its Approvals, Accreditation and Audit group.

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, including Student Component funding, industry training funding, access to 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.

The 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, including programmes based on unit standards registered on the National Qualifications Framework. ITP Quality has also been granted the authority from the New Zealand Qualifications Authority to audit institutes of technology and polytechnics and, in 2005, it completed the second round of audits of the polytechnics for compliance and effectiveness against academic standards. An institute 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.

A sub-committee on university entrance co-ordinates advice on the common standard of entrance to universities. The sub-committee also regulates discretionary entrance and co-ordinates 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.

Steering the tertiary education system

The Tertiary Education Commission's role includes giving effect to the government's statement of tertiary education priorities. The Tertiary Education Commission is also responsible for operating the government's funding mechanisms – allocating funding to tertiary education organisations. The key instruments the Tertiary Education Commission uses in managing these responsibilities are charters and profiles.

Charters

Charters are public documents that illustrate an organisation's contribution to the tertiary education strategy and to the wider tertiary education system and its stakeholders. They are high-level governance documents providing a broad description of the provider's or industry training organisation's mission and role in the tertiary education system. The charter indicates the type of education and other activities that the provider or industry training organisation will position itself to deliver and it describes the organisation's engagement with other providers and stakeholders. Charter approval is the first prerequisite for eligibility for public funding for quality-assured providers. Charters are approved by the Minister, on the advice of the Tertiary Education Commission.

Profiles

The annual profile describes in greater detail the organisation's strategic direction, activities, policies and performance targets for the next three years. Profiles have to be submitted each year by all publicly funded tertiary education organisations, unless exempt. The Tertiary Education Commission is responsible for assessing profiles and, if necessary, suggesting and discussing changes in the profile. When it is satisfied, on the evidence in the profile, that the tertiary education organisation is making a suitable contribution to the tertiary education strategy, the commission will approve the profile – thereby providing access to funding. The profile contributes to a more detailed map of the tertiary education sector and establishes more consistent monitoring, reporting and accountability for publicly funded organisations.

The government has announced its intention to strengthen the profile system substantially. The profile of a tertiary education organisation will become more closely linked to funding. It will provide a plan that will be the basis on which the Tertiary



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Education Commission will invest in that organisation. At this stage the new system will focus on the Student Component and Industry Training Funds, with work on other funds to be undertaken in the future.

The Tertiary Education Commission uses an assessment of the strategic relevance of courses and qualifications to determine which tertiary education organisations gain approval for access to public funding or to pursue particular initiatives. The commission's assessment complements quality assurance and the performance monitoring and accountability requirements established through profiles.

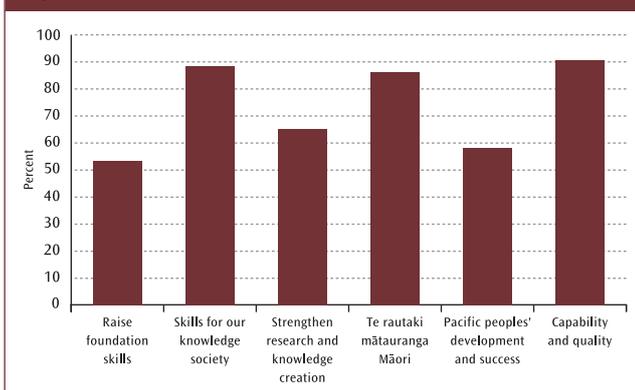
Tertiary education organisations report on the performance and financial targets set out in their profiles in an annual statement of service performance. The Tertiary Education Commission, the New Zealand Qualifications Authority and the Ministry of Education also carry out a range of other monitoring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

A recent study of the influence of the Tertiary Education Strategy 2002/07 on tertiary education organisation profile objectives found that three strategies stood out as consistently addressed.

These were:

- Skills for our knowledge society
- Te rautaki mātauranga Māori – contribute to the achievement of Māori development aspirations, and
- Capability and quality.

Figure 2.1: Percentage of 2006/08 profiles with change-focused objectives



The study looked at two sets of profiles developed by tertiary education institutions and industry training organisations covering the periods 2005 to 2007 and 2006 to 2008. It found that there was a considerable uniformity of response to the tertiary education strategy. Of the 27 theme areas used to analyse the profiles, 10 themes were reported on for both periods by tertiary education organisations. There were also six areas that had a very low response with only 5 percent of tertiary education organisations responding to these themes. For more information on this study see: <http://educationcounts.edcentre.govt.nz/publications/homepages/tes/index.html>

How funding works

The tertiary education system has an integrated funding framework. This 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 (through the Student Component, the Industry Training Fund, Modern Apprenticeships, Training Opportunities and Youth Training, Gateway, Adult Literacy, Community Education, English for Speakers of Other Languages and other foundation education)
- funding for research (through centres of research excellence funding and the Performance-Based Research Fund), and
- targeted funding, through a Strategic Development Component.

The framework as a whole has the following general features:

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

The government has signalled its intention to strengthen the funding system so as to link funding more closely with its strategy for the system. Funding will be closely linked to the quality and relevance of a tertiary education organisation's provision through the investing in a plan process – where

investments will be made in provider plans that are closely linked to stakeholders' needs and government priorities. 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 for longer periods – rather than the current annual funding.

Funding for research

Until 2005, 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 2005 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, the government decided that it will continue to fund centres of research excellence beyond 2008. An additional \$10 million in operating funding and a one-off capital injection of \$20 million has also been allocated for the 2007/08 year. In 2006, bids will be invited for extension of existing centres and/or the possible addition of two more centres of research excellence.

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 are explained more fully in chapters 12 and 15 of this report.

The strategic development component

The strategic development component contains a number of funds intended to help tertiary education organisations align their offerings with the tertiary education strategy. Among the funds included in this component are:

- *Special Supplementary Grants – Tertiary Students with Disabilities*
This fund provides funding for public tertiary education institutions to help them provide support that will enable those with disabilities to participate and achieve in tertiary education.
- *Partnerships for Excellence*
This fund enables public tertiary education institutions to seek funding to support major strategic initiatives. Government funding under this scheme is to be matched by contributions from the private sector.
- *ITP Business Links Fund*
Under this initiative, polytechnics negotiate with the Tertiary Education Commission an industry engagement plan that explains how they intend to engage or expand their connections with business and industry groups. The polytechnics receive funding on the basis of achieving agreed milestones under these plans.

Among other funds within this component are the Innovation Development Fund, intended to help tertiary education institutions develop initiatives that will support their strategies, and the e-Learning Collaborative Development Fund, which funds projects in which providers work together on innovative e-learning projects.



New Zealand's tertiary education system
and what the sector provides

AN OVERVIEW

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

New Zealand also provides learning opportunities to a significant number of international students. In 2005, the number of international students declined while the number of domestic students increased. Converting the enrolments to equivalent full-time student units shows that these fell slightly because of the fall in international enrolments.

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. Also, the New Zealand Register of Quality Assured Qualifications provides a standard structure for naming and describing qualifications across levels and types of provision.

LOOKING TO 2006

In 2006, government decided to continue to fund centres of research excellence beyond 2008. This support is expected to benefit New Zealand industries and further develop collaborative scientific research in New Zealand. Additional operating funding and a one-off capital funding allocation were also made in 2006.

Also, the proposals announced by the government in April 2006 to take further steps in the tertiary reforms aim to further strengthen New Zealand's tertiary education provision. The proposed move to multi-year funding is expected to enable tertiary education providers to better play to their strengths. Similarly, the government's plans to accentuate the system's focus on outcomes will encourage enhancements in the quality of tertiary education teaching and learning.

LEARNING OPPORTUNITIES

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.

FORMAL LEARNING

Formal learning covers all learning that contributes towards a recognised qualification.

The majority of formal learning in tertiary education is funded through the student component. This provides funding for tertiary education learning from second-chance education through to doctoral studies. It is available to public tertiary education institutions, as well as those private training establishments and other tertiary education providers that have met the required quality standards and demonstrated the relevance of their provision to the Tertiary Education Commission.

Student component funding 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 an enrolment fee is also charged to the student. It is intended that a new funding and investment system be phased in from 2008.

International students also make up a significant number of formal students (47,400 in 2005). New Zealand attracts international students from around the world, with 75 percent coming from the Asia Pacific region. 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.



New Zealand's tertiary education system and what the sector provides

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

	Formal	Non-formal
Enrolled with an education provider	<ul style="list-style-type: none"> Student component-funded students International students Targeted training programmes Tertiary education in schools Industry training and Modern Apprenticeships (off-job training) 	<ul style="list-style-type: none"> Adult and community education through community education providers, tertiary education institutions, schools and others
Employment and community-based learning	<ul style="list-style-type: none"> Industry training and Modern Apprenticeships (on-job training) 	<ul style="list-style-type: none"> Adult and community education through community organisations Adult literacy programmes

Industry training provides training that counts towards recognised qualifications and is designed by, and delivered in conjunction with, industry. The costs of training are jointly funded by government and industry. The training is administered and supported through the 41 industry training organisations, which have been established by particular industries or groups of industries.

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 co-ordinators. The co-ordinators 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 that 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 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.

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 2005, there were 132,000 students (or 33,000 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.

NON-FORMAL LEARNING

Adult and community education

This type of education 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 deliver a range of courses and liaise with interested and relevant agencies. The networks are varied in nature, reflecting local conditions and requirements.

The ACE Innovation and Development Fund has been set up to encourage and support flexible and responsive provision of ACE at local levels. It provides one-off funding for projects that address emerging needs, social development and/or priority learner groups.

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.

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.

In 2005, the government established a single pool of ACE funding for all ACE providers. This brings the funding for all community education under the same framework and is designed to improve the quality, relevance and value for money of ACE. There will also be a new funding framework to create access to funding for all providers on the basis of the five ACE priorities referred to above. This is expected to significantly increase the access community providers have to ACE funding, while limiting provision by tertiary education institutions.

Adult literacy and foundation education

A range of 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 Zealand's tertiary education system and what the sector provides

- new approaches
- reaching learners not currently accessing foundation learning
- strengthening foundation learning 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 over. 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 which 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

The Tertiary Education Strategy 2002/07 placed a strong focus on the role of tertiary education in developing skills necessary for participation in society, including:

- Raising foundation skills so that all people can participate in New Zealand's knowledge society, and
- Developing the skills New Zealanders need for our knowledge society.

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
- developing higher levels of competence for effective participation in the knowledge society, and
- enhancing 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 make 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.

Table 3.2: Alignment of key competency frameworks across sectors

Te Whāriki	School curriculum	Tertiary
Wellbeing Belonging	Managing self Participating and contributing	Acting autonomously
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*.

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



New Zealand's tertiary education system and what the sector provides

- 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:

- developing 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, which incorporates qualifications recognised and assured 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	Master degrees
8	Postgraduate Diplomas and Certificates, Bachelor 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 award 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



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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 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 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 seven centres are inter-institutional research networks with researchers working together on a commonly agreed research plan.

In Budget 2006, the government announced its intention to conduct another selection round and to create new centres of research excellence.

The second is the Performance-Based Research Fund, which is being phased in over the period 2004 to 2007 and will shift the basis of research funding from a system based on student enrolments to one where funding will be 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 and Trends 2002*, pp 108-110, and in Tertiary Education Commission (2004), *Performance-Based Research Fund: evaluating research excellence – the 2003 assessment*, pp 15-23.



Outcomes of tertiary education

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AN OVERVIEW

More New Zealanders have been participating in tertiary education in recent years and in 2005 there was a significant increase, from the previous year, in students completing a tertiary qualification. The overall rise was largely a result of an increase in the number of sub-degree qualifications awarded. There was also a significant increase in the number of students completing a postgraduate qualification, while the number of students completing bachelors degrees fell from the previous year.

One in two people in the New Zealand working-age population held a tertiary qualification in 2005. The group comprising all 'other' ethnicities had the highest proportion of its people with a bachelors degree or higher, followed by Europeans, Māori and Pasifika people.

The unemployment rate for holders of bachelors or higher qualifications and other tertiary qualifications fell in 2005 and these rates continued to be lower than for those with school qualifications or no qualifications. The unemployment rate also fell for those with school qualifications, while it remained unchanged in 2005 for those without any qualifications. A stronger economy has led to the lower rates of unemployment in recent years. New Zealand's unemployment rates for the tertiary qualified are well below the average for the Organisation for Economic Co-operation and Development (OECD), according to the most recently available international comparisons.

International comparisons also showed that the New Zealand population's overall tertiary attainment in 2004 was well above the OECD average for females and slightly below the average for males. The New Zealand population's attainment of bachelors or higher qualifications was below the OECD average for both males and females, while the gender gap in New Zealand for tertiary qualifications, in favour of females, is now the second largest in the world, after Finland.

In 2006, the OECD calculated the internal rate of return to tertiary education for New Zealand for the first time. Rates of return were calculated for the individual (the private internal rate of return) and for the government (the public internal rate of return). The private tertiary return in 2003 was above the bond rate, meaning that even in a narrow financial sense, tertiary education is a good investment for a private individual. While the return to New Zealanders was higher than to the Danes and Swedes, it was below that of the Americans and the English.

The relatively low rate of return in New Zealand reflects the fact that there is less income disparity in New Zealand than in countries like the United States and the United Kingdom. The public return to tertiary education in New Zealand was again positive – it is financially a good investment for the government.

Another recent analysis looked at the earnings of students with loans who recently left study. This showed that those who completed a tertiary qualification had a higher median income, five years post-study, than those who did not complete their qualification. The income premium was higher for bachelors qualifications than for other tertiary-level qualifications. Analysis has also shown that the level and field of study and employment are factors influencing earnings.

The University of Auckland's economic contribution to the Auckland region was estimated to be \$4.4 billion in 2005 in a recent study. Similar studies in other regions have also shown that the presence of a major tertiary education provider carries a financial benefit for the community. Other recent studies on the outcomes of tertiary education showed that, on average, an additional year of education increases future income somewhere between 5 and 15 percent. Tertiary education also continues to contribute positively to New Zealand's health, social and family outcomes. In addition to making workers more productive, it leads to the creation of knowledge, ideas and technological innovation. In the area of health, for example, studies show that those with post-school qualifications have lower mortality rates than those with no, or only school, qualifications.

LOOKING TO 2006

In 2006, the Ministry of Social Development released a report, called *Living Standards 2004*, which showed that comparatively high living standards are found among people with tertiary education. Using an Economic Living Standard Index, the report provided detailed information on the impact of tertiary education on the living standards of New Zealanders.

As the country moves towards a knowledge-based economy, it is interesting to speculate whether women's higher educational attainment will result in more women being promoted to positions of leadership within both the public and private sectors. The emerging gender gap in educational attainment favouring females may portend closure of the gender wage gap and create a new economic paradigm, one that could bring in a

ANALYTICAL TABLES: An associated set of tables on tertiary education outcomes is available on the Education Counts website, Tables COM1-35, EAP1-8, PSE1-3, PS11-12 and PS01-2. Detailed technical information on the data presented here can be found in chapter 17.



Outcomes of tertiary education

new social order. This portends higher earnings and higher status for women in the years to come, should a new social order be realised.

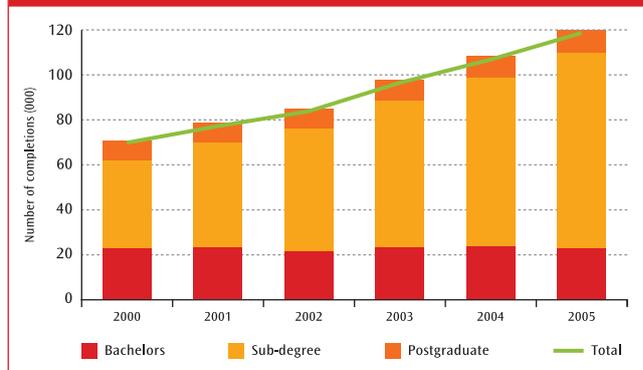
New Zealand's tertiary education system adds social and economic welfare by promoting economic growth and reducing social inequality, and through the achievement of these goals, it enhances happiness and wellbeing. The prospect of better opportunities and a higher standard of living leads people to continue their education after attaining school qualifications. The long-term outcomes of tertiary education are explored in this chapter, using selected indicators that measure the progress towards desired outcomes. The indicators used here are New Zealand's qualification completion rates, the qualifications of the population, the relationship between labour force status and education, the income benefits from education, the impact of education on participation in the community, and the impact of education on the population's health. Some of the indicators are also used to compare New Zealand's outcomes with those of other member countries of the Organisation for Economic Co-operation and Development.

RISING TREND IN TERTIARY EDUCATION QUALIFICATIONS

The number of New Zealanders completing a tertiary qualification increased by 10.9 percent from 2004 to 2005. There were 16 percent more students who attained a sub-degree qualification and 6.7 percent more students who completed a postgraduate qualification. However, the number of domestic students completing a bachelors degree in 2005 fell by 3.5 percent from 2004.

Over the period from 2000 to 2005, there was a 70 percent increase in the number of students who completed a tertiary education qualification. The overall rise was largely the result of an increase in sub-degree qualifications. Figure 4.1 shows that in 2000 there were 69,700 qualifications completed and in 2005 this had risen to 118,600 qualifications. Those completing a sub-degree qualification more than doubled over this period. Before the recent fall, completions of bachelors degrees remained relatively steady from 2000 to 2005, while completions of postgraduate degrees rose by 17 percent over these years.

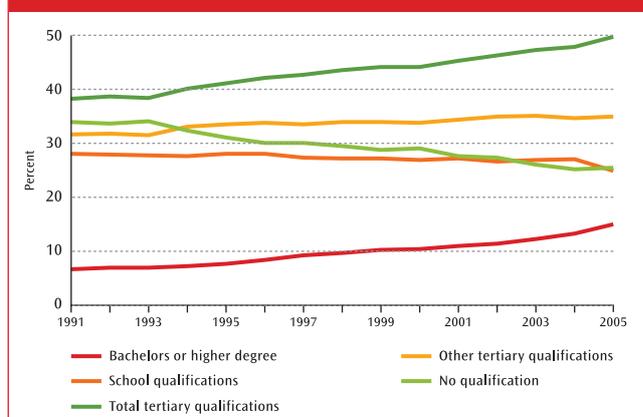
Figure 4.1: Qualification completions by domestic students



A major factor driving the increase in qualification completions is the higher participation by New Zealanders in tertiary education in recent years. A picture of the level of tertiary qualifications in the New Zealand working-age population can be seen in data from Statistics New Zealand's Household Labour Force Survey. Of those in the working-age population (15 years or over), the proportion holding a tertiary qualification rose steadily from 1991 to 2005, from 39 to 50 percent. The increase from 2004 to 2005 was just above 1 percent.

The proportion of the New Zealand working-age population holding a bachelors or postgraduate qualification doubled from 7 to 15 percent between 1991 and 2005, while holders of other tertiary qualifications increased by only 3 percent. There was a significant drop, from 1991 to 2005, in the proportion of the population with no school qualification, while the proportion of school qualification holders remained relatively unchanged.

Figure 4.2: Working-age population (June quarter) by highest tertiary qualification



Source: Statistics New Zealand (2005), Household Labour Force Survey.

From 2004 to 2005, much of the growth in tertiary-level attainment in the working-age population was due to the growth in bachelors or higher qualifications. The proportion holding other tertiary qualifications remained unchanged from 2004 to 2005. Thirty-five percent of the population held other tertiary qualifications in 2005, while one-quarter held a school qualification and another quarter had no formal qualifications.

Ethnicity of holders of tertiary qualifications

Looking at the ethnic make-up of the population over the period from 1991 to 2005 shows that the proportion holding a bachelors or higher qualification increased by 14 percent for the Other ethnic group, by 7.5 percent for Europeans, by 4.8 percent for Māori and by 3.4 percent for Pasifika (Figure 4.3). A significant increase in the attainment rate of the Other ethnic group may be attributable to the fact that the proportion of the New Zealand usually resident population who were born overseas and also obtained their tertiary qualifications overseas is increasing over time. In an analysis of census data, Newell and Perry (2006) estimated that, in 1996, 20 percent of the usually resident population with bachelors or higher qualifications were born and educated overseas and in 2001 this had risen to 22 percent.

Qualification share by ethnic group

In terms of all qualification levels, the proportion of the European group and the Other ethnic group that held a tertiary qualification was 52 percent each in 2005. Thirty-six percent of Māori and 32 percent of Pasifika peoples held a tertiary qualification in 2005. In 2005, 30 percent of the Other ethnic group, 14 percent of Europeans, 5.8 percent of Māori and 4.5 percent of Pasifika peoples held a bachelors or higher qualification. Almost 40 percent of those in Māori and Pasifika groups did not have a formal qualification.

The bachelors or higher qualifications in the working-age population in 2005 increased on the previous year for the Other ethnic group by 1.9 percent, for Europeans by 1.4 percent and for Māori by 1.5 percent, while it fell for the Pasifika group by 0.9 percent. Due to the small size of the sample associated with the Māori and Pasifika ethnic groups at the bachelors or higher qualification level, caution needs to be exercised in drawing inferences about those sub-populations.

Figure 4.3: Working-age population (June quarter) with a bachelors or higher qualification by ethnic group



Note: Due to larger sampling errors for the smaller ethnic groups such as Māori and Pasifika, caution needs to be exercised in interpreting the results for those groups.

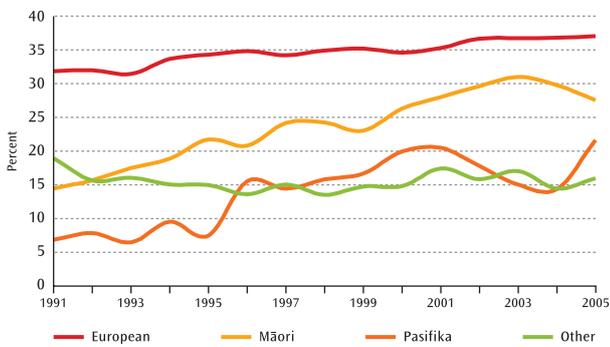
While Figure 4.3 shows that significant disparity exists in New Zealand in the attainment of bachelors or higher tertiary qualifications by ethnic group, there is a positive trend in the attainment of other tertiary qualifications by Māori and Pasifika (Figure 4.4). Māori holders of other tertiary qualifications increased significantly, from 21 percent to 31 percent, between 1991 and 2005. However, from 2003, there was a slight drop in the proportion of Māori other tertiary qualification holders. Between 1991 and 2005, the percentage of Pasifika with other tertiary qualifications rose by 10 percentage points. Over the same period, Europeans registered only a small increase in other tertiary qualifications of four percentage points, while for the Other ethnic group the number holding other tertiary qualifications decreased by two percentage points.

In 2005, the proportion of the working-age population with other tertiary qualifications was 38 percent for Europeans, 31 percent for Māori, 26 percent for Pasifika peoples and 22 percent for the Other ethnic group.



Outcomes of tertiary education

Figure 4.4: Working-age population (June quarter) with other tertiary qualifications by ethnic group



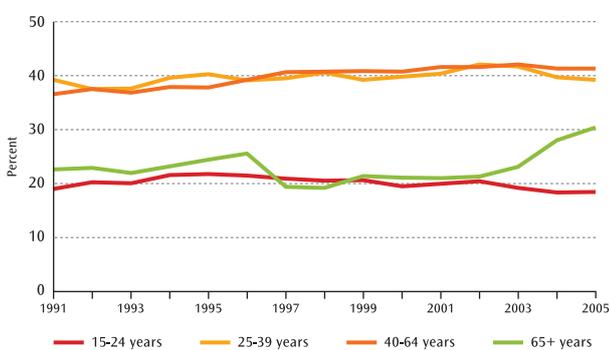
Source: Statistics New Zealand (2005), Household Labour Force Survey.

Note: Due to larger sampling errors for the smaller ethnic groups such as Māori and Pasifika, caution needs to be exercised in interpreting the results for those groups.

Age of other tertiary qualification holders

Of those holding other tertiary qualifications, the majority in 2005 were aged 40 years or over. In 2005, 57 percent of all tertiary qualification holders in the working-age population were over 40 years of age, compared with 44 percent in 1991. This trend is partly a reflection of the increasing number of completions in other tertiary qualifications by those aged 40 to 64 years, between 1991 and 2005. The percentage of the population holding other tertiary qualifications in the age groups of 15 to 24 years has decreased slightly since 2002, while the proportion for those aged 25 to 39 years remained virtually unchanged, over the period from 1991 to 2005.

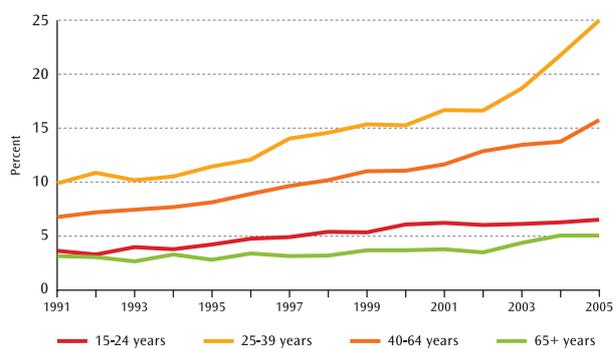
Figure 4.5: Working-age population (June quarter) with other tertiary qualifications by age group



Source: Statistics New Zealand (2005), Household Labour Force Survey.

The proportion of those aged 65 years or older with other tertiary qualifications increased steadily over the five years to 1996, then, following a flat period to 2002, it rose steadily to reach 30 percent in 2005. This is likely to be due to the increased participation of older people in tertiary education since 2000. It is evident from Figure 4.6 that over the 14 years ending in 2005 there was a significant increase in the number of bachelors degree or postgraduate qualifications held by the population in the various age groups. This is especially apparent in the age groups of 25 to 39 years and 40 to 64 years. In 1991, 10 percent of 25 to 39 year olds had bachelors or postgraduate qualification and by 2005 this had risen to 25 percent. In the same period, this proportion increased from 6.8 to 16 percent for the 40 to 64 year olds. The proportion of 15 to 24 year olds with a bachelors or postgraduate degree increased from 3.6 percent in 1991 to 6.5 percent in 2005, while for those aged 65 or older the proportion increased from 3.1 to 5 percent.

Figure 4.6: Working-age population (June quarter) with a bachelors or higher qualification by age group



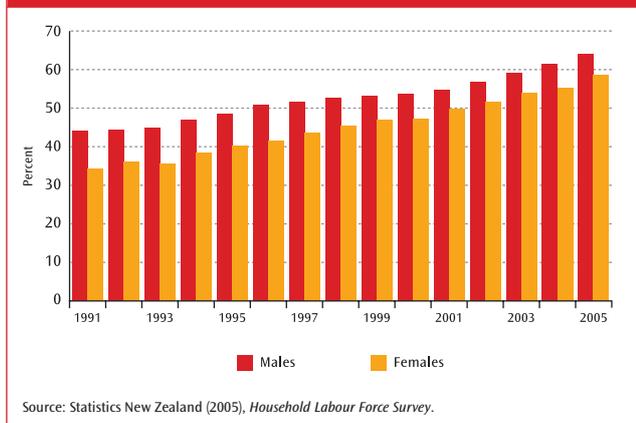
Source: Statistics New Zealand (2005), Household Labour Force Survey.

Rising female qualification attainment

Over the period from 1991 to 2005, the proportion of women attaining a tertiary qualification in the working-age population increased steadily, while among men the proportion showed little movement. Especially for bachelors or higher qualifications, the gender gap has closed significantly. It is interesting to note that the gender gap in the holders of school qualifications in favour of girls may appreciably influence the future post-school attainment rate. How this shift will be reflected in labour market outcomes in the coming years will be of considerable interest. Will attitudes about women's role in society evolve in a manner that is compatible with the educational edge that women may soon gain over men? Or will new barriers spring up that prevent women from securing an equal footing with men in top management positions?¹ This portends higher earnings and higher status for women in the years to come.

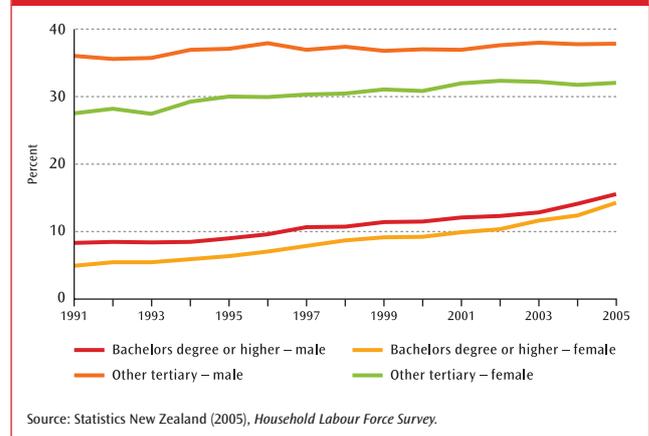
The graph below shows that the number of women holding a tertiary qualification increased from 34 percent in 1991 to 59 percent in 2005.

Figure 4.7: Working-age population (June quarter) with a tertiary qualification by gender



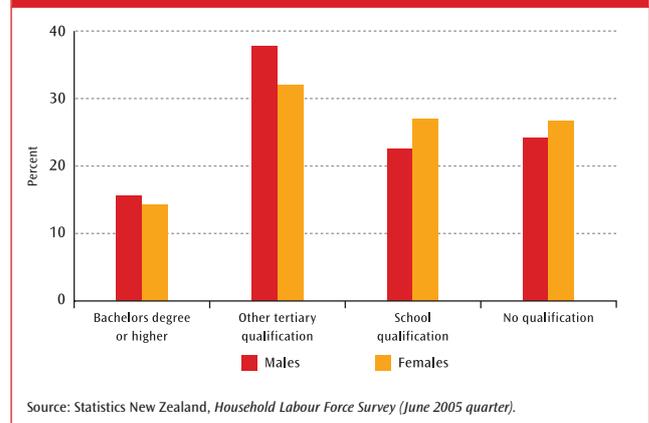
The gender gap is also narrowing, but more slowly, for other tertiary qualifications. Figure 4.8 illustrates that the proportion of males with other tertiary qualifications remained unchanged at 38 percent from 1991 to 2005, while the proportion of females with other tertiary qualifications increased from 27 percent to 32 percent over the same period.

Figure 4.8: Working-age population (June quarter) by qualification level and gender



The estimates from the 2005 Household Labour Force Survey of the number of men and women by highest level of qualification are shown in Figure 4.9. Among the female population, about 27 percent held a school qualification and a similar proportion had no formal qualification.

Figure 4.9: Working-age population by qualification level and gender



Management and commerce most common field of study

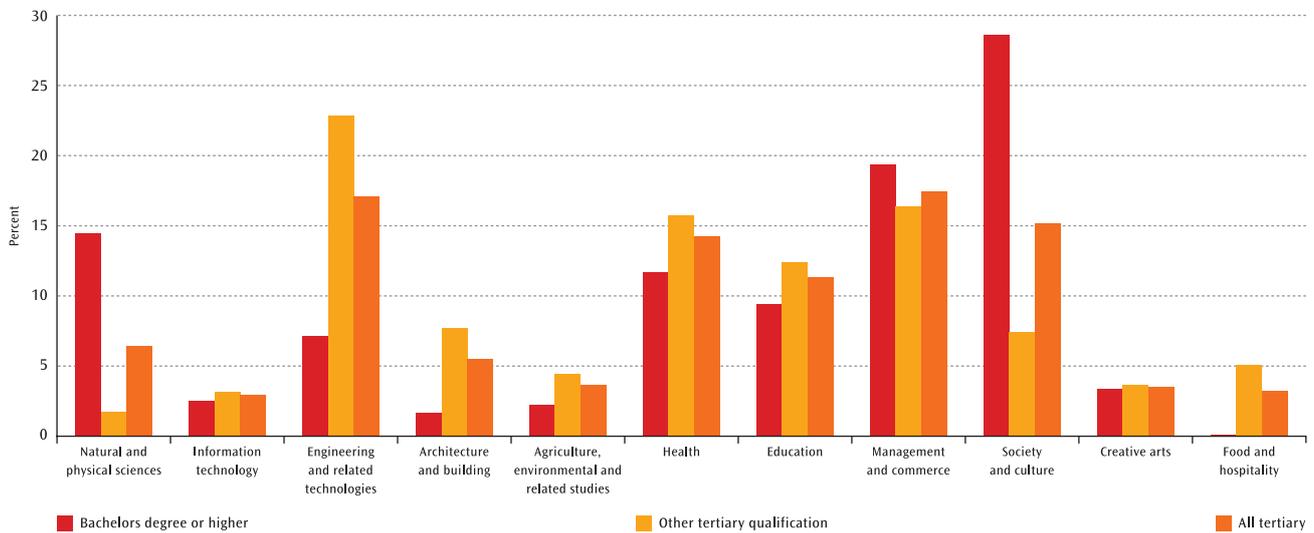
In a recent analysis of the 2001 census data, Newell and Perry (2006) indicated that a large proportion of people hold qualifications in management and commerce (17 percent), followed by engineering and related studies (17 percent) and society and culture (15 percent). The least common field of those considered was information technology (Figure 4.10).

¹ U.S. News & World Report reporter Brendan I. Koerner speculates, "If college degrees remain an entry to wealth and status in the 21st century, males may have to get used to the same second-class status that women so long endured, as highly educated females become the majority among the nation's intellectual, economic, and even power elite."



Outcomes of tertiary education

Figure 4.10: Working-age population in 2001 by qualification level and field of study



Source: Newell and Perry (2006).

The most common field of study varied by level of the study. At bachelors degree and postgraduate level the most common field was society and culture (29 percent), followed, at some distance, by management and commerce (19 percent) and natural and physical sciences (14 percent). The most common field of study for sub-degree qualifications was engineering and related studies (23 percent), followed by management and commerce (16 percent) and health studies (15 percent). The least common field of study for bachelors degrees was food and hospitality while for other tertiary qualifications natural and physical sciences were least common. There was a significant shift in the choice of fields of study observed between 1981 and 2001. This shift in the field of study preference was largely driven by labour market demand.

How New Zealand compares internationally

International comparisons indicate that at 36 percent attainment of tertiary qualifications by New Zealanders is slightly higher than the OECD average. This proportion is comparable to those of Australia and Finland. The proportion of the New Zealand population with a bachelors or higher qualification is 18 percent,² slightly lower than the OECD average. In Finland, this rate is 18 percent and in Australia it is 22 percent. This level of attainment is observed in countries like the United States, Canada, New Zealand, Australia and Finland where programmes of three to five years are the norm. Sub-degree programmes are a sizeable feature of the tertiary education system in some OECD countries, including New Zealand (Figure 4.11).

² This percentage is higher than that from the *Household Labour Force Survey* because it is based on a slightly different age group.

Figure 4.11: Proportion of population aged 25 to 64 years in 2004 by qualification level and country

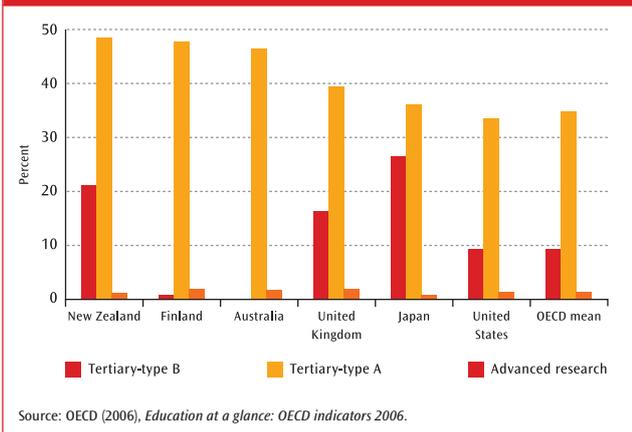


Note: Diploma in this graph refers to certificates and diplomas at level 5 to 7 and Certificate refers to level 1 to 4 certificates.

Finland does not have qualifications equivalent to level 1 to 4 certificates.

Another indicator of tertiary education outcomes is the graduation rate. This is charted below for selected OECD countries. The graduation rate for 2004 is the proportion of students that have completed tertiary qualifications,³ expressed as a percentage of the age group normally completing these qualifications.

Figure 4.12: Tertiary graduation rate in 2004 by qualification level and country



Note: Tertiary-type B and tertiary-type A programmes correspond to level 5 to 7 certificates and bachelors or higher qualifications, respectively. Advanced research programmes refer to doctoral study in New Zealand. The duration of programmes leading to a first tertiary-type A qualification ranges from three to five years.

Although not all of those completing are in the ‘normally completing’ age band, this figure gives an indication of how many students are obtaining a higher-level tertiary qualification.

At over 40 percent, the graduation rate for tertiary-type A qualifications in New Zealand is one of the highest among OECD countries. This compares with the OECD average of 35 percent. New Zealand’s graduation rate is comparable to those in Finland and Australia. Graduation rates at degree level are at 40 percent or more in Australia, New Zealand and the United Kingdom, where bachelors level programmes of three to five years are the norm.

At 21 percent, New Zealand’s diploma-level graduation rate in 2004 was also higher than the OECD average of 9 percent. Japan has the highest graduation rate at diploma level, followed by New Zealand. Programmes of this type are a sizeable feature of the tertiary system in only a small number of OECD countries, most notably Japan and New Zealand. The graduation rate in New Zealand for advanced research programmes is slightly lower than the OECD average of 1.3 percent.

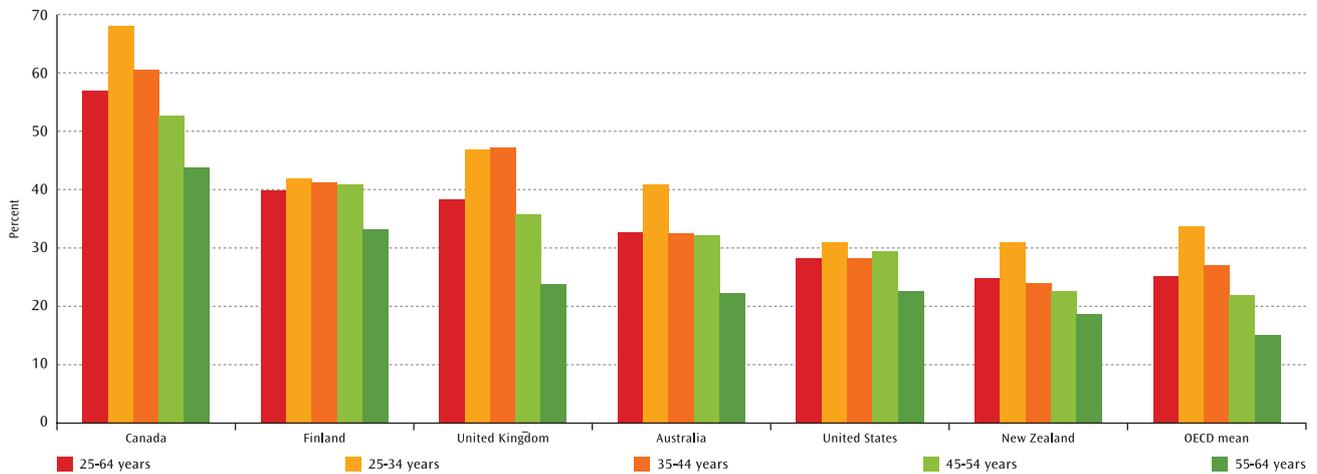
Tertiary-level qualification attainment of the population by age group, for selected OECD countries, is shown in Figure 4.13. New Zealand’s attainment is higher than the OECD average for those aged 45 to 54 years and 55 to 64 years, at 26 and 20 percent, respectively. This compares to the OECD averages of 23 and 18 percent. However, in the younger age groups, the proportion of the population with a tertiary qualification is lower than the OECD average. New Zealand’s attainment was 28 percent for those aged 25 to 34 years and 26 percent for the group aged 35 to 44 years. The OECD averages were 31 and 27 percent, respectively.

³ This measure excludes certificate levels 1 to 3, which are considered by the OECD to be post-secondary, non-tertiary qualifications.



Outcomes of tertiary education

Figure 4.13: Proportion of population with a tertiary qualification in 2004 by age group and country



Source: OECD (2006), *Education at a glance: OECD indicators 2006*.

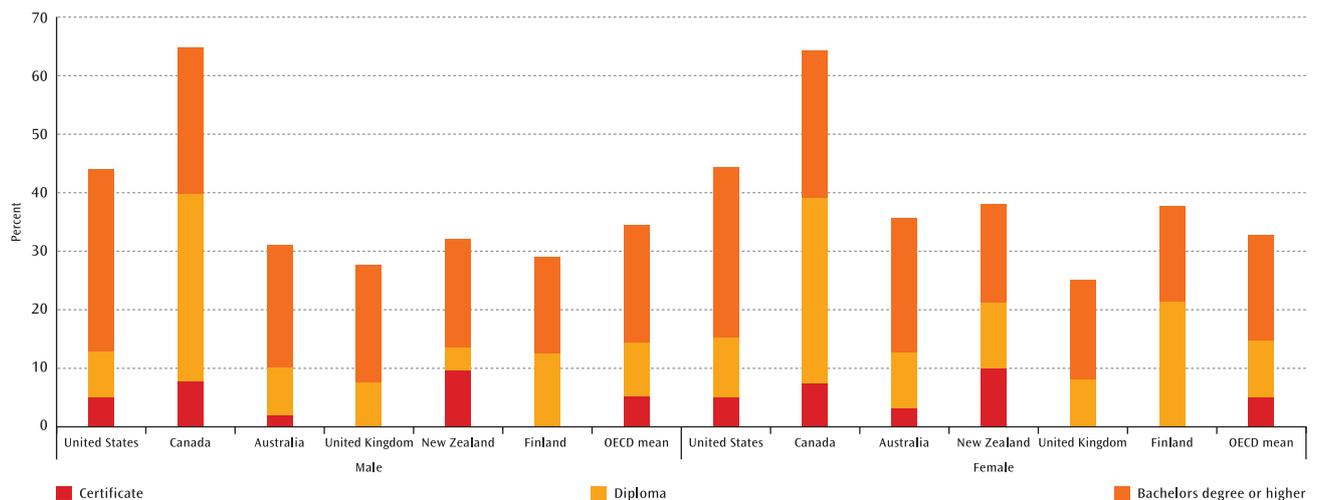
Note: This graph excludes post-secondary non-tertiary qualifications which refer to level 1 to 4 certificates.

Tertiary qualification attainment by gender, for selected OECD countries, is charted in Figure 4.14. New Zealand had a higher tertiary qualification attainment rate in 2004 for females than males, at 38 and 32 percent, respectively. This compares with an OECD average of 33 percent for females and 34 percent for males. Male and female attainment rates of bachelors or higher qualifications in New Zealand are below the OECD average.

On the other hand, female attainment at post-secondary and diploma level was higher in New Zealand compared with the OECD average.

Compared with other OECD countries, the gender gap is largest in Finland, followed by New Zealand, where the female graduation rate exceeds that of males by more than 6 percent.

Figure 4.14: Proportion of the population with a tertiary qualification in 2004 by gender and country



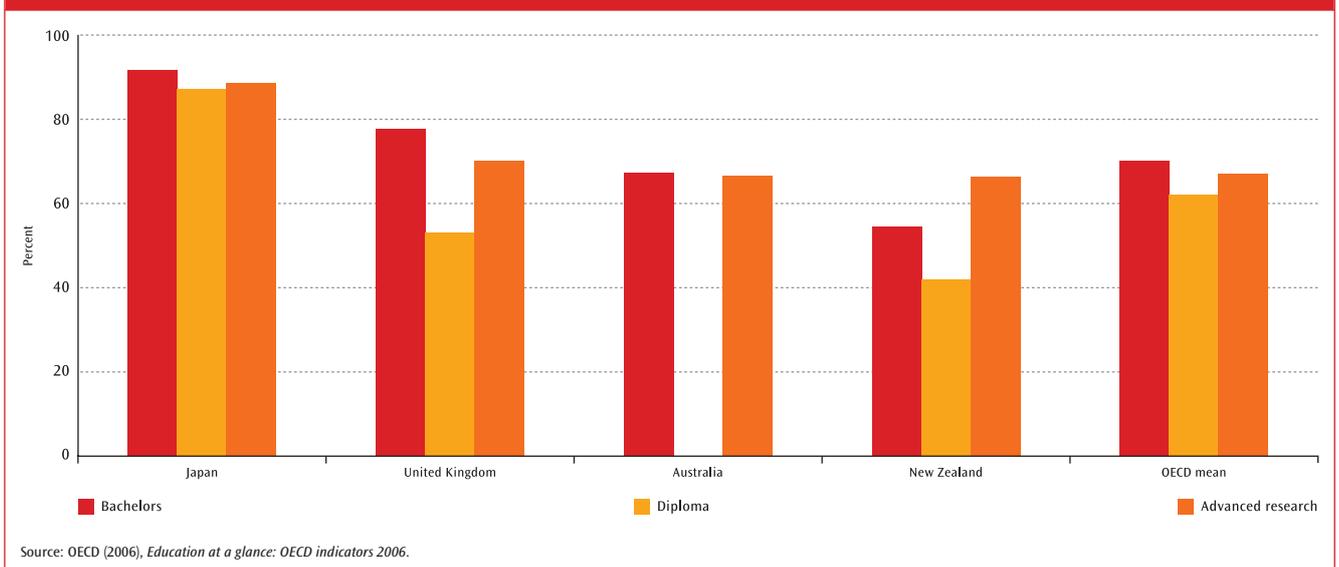
Source: OECD (2006), *Education at a glance: OECD indicators 2006*.

Note: Diploma in this graph refers to level 5 to 7 certificates and diplomas and Certificate refers to level 1 to 4 certificates. Finland does not have qualifications equivalent to level 1 to 4 certificates.

Another indicator used by the OECD for comparing tertiary outcomes is the survival rate. The survival rate is defined as the proportion of students who successfully complete the study undertaken within the normal minimum time for the qualification. The highest degree-level survival rates are reported by Japan, at over 80 percent, while in New Zealand and the United States the survival rates are just over 50 percent. The survival rates for degree-level programmes in New Zealand,

Sweden and the United States are below the OECD average. This is due to a high proportion of part-time students in the student population in New Zealand and low barriers of entry to study. The survival rates in the advanced research programmes in New Zealand are comparable to the OECD average of 67 percent. New Zealand's diploma survival rate was 42 percent and this was one of the lowest compared to the OECD average of 62 percent (Figure 4.15).

Figure 4.15: Survival rate in tertiary education in 2004 by country



Notes:

1. Tertiary-type B and tertiary-type A programmes correspond to level 5 to 7 certificates and bachelors or higher qualifications, respectively. Advanced research programmes refer to doctoral study in New Zealand. The duration of programmes leading to a first tertiary-type A qualification ranges from three to five years.
2. The diploma figure for Australia is stated as missing.



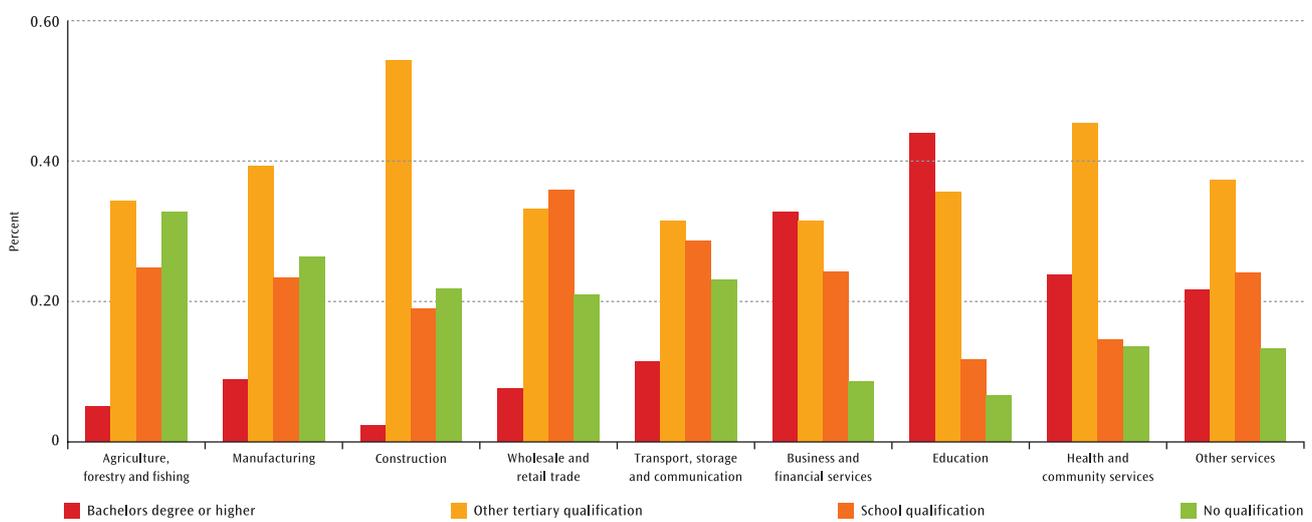
Outcomes of tertiary education

Qualification levels in industry and occupation groups

The distribution of tertiary qualification holders employed in different industries is depicted in Figure 4.16. Almost 45 percent of the bachelors or higher qualification holders are employed in education, followed by business and financial services. The smallest proportion of bachelors or higher qualification holders is employed in the construction industry.

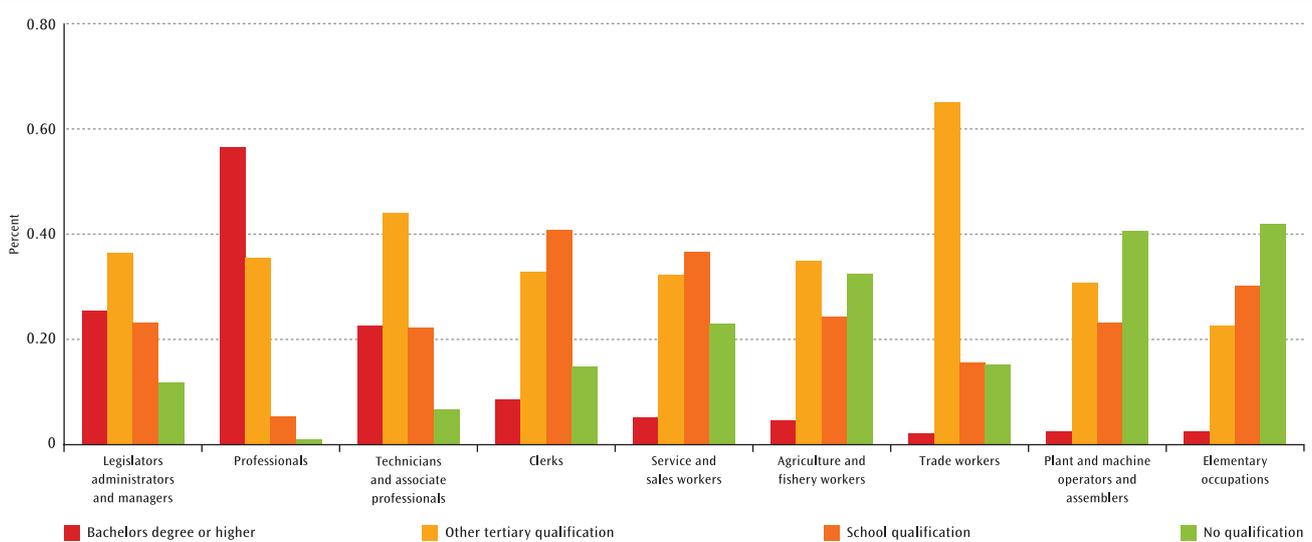
Among the holders of other tertiary qualifications, the most common industries of employment were the construction industry and health and community services, at 54 percent and 45 percent, respectively (Figure 4.16).

Figure 4.16: Distribution of employees with a tertiary qualification by industry



Source: Statistics New Zealand, *Household Labour Force Survey (June 2005 quarter)*.

Figure 4.17: Distribution of employees by qualification level and broad occupational group



Source: Statistics New Zealand, *Household Labour Force Survey (June 2005 quarter)*.

The distribution of tertiary qualification holders by broad occupational group shows that bachelors and higher qualifications are closely associated with professional occupations, legislators, administrators and managers as well as technicians and associate professionals. On the other hand, other tertiary qualification holders are generally employed as trades workers, technicians and associate professionals, agriculture and fishery workers, or clerks, sales and services workers.

LABOUR MARKET OUTCOMES

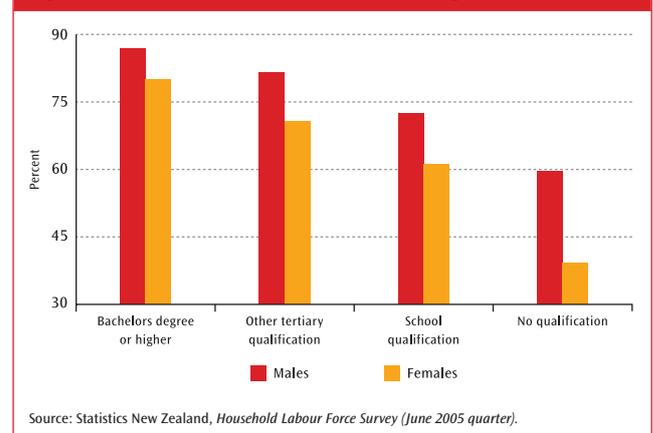
Participation in the New Zealand labour force by men and women with tertiary qualifications is graphed in Figure 4.18. A significant shift can be observed, between 1991 and 2005, in the participation in the labour market of females with a bachelors or higher qualification. From 1991 to 2005, the participation rate for the male population with a bachelors or higher qualification rose by 5 percent while the female participation rate increased by 15 percent. Consequently, the gender gap (in favour of males) in the participation rate for those with bachelors or higher qualifications decreased from 17 percentage points in favour of males in 1991 to seven percentage points in 2005. A significant upwards shift in the female participation rate from 2000 onwards can be observed in the graph below. The labour force participation rate for those holding other tertiary qualifications remained relatively unchanged over the period from 1991 to 2005, especially for males. Over the same period, a small increase can be observed in the participation rate of females with other tertiary qualifications.

Figure 4.18: Labour force participation rate (June quarter) by qualification level and gender



The 2005 labour force participation rates for men and women by qualification level are depicted in Figure 4.19. The gap between the participation rate of men and women narrows as the qualification level rises. For those with no qualification, the gap was 21 percentage points. Among those with a bachelors or higher qualification the gap was seven percentage points.

Figure 4.19: Labour force participation rate by highest qualification



Ethnicity and the labour force participation rates in 2005 are charted in Figure 4.20. Among all ethnic groups higher tertiary-level qualifications were associated with higher participation rates. The European, Māori and Pasifika groups with tertiary qualifications generally have relatively similar labour force participation rates while the Other ethnic group had a lower labour force participation rate at all levels of highest qualification.

Figure 4.20: Labour force participation rate by highest qualification and ethnic group



Note: Due to larger sampling errors for the smaller ethnic groups such as Māori and Pasifika, caution needs to be exercised in interpreting the results for those groups.



Outcomes of tertiary education

Of those with a bachelors or higher qualification in 2005, Māori had the highest labour force participation rate, 92 percent, followed by Europeans at 86 percent and Pasifika at 84 percent. Those in the Other ethnic group had the lowest participation rate at 75 percent. The labour force participation rates of those with other tertiary qualifications was 77 percent for Europeans, 75 percent for Pasifika, 74 percent for Māori, and 67 percent for the Other ethnic group.

Unemployment and the tertiary qualified

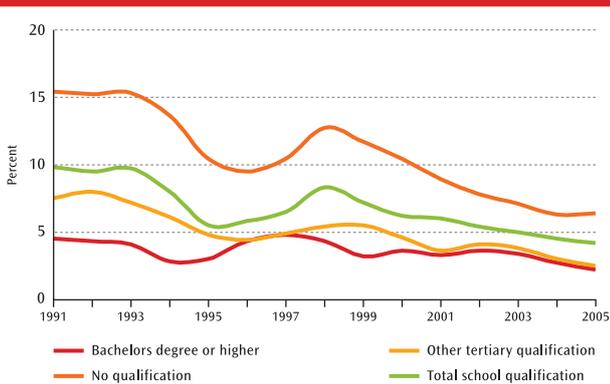
The unemployment rate has decreased across all qualification levels since 1998, due to a strong New Zealand economy. In 2005, New Zealand had the second lowest unemployment rate among OECD nations at 3.6 percent, just above South Korea. The average rate for the whole OECD in 2005 was 6.3 percent. Figure 4.21 also illustrates how the unemployment rate has varied with the change in economic cycle with unemployment falling from 1998 onwards in response to the strengthening of the economy. The unemployment rate has fluctuated for all groups; however, the smallest fluctuations have been among those with tertiary qualifications. The unemployment rate among those with bachelors or higher qualifications fluctuated between 5 percent in 1997 and 2 percent in 2005. By contrast, the unemployment rate of those with no qualifications was nearly 16 percent in 1993 and fell to 6.4 percent in 2005. This implies that having a tertiary qualification is associated with greater sustainability of employment.

Another interesting observation is that the unemployment rates for those with other tertiary qualifications and those without school qualifications has narrowed considerably. By 2005, there was no difference in the unemployment rate for holders of bachelors or higher qualifications and those with other tertiary qualifications.

Unemployment and ethnicity

Between 1991 and 2005, the disparity in the unemployment rates of different ethnic groups with a tertiary qualification narrowed. In recent years, the closing of this gap has been more pronounced, especially for those with bachelors or higher qualifications. Of those with a bachelors or higher qualification, the unemployment rate fell for Europeans from 3.6 to 1.1 percent; for Māori from 4.9 to 1.7 percent; for Pasifika from 9.9 to 1.6 percent – the most significant improvement; and for the Other ethnic group the rate fell from 11.6 to 6.5 percent. While the drop in unemployment for the Other ethnic group was five percentage points from 1991 to 2005, it nonetheless remains five percentage points higher than for the other groups. The overall trend in the unemployment rate for those holding a bachelors or higher qualification is shown as a line in the graph below (Figure 4.22). The fluctuating movements in the unemployment rate coincide closely with the economy's business cycle.

Figure 4.21: Unemployment rate (June quarter) of the working-age population by highest qualification



Source: Statistics New Zealand (2005), *Household Labour Force Survey*.

Figure 4.22: Unemployment rate (June quarter) of the working-age population with a bachelors or higher qualification by ethnic group



Note: Due to larger sampling errors for the smaller ethnic groups such as Māori and Pasifika, caution needs to be exercised in interpreting the results for those groups.

Of those with other tertiary qualifications, the gap in the unemployment rate for the Other ethnic group has also gradually become smaller, from 13 percent in 1991 to 4.3 percent in 2005. Over the same period, the unemployment rate for Europeans dropped from 6.2 to 2 percent, for Māori from 19 to 6 percent and for the Pasifika group from 21 to 3.7 percent.

The lower unemployment rate associated with holders of higher-level qualifications highlights the importance of tertiary qualifications in the labour market. Strong economic growth and higher attainment rates have both contributed significantly to lower unemployment rates in recent years. A detailed discussion on labour force participation by educational qualification can be found in a recent report by Smart (2006).

Marginal gender disparity in unemployment rates

The unemployment rates for men and women with bachelors or higher qualifications show only a marginal disparity in 2005, when compared with other tertiary qualification holders. The unemployment rate in 2005 for females with bachelors or higher qualifications was 2.5 percent, while for males this was slightly higher at 2.8 percent. For males with other tertiary qualifications the unemployment rate was 2.3 percent, while females with other tertiary qualifications had a higher unemployment rate

of 3.2 percent. The gender disparity in unemployment is more evident among those with no school qualifications.

How does New Zealand's unemployment compare internationally?

In this section, we compare the employment rate at various qualification levels in OECD countries. The employment rate referred to here is calculated as the number employed as a percentage of the population of working age, those aged 25 to 64 years. The employment rates for both males and females with tertiary qualifications for selected OECD countries are graphed below (Figure 4.23).

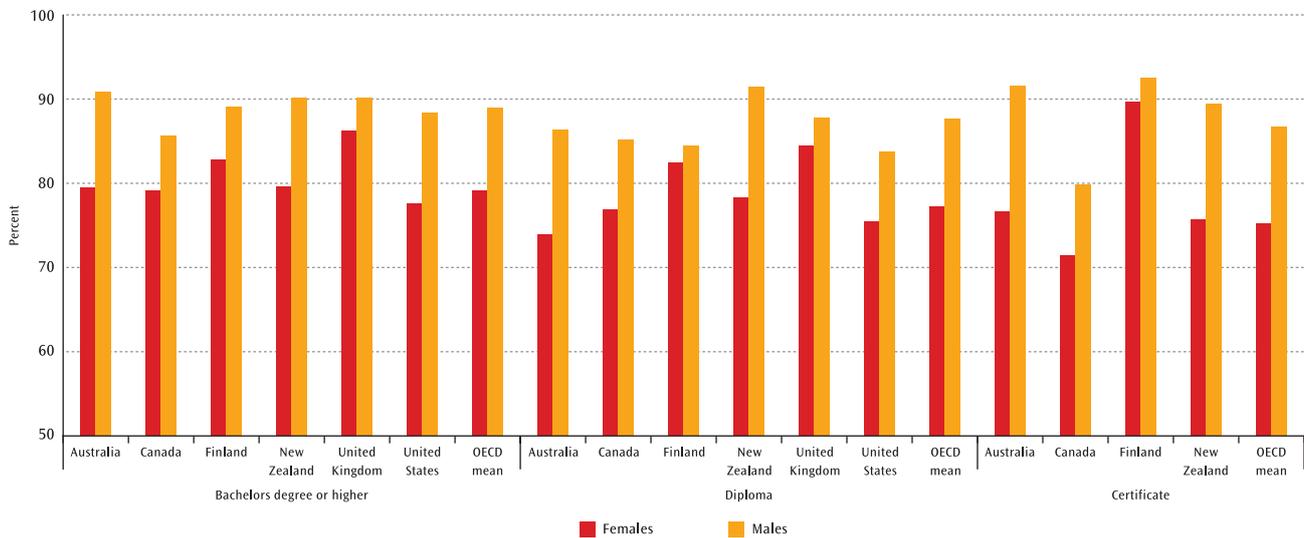
The employment rate for the New Zealand population aged 25 to 64 years was 84 percent in 2004. This compares to an OECD average of 84 percent and 83 percent in Australia.

Male employment rates in New Zealand are very similar for those with bachelors or higher qualifications, diplomas and level 1 to 4 certificates. In 2004, these rates were 90 percent, 91 percent and 89 percent, respectively. These are well above the OECD average. For females in New Zealand, these rates in 2004 were 80 percent, 78 percent and 76 percent, respectively, and this is slightly lower than the equivalent OECD averages. The male employment rate is 11 to 14 percentage points higher than for females



Outcomes of tertiary education

Figure 4.23: Employment rate in 2004 for those aged 25 to 64 years by qualification level, gender and country



Source: OECD (2006), *Education at a glance: OECD indicators 2006*.

Note: Diploma in this graph refers to level 5 to 7 certificates and diplomas and Certificate refers to level 1 to 4 certificates.

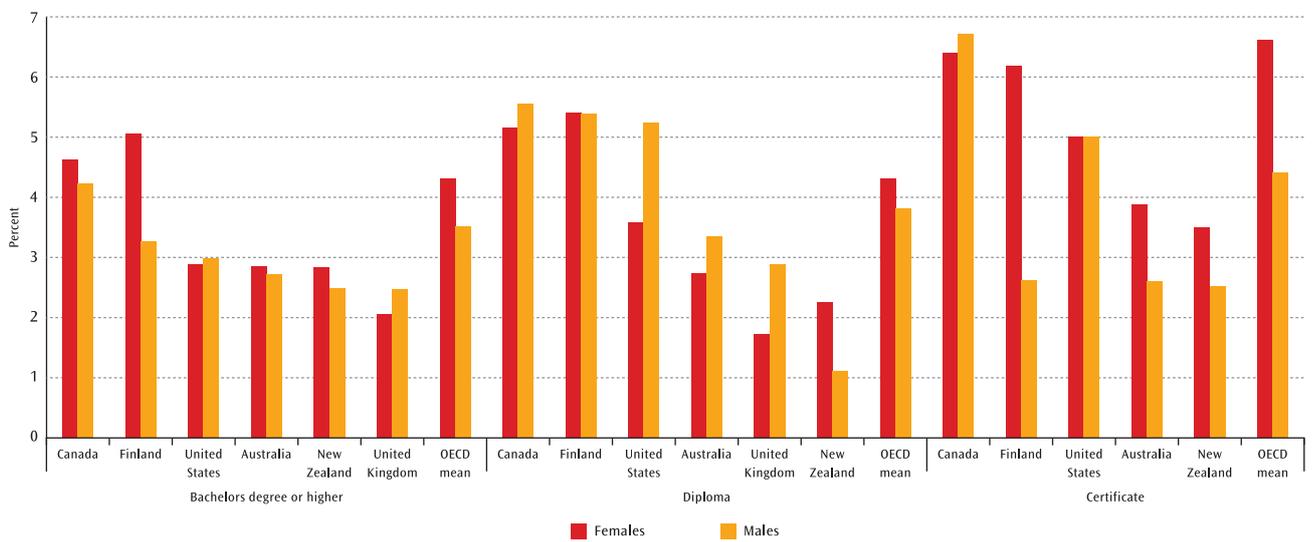
Finland does not have qualifications equivalent to level 1 to 4 certificates.

in New Zealand across all tertiary qualifications. The OECD average male employment rate is 10 to 11 percentage points higher than that of females. This indicates that bachelors and higher qualifications have reduced the gender disparity in the employment rate; however, the gender gap in New Zealand is higher than the OECD average.

In 2004, New Zealand's unemployment rate for the population aged 25 to 64 years was 2.4 percent for both the holders of bachelors or higher qualifications and those with other tertiary qualifications. This differs slightly from that published in the *Household Labour Force Survey*, which is based on a working-age population aged 15 or over. This is one of the lowest rates for OECD countries. The OECD average for those with bachelors or higher qualifications was 3.9 percent, and 6.2 percent for holders of other tertiary qualifications – a gap of 2.3 percentage points.

Differences in the unemployment rate, due to qualification level and gender, are depicted for selected OECD countries in Figure 4.24. Although there were differences in the unemployment rate between males and females in 2004, the gap for those with higher qualifications was closer in New Zealand than in other countries in the OECD. The respective unemployment rates for males and females were 2.5 percent and 2.8 percent for those with bachelors or higher qualifications; 1.1 percent and 2.2 percent for those with diplomas; and 2.5 percent and 3.5 percent for those with post-secondary qualifications. The respective average unemployment rates for OECD countries were 3.5 percent and 4.3 percent for holders of bachelors or higher qualifications; 3.8 percent and 4.3 percent for diploma holders; and 4.4 percent and 6.6 percent for those with post-secondary qualifications.

Figure 4.24: Unemployment rate in 2004 for those aged 25 to 64 years by qualification level, gender and country



Source: OECD (2006), *Education at a glance: OECD indicators 2006*.

Note: Diploma in this graph refers to level 5 to 7 certificates and diplomas and Certificate refers to level 1 to 4 certificates. Finland does not have qualifications equivalent to level 1 to 4 certificates.

TERTIARY QUALIFICATIONS AND INCOME

Between 1997 and 2005, information from the *New Zealand Income Survey* showed that people holding bachelors or higher qualifications earned more than those with other tertiary qualifications (Figure 4.25). The median weekly incomes for the population aged 15 or over by highest educational qualification are shown in Figure 4.25. Over the period from 1997 to 2005, the income differential between holders of bachelors and higher qualifications and those holding other tertiary qualifications remained virtually unchanged. The former earned a median weekly income of \$756 and the latter earned \$560 in 2005. The relative difference in earnings between the tertiary qualified and those with no qualifications decreased between 1997 and 2005 – a consequence of the strengthening labour market, with a consequent fall in unemployment. The incomes of those with bachelors and higher qualifications rose by less than 2.6 percent per year from 1997 to 2005, while the incomes for those with other tertiary qualifications rose by 3.5 percent per year. The incomes of those with no school qualifications also increased by 3.6 percent per year from 1997 to 2005.

Figure 4.25: Median weekly income (June quarter) from all sources for the working-age population by qualification level



Source: Statistics New Zealand (2005), *New Zealand Income Survey*.

The *New Zealand Income Survey* collects information on both hourly and weekly earnings. These two measures give different views of the extent to which the labour market is rewarding people in employment. Weekly earnings give a sense of people's access to work, as well as the level of payment that work commands. Hourly earnings record the latter without distorting the effects of the number of hours worked. This shows



Outcomes of tertiary education

that people with higher qualifications have higher median hourly wage rates.⁴ In 2005, males with bachelors and higher qualifications earned a median hourly wage of \$25, compared to a rate of \$19 for those with other tertiary qualifications. The comparable rates for females were \$20 and \$16, respectively (Figure 4.26).

Figure 4.26: Median hourly wage rate (June quarter) for the working-age population by qualification level and gender

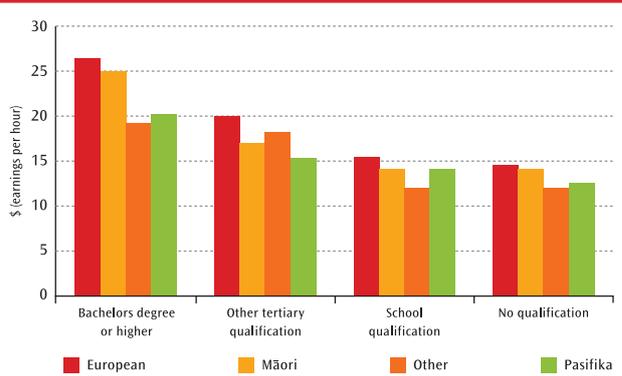


Source: Statistics New Zealand (2005), *New Zealand Income Survey*.

Disparities in earnings between men and women are clearly evident at all qualification levels. In 2005, the largest gender differential was observed for the Other ethnic group. Of those with bachelors or higher qualifications, males in the Other ethnic group earned 82 percent more, on average, than females. Europeans in the same qualifications group had the next highest gender differential, with males earning 47 percent more, on average, than females. Māori followed, with males earning 31 percent more, on average, than females. Gender disparity was greatest for Europeans, in the case of those with other tertiary qualifications, with males earning 71 percent more, on average, than females. The next highest gender differential in this qualification group was observed for the Other ethnic group – males earned 53 percent more, on average, than their female counterparts. Māori males followed, earning 50 percent more than Māori females and in the Pasifika group, males earned 38 percent more, on average, than females.⁵

The ethnic-based disparity in hourly wage rates is much smaller for those with no qualifications or school qualifications only. As can be seen in Figure 4.27 the differences in hourly rates by ethnic group are most apparent for those with bachelors or higher qualifications.

Figure 4.27: Median hourly wage rate for the working-age population by highest qualification and ethnic group



Source: Statistics New Zealand, *New Zealand Income Survey (June 2005 quarter)*.

The disparity among people of different ethnic groups in earnings is lower among those who hold a tertiary qualification. In 2005, the earning differential between holders of bachelors or higher qualifications varied considerably among ethnic groups. Māori with bachelors or higher qualifications in 2005 had the highest median weekly earnings, at \$902, followed by Europeans at \$806, then Pasifika at \$690 and the Other ethnic group at \$500.⁶ The other tertiary-qualified groups earned significantly less in 2005 than those with bachelors or higher qualifications.

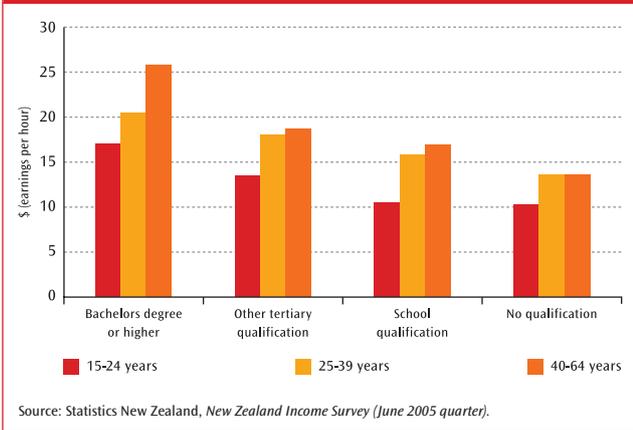
The median hourly wage rate increases substantially for holders of bachelors or higher qualifications for the various age groups. For those aged 40 to 64 years the increase is very significant for holders of bachelors or higher qualifications while for the less qualified the increase is minor (Figure 4.28).

4 The analysis of the impact of highest qualification on the median weekly income has the advantage of not disaggregating the impact of hours worked on weekly income.

5 Due to the large sampling error for the Pasifika group, caution needs to be exercised in interpreting the result for this group.

6 Median earnings may not reflect the real situation. Although the Māori population may have higher earnings than Europeans, their proportions of population distributed in higher income ranges are very small.

Figure 4.28: Median hourly wage rate for the working-age population by highest qualification and age group

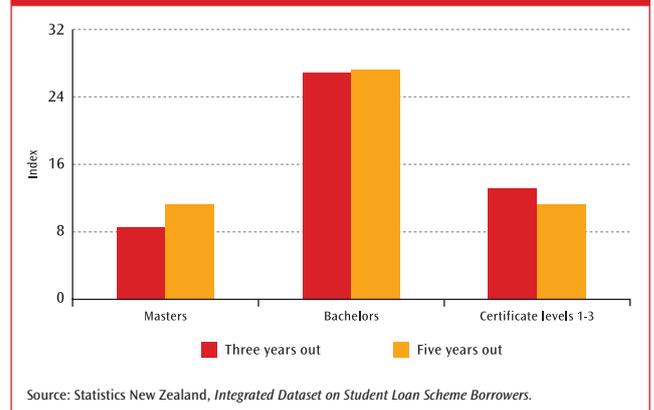


Income premiums for those with tertiary qualifications

A recent analysis of the earnings of students with loans who recently left study between 1997 and 1999 showed that successful completion of a tertiary-level qualification results in higher median incomes five years post-study (Hyatt and Smyth 2006). For those who successfully completed a bachelors-level qualification the premium was 30 percent more than for those who studied at that level but left without completing a degree (Figure 4.29). Over time, the premium on the successful completion of higher-level qualifications either stays the same or it increases, while the premium on the successful completion of sub-degree qualifications exhibits a drop in the premium.

The premium for completing a bachelors degree was higher than for a masters degree. The premium for completing a diploma was also higher than for a level 1 to 3 certificate. Over time, the premium was higher for bachelors and higher qualifications than for other tertiary qualifications. While the premium levels earned reflect the value of skills acquired during study they were also influenced by the lower unemployment rate between 2000 and 2002 which had the effect of lowering the premium.

Figure 4.29: Income premium for completion of a qualification three and five years after leaving study, by qualification level, for students who last studied in 1997



The premium for holders of a bachelors or higher qualification was higher for men than for women, while for those completing other tertiary qualifications the premium was higher for women than for men.

Figure 4.30: Income premium for completion of a bachelors degree three, five and seven years after leaving study, by gender and ethnic group, for students who last studied in 1997



The ethnic differences in earnings for those who completed a qualification and those who did not are graphed in Figure 4.30. As can be seen from the graph, Asians had the highest earnings premium, three and five years after leaving study, and Māori had the highest earning premium, seven years after leaving study.



Outcomes of tertiary education

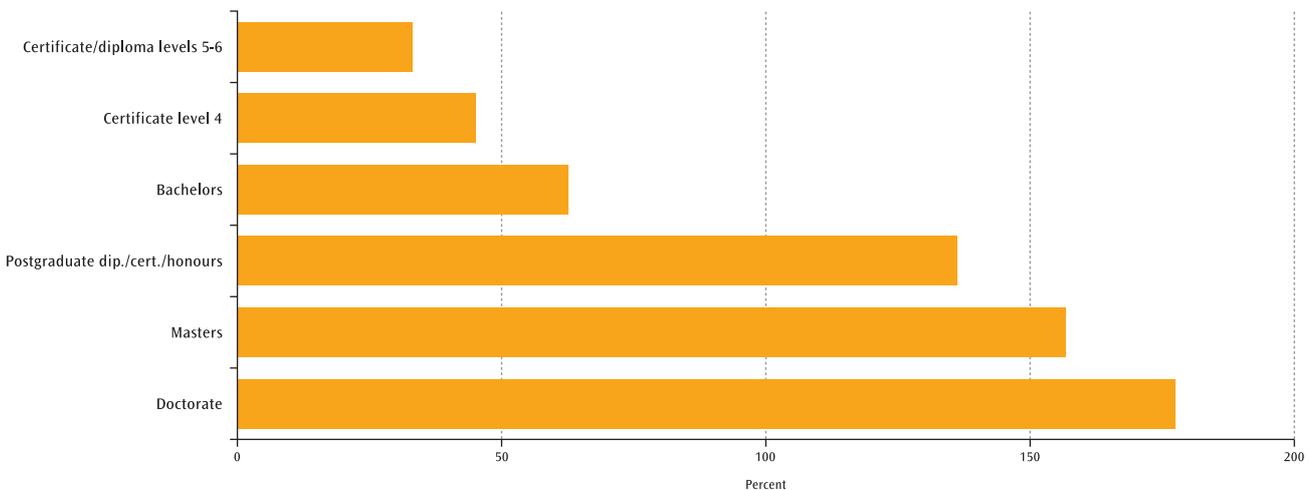
Factors influencing post-study incomes

A recent study by Nair (2006) assessed the influence of qualifications, demographics and employment-related factors on post-study incomes. The analysis looked at the earnings of Student Loan Scheme borrowers who had left tertiary study between 1997 and 1999. The industry of employment, combined with the level of tertiary qualifications and the field of study, was an important factor in determining post-study income. The study also confirmed the fact that those with higher-level qualifications receive higher earnings. For example, it was found that student loan borrowers with a doctorate qualification earned a premium of 178 percent, which was higher than that of level 1 to 3 certificate holders when other factors such as age, gender, etc. were held constant. Borrowers with a masters degree earned a premium of 157 percent and those with bachelors degrees or advanced diplomas earned a premium of 63 percent.

The premiums earned by holders of higher-level qualifications compared to the earnings of those with level 1 to 3 certificates are graphed in Figure 4.31. The premiums shown are expressed as a ratio of the predicted earnings of borrowers at each qualification level to the predicted earnings of borrowers with a level 1 to 3 certificate.

People who study in the field of health studies were found to have the highest predicted earnings. These borrowers, once other factors such as age were controlled for, had predicted earnings over twice as high as someone who had studied a mixed field programme.⁷ The next highest predicted premium was earned by those who studied in the fields of engineering and management and commerce. Borrowers who studied mixed field programmes had the lowest predicted earnings. The predicted premiums earned in the various fields of study compared with the predicted earnings of those who qualified in a mixed field programme are shown in Figure 4.32.

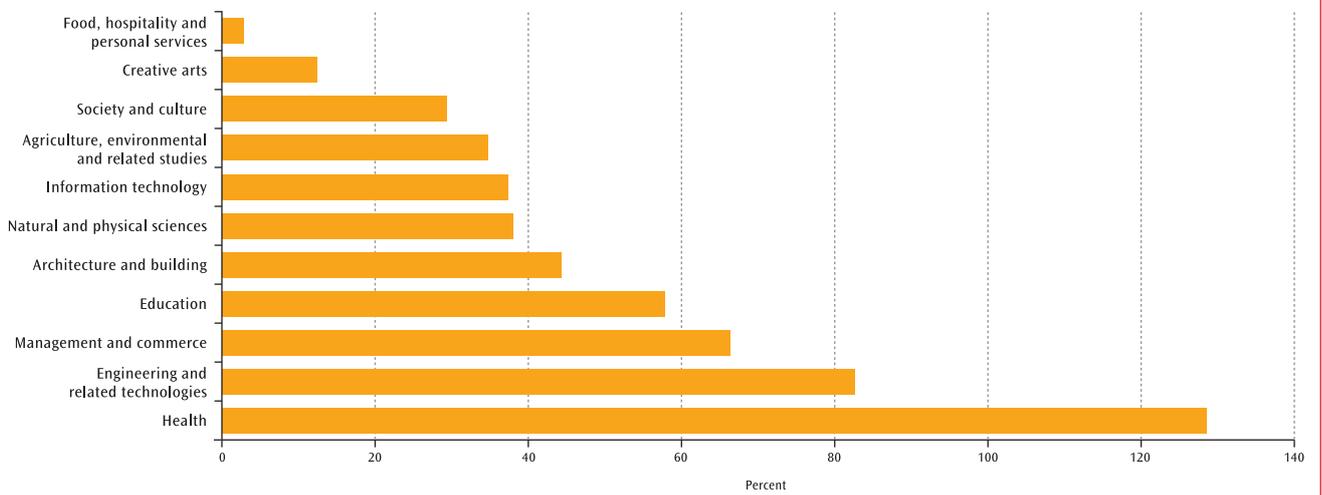
Figure 4.31: Predicted income premium for higher qualifications relative to certificate levels 1-3



Source: Statistics New Zealand, *Integrated Dataset on Student Loan Scheme Borrowers*.

⁷ It is important to note that the premium on income across the various fields of study (and industries) can vary widely at different levels of tertiary qualification. The reader should refer to Nair's full report for a presentation of more in-depth findings of these 'interaction effects'.

Figure 4.32: Predicted income premium by field of study compared with a mixed field programme

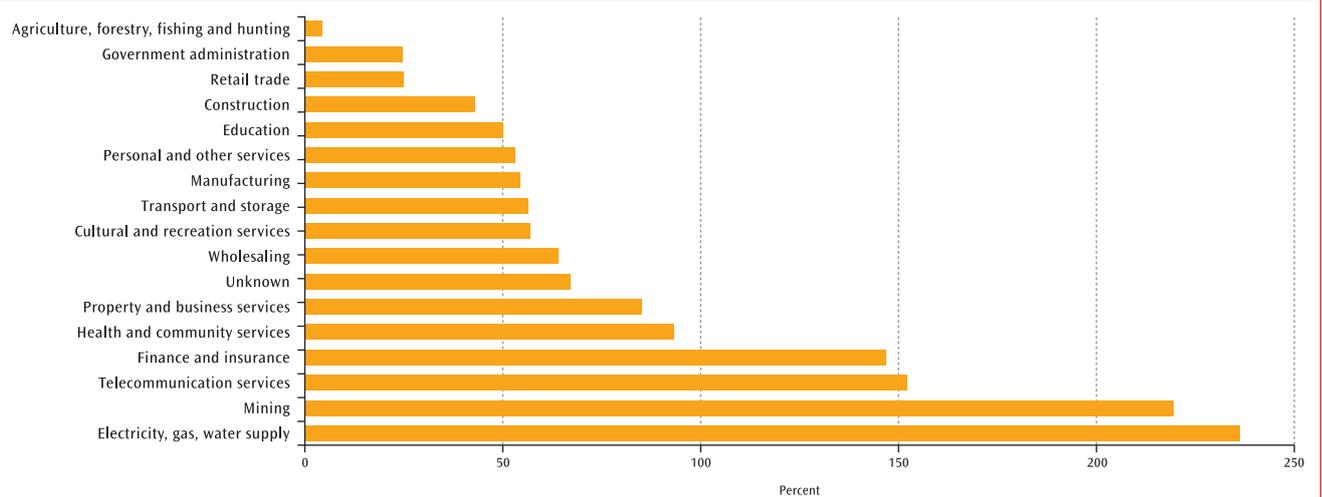


Source: Statistics New Zealand, *Integrated Dataset on Student Loan Scheme Borrowers*.

Industry of employment was found to be the major factor determining the level of post-study income (Figure 4.33). The study found that those with a tertiary qualification employed in the electricity, gas and water supply industry had the highest predicted earnings, once other factors were controlled for. Employees in this field received a predicted income premium

of over 200 percent compared with those employed in the accommodation industry. The premiums earned by those employed in the electricity, gas and water supply industry and in mining may be attributable in part to the high risk associated with their work.

Figure 4.33: Predicted income premium by industry compared with the accommodation industry



Source: Statistics New Zealand, *Integrated Dataset on Student Loan Scheme Borrowers*.



Outcomes of tertiary education

Labour market outcomes 5 to 10 years after graduation

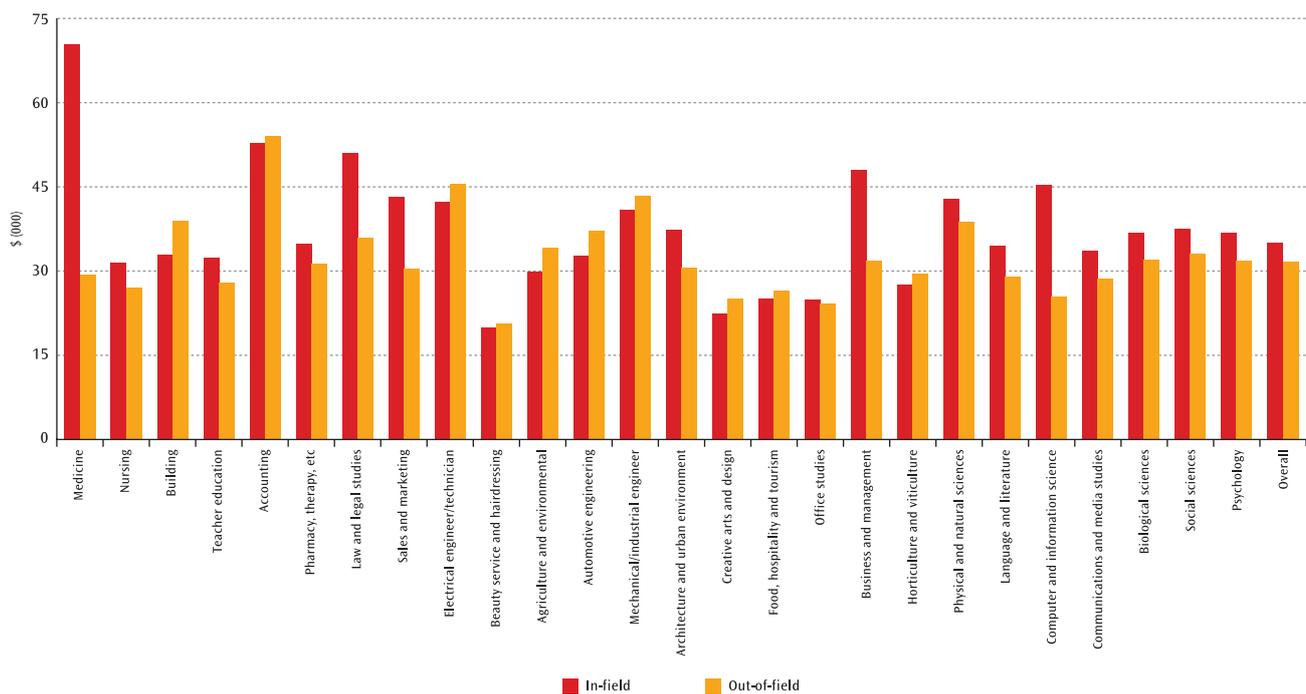
Income premiums are also paid to those in fields of employment that require a matching field of study that has a high degree of specialisation such as beauty services and hairdressing, medicine, nursing and teacher education. Marē and Liang (2006) referred to this type of industry as 'in-field' employment. Fields of study with low degrees of specialisation included business and management, office studies, and sales and marketing. Their study focused on post-school graduates aged 18 to 30 years and used information from the New Zealand population census (Figure 4.34). Marē and Liang's specialisation index showed large increases in the incomes of graduates from 1996 and 2001.

The study found that for tertiary graduates aged between 18 and 65, the median income of those employed 'in-field' was 11 percent higher than those employed 'out-of-field'. The premium

for those graduates aged between 18 and 30 was higher at 20 percent, suggesting that as graduates get older the premium for working 'in-field' falls.

However, Marē and Liang found considerable variation exists in the premium for working 'in-field' across fields of study. For those aged 18 to 65, 16 out of 26 fields of study had a higher median income for those who were employed 'in-field' than those employed 'out-of-field'. Fields of study that showed significant positive returns to working 'in-field' were medicine with a premium of 141 percent, computer and information science (79 percent) and business and management (51 percent). This compares with fields of study such as building and automotive engineering that displayed negative returns from working 'in-field' of 16 percent and 12 percent, respectively.

Figure 4.34: Median annual income in 2001 for tertiary graduates aged 18 to 65 years by in-field and out-of-field employment



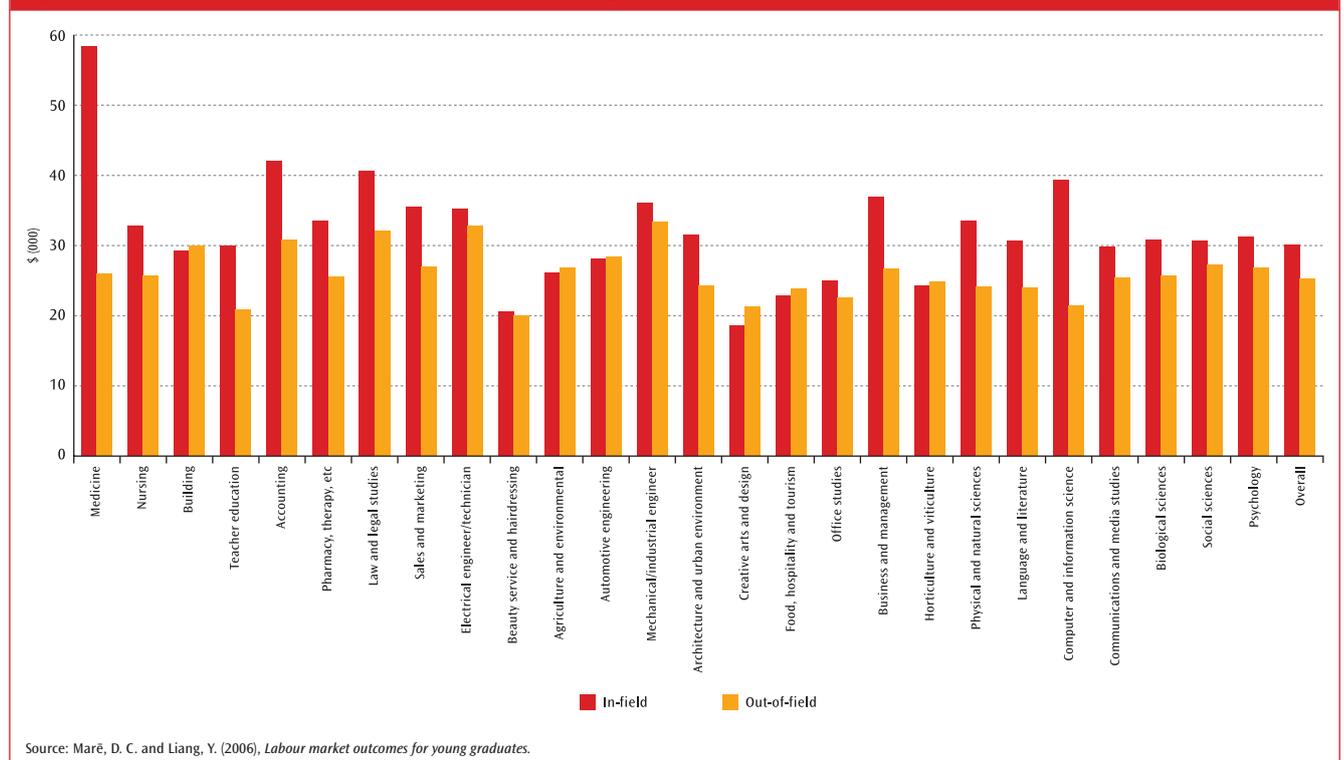
Source: Marē, D. C. and Liang, Y. (2006), *Labour market outcomes for young graduates*.

For graduates aged between 18 and 30, 20 out of 26 fields of study displayed a higher median income for those who were employed 'in-field' than those who were employed 'out-of-field'. 'Medicine' and 'computer and information science' once again displayed strong positive returns to working 'in-field' of 125 percent and 84 percent, respectively. Of fields of study that had negative returns from working 'in-field', 'creative arts' was the most significant with a median income 13 percent lower for those who were employed 'in-field' than for those employed 'out-of-field'.

Income returns to tertiary education – how we compare internationally

An income index for males and females of selected OECD countries is drawn in Figure 4.36 below. The index compares those with lower level tertiary qualifications, tertiary diplomas and bachelors or higher qualifications with those who have upper secondary and post-secondary non-tertiary education. The average earnings of this group have been scaled to 100 in the graph. This illustrates that those with a higher qualification level earned a relatively higher income premium. The relative average earnings in New Zealand in 2004 were slightly below those of the United States, Germany and the United Kingdom for those with certificate and diploma qualifications. Comparing the returns in 2004 with those with a higher-level qualification shows that the returns are greater in countries such as the United Kingdom and the United States. The relative earnings score was 174 in the United Kingdom and 181 in the United States, while New Zealand's score was 147.

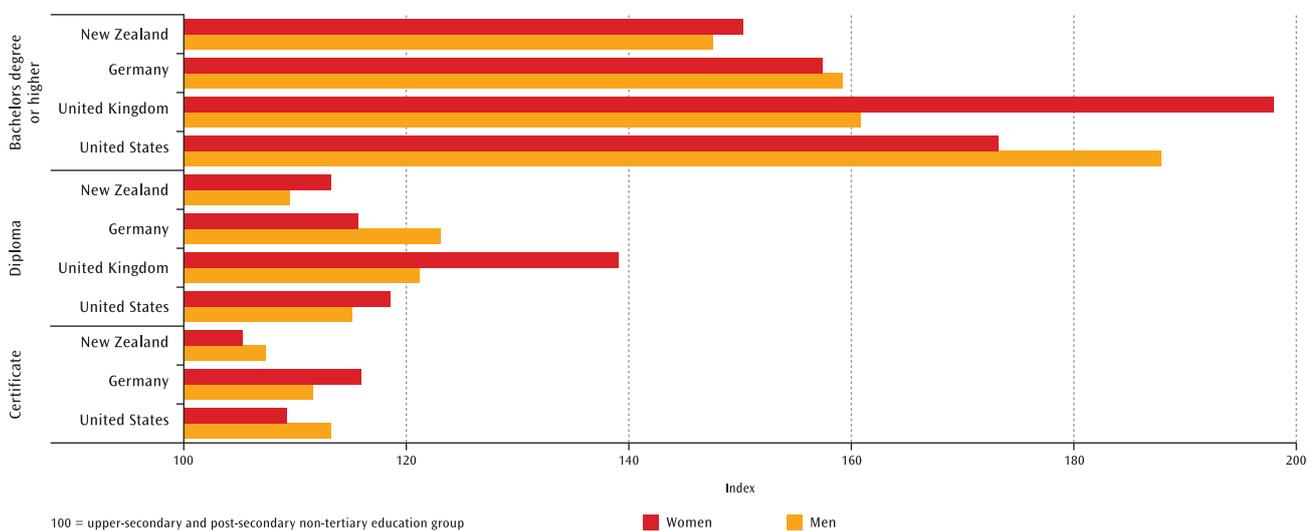
Figure 4.35: Median annual income in 2001 for tertiary graduates aged 18 to 30 years by in-field and out-of-field employment





Outcomes of tertiary education

Figure 4.36: Relative earnings in 2004 of those aged 25 to 64 years by qualification level, gender and country



Source: OECD (2006), *Education at a glance: OECD indicators 2006*.

Notes:

1. Diploma in this graph refers to level 5 to 7 certificates and diplomas and Certificate refers to level 1 to 4 certificates.
2. Post-secondary (certificate equivalent) is stated as missing for the United Kingdom.

The 2004 income distribution for the population aged 25 to 64 years by qualification level is shown in Figure 4.37 for selected OECD countries. Twenty-two percent of New Zealanders with bachelors or higher qualifications have a pre-tax income of twice the median income or higher. This compares to 29 percent and 30 percent in the United Kingdom and the United States, respectively. Nine percent of New Zealanders with a tertiary diploma qualification have a pre-tax income of twice the median income or higher. This compares to 12 percent in the United Kingdom and the United States.⁸

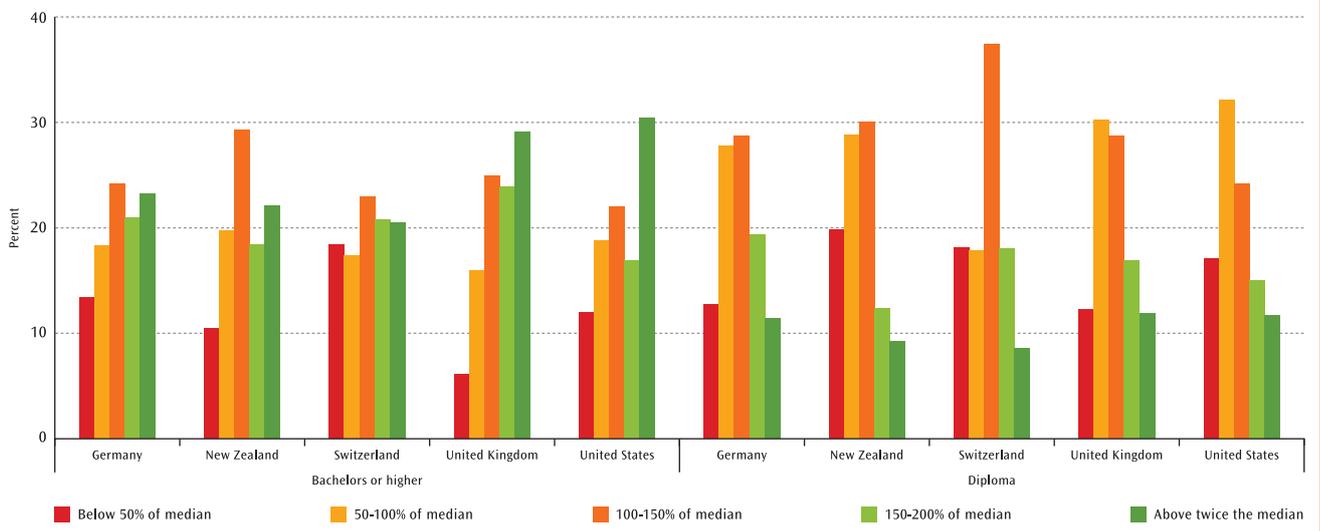
Comparisons can also be observed about the proportion below the median income in different countries. In New Zealand, in 2004, 11 percent of those with a bachelors or higher qualification earned 50 percent less than the median income. In the case of the United Kingdom and the United States, these percentages were six and 12, respectively. Twenty percent of New Zealanders

with a diploma qualification are likely to earn half the median income or less. It is interesting to note that even at higher levels of education there is a small number of individuals in the lower earning categories, suggesting that their return on tertiary education has been relatively low.⁹ Graph 4.37 shows that New Zealand has relatively low income disparities when compared with the United States and the United Kingdom.

⁸ The earnings distributions also reflect the fact that educational attainment cannot be fully equated with proficiency and skills: skills other than those indicated by educational attainment, as well as experience, are rewarded in the labour market. Differences in the scale and operation of training systems for adult learners also influence national patterns of earnings dispersion, as do non-skills-related recruitment considerations – such as gender, ethnicity or age. Technological, economic and social change could all alter how wage levels relate to the level of educational attainment.

⁹ The data shows that in most countries the share of individuals in the lowest earnings categories falls as the level of educational attainment rises. This result is another way of viewing the well-established, positive relationship between earnings and educational attainment. The data reported are accounting rates of return only. The results would no doubt differ from econometric estimates that control for the inherent ability, and other features, of those who decide to invest in education.

Figure 4.37: Income distribution of those aged 25 to 64 years in 2004 by income, qualification level and country



Source: OECD (2006), *Education at a glance: OECD indicators 2006*.

Note: Diploma in this graph refers to certificates and diplomas at levels 5 to 7.

The OECD calculates New Zealand's internal rates of return

The impact on earnings of investing in tertiary education can also be 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 income gained. The OECD recently published the 2003 internal rates of return for individuals (the private rate of return) and the return for governments (the public rate of return). Two scenarios apply:

- The individual follows a tertiary education programme directly from school before entry to the labour market.
- Attainment of the next higher level of education has been postponed until the age of 40.

The private internal rate of return for the two scenarios has been graphed for selected OECD countries in Figure 4.38. For those with bachelors degrees in 2003, the private internal rate of return in all OECD countries except New Zealand, Denmark, Sweden and Switzerland was above 10 percent per annum for both men and women. In New Zealand, the private rate is well below those of the United States and the United Kingdom, while it is 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

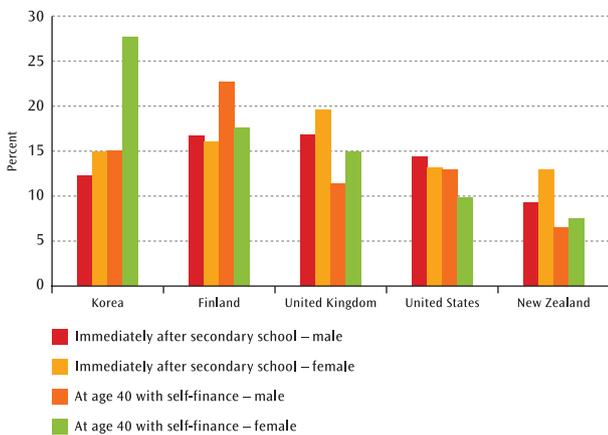
in 2003. The internal rate of return for those going straight to tertiary education was 12 percent in 2003 for females, compared to a rate of 9.3 percent for males.

The private internal rate of return was substantially lower for those who attained a tertiary qualification at age 40. This rate was 6.5 percent for males and 7.5 percent for females. The private internal rates of return were higher for this group in all other OECD countries than in New Zealand, Denmark and the United States. 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 graphed below are, however, based on average pre-tax earnings for persons at different levels of educational attainment. At a given level of educational attainment, individuals who have chosen different courses of study or who come from different social groups may register different rates of return. In estimating benefits, the effect of education on increasing the likelihood of employment is taken into account. This does, however, make the estimates sensitive to the stage in the economic cycle when the data was collected.



Outcomes of tertiary education

Figure 4.38: Private internal rate of return in 2003 for a bachelors degree by gender and country

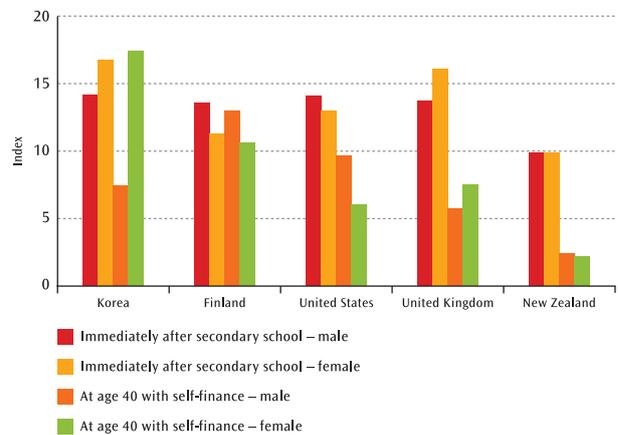


Source: OECD (2006), *Education at a glance: OECD indicators 2006*.

The public internal rates of return for New Zealand and selected OECD countries is charted in Figure 4.39. The public internal rate of return attempts to get a measure of the cost to the taxpayer of funding an individual's education and balances that against the extra tax that is collected as a result of the fact that graduates earn more. New Zealand's public return for both males and females is 9.9 percent, lower than the rate in the United Kingdom and the United States while above the rate in Sweden, Denmark and Switzerland. For those who enter tertiary education programmes directly after education, the public rate is higher in New Zealand, Belgium and Korea than the private rate. 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 4.39: Public internal rate of return in 2003 for a bachelors degree by gender and country



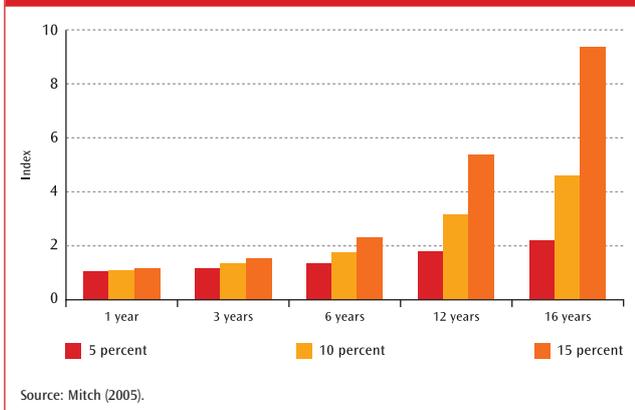
Source: OECD (2006), *Education at a glance: OECD indicators 2006*.

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.

TERTIARY EDUCATION AND ECONOMIC GROWTH

Studies typically find that, on average, an additional year of education increases an individual's future earnings by between 5 percent and 15 percent, depending on when study takes place and in which country (Temple 2001). A recent study by Mitch (2005) on education and economic growth used the assumption of an earnings increase of between 5 percent and 15 percent for each extra year of study. This study reported that an average 16 years of education would result in a one- to four-fold increase in per capita income relative to school-level earnings. In this scenario, it was assumed that the physical capital stock was constant. Where the physical capital stock was allowed steady-state change, this resulted in a one- to eight-fold increase in per capita income. The varying returns on the per capita income from an extra year of education are graphed in Figure 4.40.

Figure 4.40: Increase in per capita income due to additional education



Notes:

1. Income from extra years of education has been measured against a base of one year of education.
2. The physical capital stock has changed in this scenario.
3. Years relate to years of education. Six years of education take a student from illiteracy to universal grammar school, 12 years of education from illiteracy to universal high school, and 16 years of education from illiteracy to universal college.

A New Zealand study argues that the effect on earnings of an additional year of education is probably around 6 to 8 percent (Norton, Sanderson, Booth and Stroombergen 2000). Assuming that the increase in earnings is around 6 to 8 percent, the increase in per capita income under New Zealand conditions would result in an up to four-fold increase, attributable to additional education, allowing for steady-state change in the physical capital stock. Schleichler's study (2006) reports that the OECD countries that give individuals one more year of education will boost productivity and economic output over time by between 3 percent and 5 percent.

Studies of census and *Household Labour Force Survey* data show positive returns to tertiary education. Studies by Maani (1996, 1999), Maani and Maloney (2004) and Penny (2005), all showed that there were positive returns associated with higher qualifications.¹⁰ Similarly, Scobie, Gibson and Trenth (2005) estimated the value of human capital and found that qualification levels were a major factor in determining an individual's human capital. Those with higher qualifications had a significantly higher estimated human capital than those without these qualifications.

The tertiary education system also contributes to the economic growth of New Zealand in many other ways. A recent study by

Walton (2006) on the operational activities of tertiary education institutions showed that they direct substantial money flows into the New Zealand economy. It was estimated, for instance, that the expenditure of the University of Auckland, and its students, added \$4.4 billion of output to the Auckland regional economy in 2005.

The number of foreign students in New Zealand decreased in 2005 and Education New Zealand, an association of education exporters, reported that there were 5.7 percent fewer foreign full-time equivalent students in the tertiary education sector in 2005, compared to 2004. Income for the industry had dropped from \$1.47 billion in 2004 to \$1.39 billion in 2005, a decrease of 5.4 percent. The fall in spending by international students will also reduce income available to the New Zealand economy. In 1997, the earnings from international students was \$0.2 billion.

HEALTH, SOCIAL AND FAMILY OUTCOMES

The benefits of tertiary education also include positive returns to society that cannot be estimated because the tax and expenditure data on such indirect effects of education is not readily available. For example, better-educated individuals generally experience superior health status, lowering the expenditure on the provision of their health care. Another example suggests that, for some individuals, achieving higher levels of education lowers the likelihood of their committing certain types of crime.

McMahon reports in a United States study, published in 2002, that the social benefits of education include not only direct effects such as a higher labour force participation rate and increased economic productivity, but also the impact on the population's growth rates and health, democratisation, political stability and human rights. Additionally, the study reports on the impacts of education on the environment and how it helps to reduce poverty, inequality, crime and drug use.

Many studies, both internationally and in New Zealand, show that education has become one of the most widely used socioeconomic indicators, used for mortality and health studies in the areas of demography and epidemiology. For example, a census mortality study conducted by the University of Otago and the Ministry of Health estimated inequalities and trends in adult mortality by income, education and occupational class. This study presents results for four different time periods and focuses on the differences in mortality for three levels

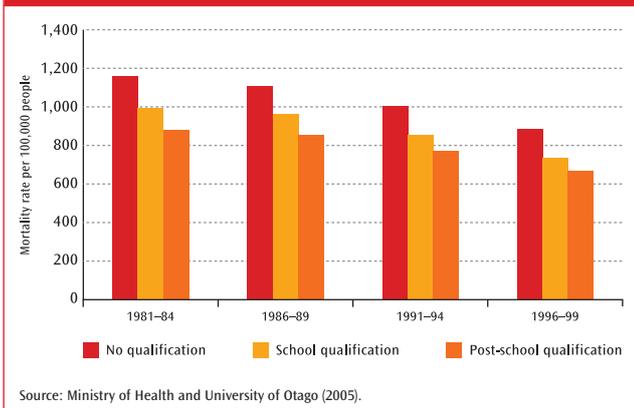
¹⁰ See *Profile & Trends 2004* for further details.



Outcomes of tertiary education

of education. The study covered the New Zealand resident population aged 25 to 77 years. The results showed that within each cohort, those with post-school qualifications have lower mortality rates than those with no qualifications or school qualifications only. The mortality rates for men are depicted in Figure 4.41 and those for women in Figure 4.42.

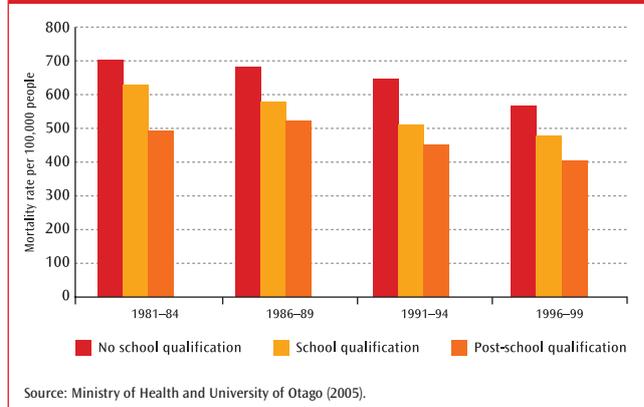
Figure 4.41: New Zealand male mortality rate by highest qualification level for four census cohorts



Notes:

1. Mortality rate per 100,000 population.
2. New Zealand resident population aged 25 to 77 years on census night.
3. The cohorts were followed for three years.
4. All-cause mortality – cause of mortality as classified under ICD9 classification.

Figure 4.42: New Zealand female mortality rate by highest qualification level for four census cohorts



Notes:

1. Mortality rate per 100,000 population.
2. New Zealand resident population aged 25 to 77 years on census night.
3. The cohorts were followed for three years.
4. All-cause mortality – cause of mortality as classified under ICD9 classification.

Another United States study, by Lochner and Moretti (2001), estimates the effect of education on participation in criminal activity, and the effects of education. Crime is a negative externality with enormous social costs, so if education reduces crime, then education may have large social benefits that are not taken into account by individuals. The paper begins by analysing the effect of education on incarceration using United States census data and changes in state compulsory attendance laws over time. They estimated that additional years of secondary education reduce the probability of incarceration, with the greatest impact associated with completing high school.

Another study, by Dee (2004), on the effects of educational attainment on adult civic engagement and attitudes provides some of the most important justifications for government intervention in the market for education. The results suggest that educational attainment has large and statistically significant effects on subsequent voter participation and support for free speech. The author also found that additional education appears to increase the quality of civic knowledge as measured by the frequency of newspaper readership.

Education level determines the standard of living

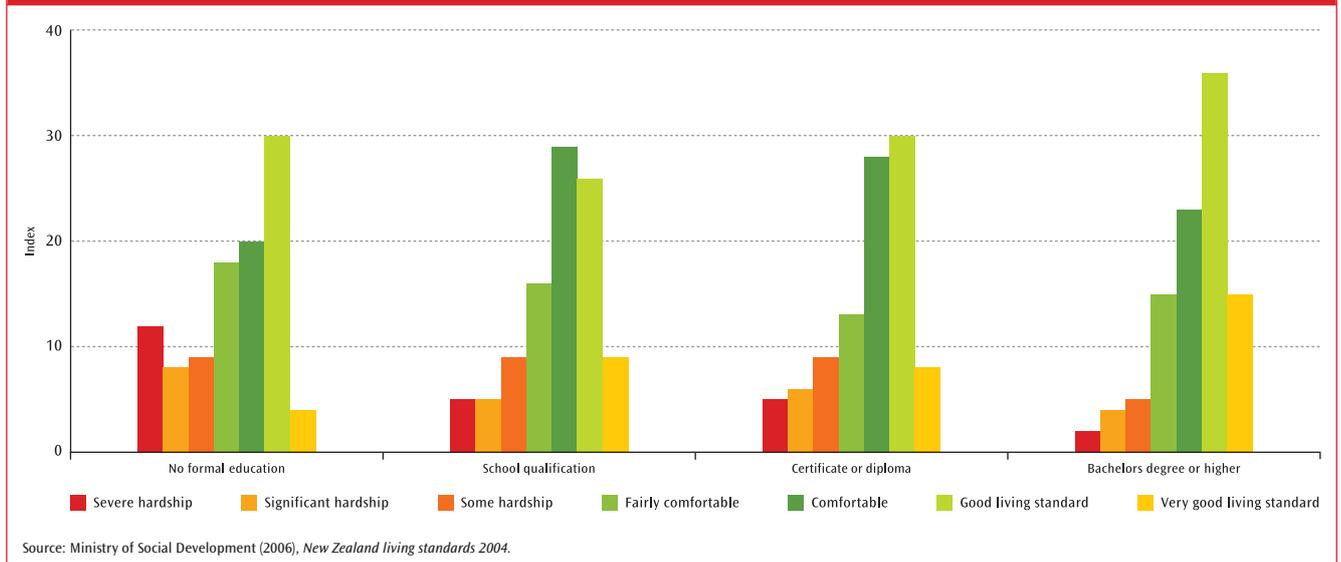
A report on the living standards of New Zealanders released by the Ministry of Social Development (2006) provides detailed information on the impact of tertiary education on living standards, using the Ministry’s Economic Living Standard Index. The report states that comparatively high average living standards scores are found among people with tertiary qualifications.

In Figure 4.43 the living standard distribution for four levels of educational qualification has been depicted. It can be seen from the graph that, overall, there is a positive association between living standards and qualification levels.

People with no formal qualifications are the most likely to have living standard scores at the lower end of the Economic Living Standard Index (levels 1–3).¹¹ Twenty-nine percent of people in this group were in hardship, compared to 1 percent of people with a bachelors or higher qualification. The high representation

of people with no formal qualification who were described as having ‘good’ living standards may in part be a consequence of the favourable living standard distribution of older New Zealanders, who tend to have lower levels of formal education. Since 2000, there has been an increase in ‘severe hardship’ amongst those with no formal qualifications and their average living standards score fell from 39.6 in 2000 to 37.3 in 2004. In 2004, those with no formal qualifications continued to have an average living standard score that was below that of the overall population. A strong relationship between living standards and parents’ qualifications is also discussed in the report. The average Economic Living Standard Index score steadily reduces from 42.5 for respondents with a bachelors degree or higher qualification, to 27.1 for respondents with no formal qualifications. The families in the latter group are only a third as likely to have a ‘very good’ living standard and are nine times as likely to live in ‘severe hardship’. The proportions of the latter group in ‘severe hardship’ rose from 15 percent in 2000 to 27 percent in 2004.

Figure 4.43: Living standards of New Zealanders in 2004 by highest qualification



¹¹ Levels 1 to 3 refer to Economic Living Standards. For example levels 1 to 3 are defined as ‘severe hardship’, ‘significant hardship’, and ‘some hardship’, etc. Level 7 is ‘very good living standard’ with a score of 56 and above, whereas level 1 gets a score of 0 to 15.



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Learners in tertiary education

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SUMMARY

In 2005, over 680,000 people were engaged in some form of formally recognised learning, either at tertiary education providers or in the workplace, or both. Nearly one in five New Zealanders aged 15 years or over was involved in some form of formal tertiary education, with just over 14 percent enrolled at a tertiary education provider and about 5 percent undertaking formal learning in the workplace.

More people enrolled in formal study in 2005, but when this number is converted to equivalent full-time student units, there was actually a slight decline from 2004. International student numbers fell significantly in 2005, after strong growth between 2000 and 2003, and reduced growth in 2004. Nearly one in 10 of the formal provider-based students was international in 2005.

There was a strong increase in participation in industry training from 2004 to 2005, with nearly a quarter of all formal tertiary learning in 2005 taking place in the workplace.

The number of learners at certificate or diploma level continued to increase in 2005, although in terms of equivalent full-time student units, these actually fell in 2005, indicating more enrolments in shorter courses.

The total number of students at bachelors level fell slightly for the first time in 2005, while the number of domestic students studying bachelors degrees fell for the second year in a row.

Doctoral enrolments continued to grow strongly in 2005, in response to government funding changes, while equivalent full-time student numbers at other postgraduate levels have either flattened out or fallen slightly.

Non-formal learning in New Zealand declined significantly in 2005. This was due to the progressive shift of adult and community education out of the student component and into a new pool that is focused around the government's priorities for adult and community education.

LOOKING TO 2006

Funding changes in recent years are likely to see greater stability in patterns of participation in tertiary education. Non-formal study (adult and community education) has been ring-fenced and capped, with some reductions in funding rates signalled from 2006. The funding for short awards has also been capped for 2006, with first aid and public sector short courses ineligible for funding from 2006. Since September 2005, certificate and diploma growth has also been controlled.

The Tertiary Education Commission conducted a review in 2005 of the provision in student component funding categories A1 (sub-degree arts, social sciences and general education) and J1 (sub-degree business and law education) in order to improve the alignment of publicly funded programmes with the priorities set out for the sector in the tertiary education strategy. The commission also started a three-year Assessment of Strategic Relevance review of student component funding to private training establishments. The purpose of this review is to shift funding from areas of low relevance to those of higher strategic relevance and the results of the 2005 review have influenced funding decisions for 2006.

A second factor likely to exert a positive influence on enrolments at postgraduate level is the increase in the Performance-Based Research Fund and the decision to treat international doctoral students as domestic.

From 2006, the remaining two colleges of education will become part of the university sub-sector, leaving the universities, institutes of technology and polytechnics, and wānanga as the remaining three types of public provider.

One of the factors likely to increase participation in the foreseeable future is the 'baby blip' generation moving from schooling into tertiary education. 'Baby blippers' are currently at upper-secondary school level, but numbers at tertiary age have been increasing since 2001, and a further 1,500 will be turning 18 or 19 years of age in 2006. Any increase in enrolments will, however, be moderated while the strong economy and low unemployment rate continue, as this will draw students directly into the labour market, where they can access an increasing base of formal workplace learning.

ANALYTICAL TABLES: An associated set of tables on the learners in tertiary education is available on the Education Counts website, Tables ENR1-38, EFT1-36, PPN1-13, PRG1-15, TTP1-3, SAG1-3, ACE1-4, COM1-35, ARN1-18, TTA1-3, ITP1-16 and ITA1-4. Detailed technical information on the data presented here can be found in chapter 17.



Learners in tertiary education

ONE IN FIVE NEW ZEALANDERS IN TERTIARY EDUCATION

In 2005, over 680,000 people were engaged in some form of formally recognised learning, either at tertiary education providers or in the workplace, or both. Nearly one in five New Zealanders aged 15 years or over was involved in some form of formal tertiary education, with just over 14 percent enrolled at a tertiary education provider and about 5 percent undertaking formal learning in the workplace.

Tertiary education is provided in a variety of settings that have increasingly involved learning outside of the universities and polytechnics. Over 161,000 New Zealanders undertook formal tertiary learning in the workplace in 2005, nearly a quarter of all of the formal learning undertaken. This represented 5 percent of all New Zealanders aged 15 years or over, and nearly 8 percent of those working in 2005. Participation in industry training continues to grow strongly, up 15 percent in 2005.

The tertiary education strategy released in 2002 signalled the start of a shift in government direction for tertiary education. The strategy has been followed by the government's statement of tertiary education priorities, and a series of reforms and funding changes announced during the last few years. One of the drivers of government reform has been the need to manage and improve the quality, relevance and value for money that the country receives from its substantial investment in tertiary education.

As a consequence of these reforms, the number of equivalent full-time students in formal provider-based study fell by 1.2 percent in 2005, for the first time in recent years. Despite this fall, the number of actual learners at certificate or diploma level continued to increase. This, in part, reflected the continued strong growth in off-job industry training, and a shift in the polytechnic sector to shorter sub-degree-level provision. Additionally, 2005 saw a significant increase in short award courses (i.e. programmes of less than a week). Most of this was in the polytechnic sector, either provided directly or subcontracted to private providers. There were over 161,000 learners (or 5,420 equivalent full-time students) enrolled in such courses in 2005.

Doctoral enrolments continued to grow strongly in response to government funding policy changes, while equivalent full-time student numbers at other postgraduate levels have either flattened out or fallen.

International student numbers fell in 2005. There were 6 percent fewer formal enrolments, and 39 percent fewer non-formal enrolments, after strong growth between 2000 and 2003, and reduced growth in 2004. Nearly one in 10 (or 47,300) of the formal provider-based students was international in 2005.

New Zealand has the highest percentage in the Organisation for Economic Co-operation and Development (OECD) of students that are foreign (including both permanent resident and non-resident non-citizens). In terms of New Zealanders studying overseas, over two-thirds are studying in Australia, 15 percent in the United States and 8 percent in the United Kingdom.

The number of learners in adult and community education courses provided by tertiary education institutions also fell in 2005, in response to funding policy changes, down by 34 percent from 2004. Many New Zealanders engage in non-formal learning, through tertiary institutions, in the workplace, in schools, through community organisations, or at home. An estimated 360,000 people undertook some form of structured non-formal study in 2005. This included around 183,000 learners enrolled in adult and community education courses provided by tertiary education institutions. In recent years, the sector has seen significant expansion in non-formal education. The number of students grew 270 percent from 2000 to 2003, peaking in 2004 (when there were 286,000 students enrolled with tertiary education institutions).

Internationally, New Zealand has higher rates of enrolments of older students than many other OECD countries, as well as relatively higher expectancy (or length of study) at post-secondary levels. However, the rate of enrolment for those aged 15 to 19 years is one of the lowest in the OECD.

TYPES OF LEARNING

The tertiary education sector in New Zealand covers a wide range of types of learning. It includes both formal and non-formal education. Formal learning covers all learning that contributes toward a recognised qualification. It is provided both by tertiary education organisations and by employers in the workplace. Non-formal learning fosters a culture of lifelong learning, active citizenship, critical social awareness and increased control over the future for individuals and communities. Non-formal learning can occur in tertiary education institutions, schools, the workplace, and the community, or at home. Structured non-formal education at schools or tertiary education providers is also known as adult and community education (or ACE).

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

Estimated number of students/learners	Upper secondary level	Post-secondary sub-degree level	Bachelors level	Postgraduate level	Total
Formal students					
Domestic students in government-funded providers	229,800	109,600	127,600	30,900	457,100
International students in government-funded providers	8,600	13,000	25,700	4,200	47,400
Student component-funded learners	206,600	98,300	127,800	30,900	428,320
Learners in industry training (excluding Modern Apprenticeships)	120,400	68,400			153,300
Learners in Modern Apprenticeships	800	7,600			8,400
Training Opportunities	16,400				16,400
Youth Training	10,900				10,900
Skill Enhancement		800			800
Secondary-Tertiary Alignment Resource (enrolled with tertiary providers)	16,700	300			17,000
Gateway	5,600				5,600
Students in non-government-funded providers	10,000	5,000			15,000
Total provider-based	265,100	127,900	153,300	35,100	536,500
Total workplace-based	126,800	76,000			167,300
Total formal students (in programmes of more than a week's full-time study)	376,000	196,600	153,300	35,100	680,000
Additional formal students in short courses	101,000	6,000			107,000
Non-formal students					
ACE through tertiary education institutions (domestic students)					183,000
ACE funded through schools (estimated)					164,000
International students					6,400
Adult literacy and ESOL (estimated funded learners)					11,000
ACE through community organisations					Unknown

Notes:

1. Students are counted in each type of programme they enrol in, so the sum of components will not add to totals.
2. Training Opportunities, Youth Training, STAR, Gateway, and ACE programmes are discussed in chapter 6.
3. Industry training, including Modern Apprenticeships, is discussed further in chapters 6 and 7.
4. Skill Enhancement programmes are discussed further in chapter 7.

Table 5.1 summarises the main types of programmes available in New Zealand's tertiary education system in 2005. An overview of the learning undertaken in 2005 is given below and a detailed discussion of each of the programmes is provided in chapters 6 to 9.

In addition to the estimated 680,000 learners in formal study in 2005, there were also an estimated 360,000 learners in non-

formal education (excluding community-based courses). Just over 14.3 percent of New Zealanders aged 15 years or over were enrolled with a provider in formal tertiary education during 2005. Ten years ago the participation rate was 9.2 percent. In addition, 5.0 percent of the population aged 15 years or over and 7.9 percent of those working were engaged in some form of formal workplace training in 2005. The largest relative growth



Learners in tertiary education

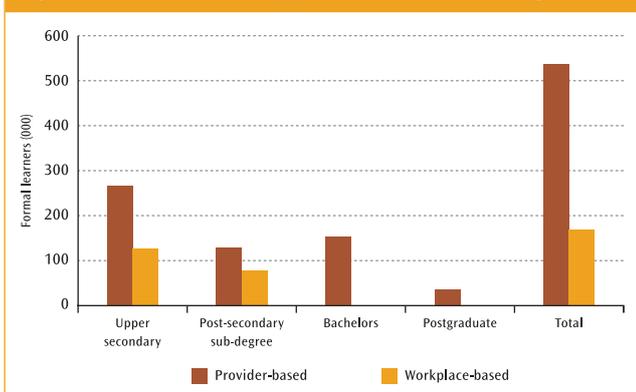
has been in level 1 to 4 certificates. The percentage of New Zealanders doing doctorates has also increased by 52 percent.

An estimated 79 percent of formal students were enrolled in tertiary education providers, while a quarter undertook formal learning in the workplace, and 4 percent were in both. Of all formal students in 2005, an estimated 55 percent (some 376,000 learners) were at levels 1 to 3 on the New Zealand Register of Quality Assured Qualifications. Level 1 to 3 qualifications are directed at those who have left school but have the same level of competency as the upper secondary level. An estimated 29 percent (or 196,600 learners) were at post-secondary level below bachelors degree – certificates and diplomas at mid-register levels 4 to 7. Around 65 percent of level 1 to 4 learners were provider-based, while 39 percent were workplace-based. About 4 percent of workplace learners at levels 1 to 4 were also enrolled at a tertiary education provider (off-job training).

At bachelors level, there were 153,300 students in 2005, around 22 percent of all formal learners. Most of these are enrolled in degrees, but around 13 percent are also doing graduate-level certificates or diplomas at level 7 on the register. Of the 153,300 students, 25,700 were international students.

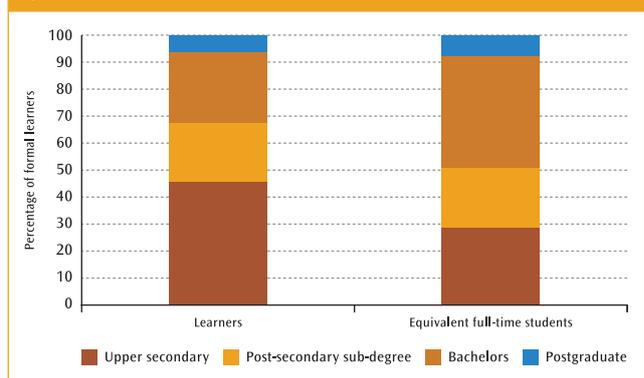
In 2005, there were 35,100 students at postgraduate level, some 5 percent of all formal learners. These comprised 4,830 (13 percent) studying for doctorates, 13,100 (37 percent) at masters level, and 17,900 (51 percent) enrolled in postgraduate-level certificates or diplomas, or bachelors with honours degrees. There were 4,200 international students at postgraduate level in 2005. All postgraduate study is undertaken at tertiary education providers.

Figure 5.1: Formal learners by qualification level and setting



Much of the provision below degree level is short term (i.e. less than one year), and often undertaken on a part-time basis, or combined with employment. In terms of equivalent full-time study at providers, the distribution of provision by level is shown in the figure below.

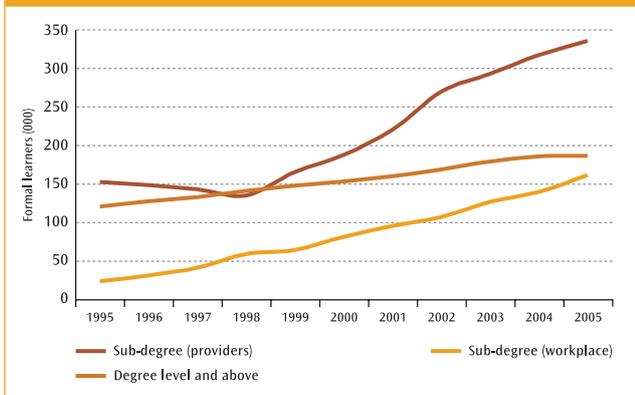
Figure 5.2: Distribution of provider-based formal students by qualification level



The number of students enrolled in formal study at tertiary education providers has slowed in 2005 and in some areas fallen, after a period of significant growth since 1999. The total number of students at bachelors level fell for the first time in 2005 (by 500 students), while the number of domestic bachelors students fell for the second year in a row.

While the total number of students enrolled in level 4 to 7 certificates and diplomas grew by 18,800, or nearly 6 percent, in equivalent full-time student terms, there were actually 2,400 (or 1.7 percent) fewer students. Doctoral enrolments continued to grow strongly in response to government funding policy changes. There were 4,830 students enrolled in 2005, up 6 percent from 2004. International students studying at doctorate level increased from 2004 and 2005 by 114 students (or 20 percent). When doctoral student numbers are converted to equivalent full-time student units, these increased for domestic students by 17 percent and for international students by 28 percent. By contrast, the number of equivalent full-time student units at other postgraduate levels have either flattened out or fallen. International students studying for bachelors degrees continued to increase in number, while domestic student numbers at bachelors level fell slightly, for the second year in a row.

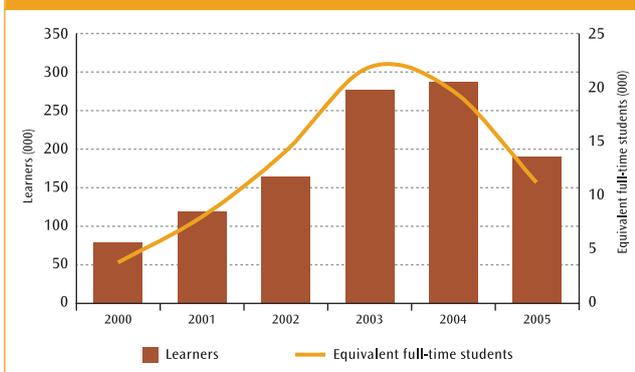
Figure 5.3: Trends in formal learners



Note: Data before 1999 excludes students in private providers.

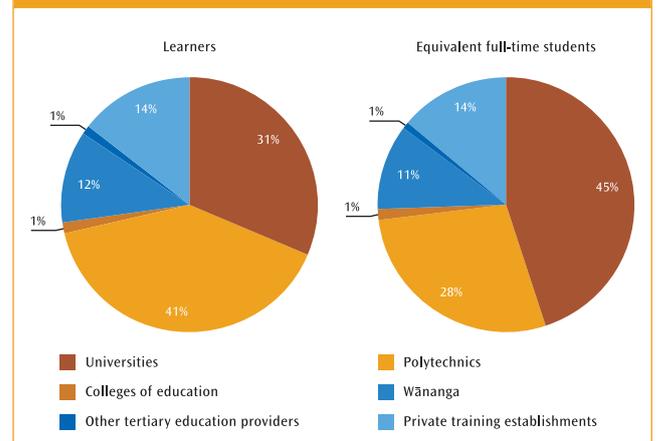
Structured non-formal learning is an important component of the tertiary sector. An estimated 360,000 New Zealanders were involved in some form of structured non-formal learning in 2005. Most of this is in schools and tertiary education providers, although it is also provided in the workplace, through community organisations, and at home. Non-formal learning has received attention in recent times, as the number of learners has expanded rapidly, placing pressures on public expenditure and raising concerns about the quality and relevance of public funding of some courses. The government has acted to ensure that non-formal learning provided by tertiary education institutions is of quality and relevance, and has introduced a number of changes. One of these has been to consolidate the funding streams for adult and community education into a single pool with allocations made on the basis of priority areas. This has acted to reduce provision in this area.

Figure 5.4: Trends in non-formal learners in tertiary education institutions



Universities remain the largest provider with 128,000 equivalent full-time student units in 2005, or 45 percent of the total. In terms of numbers of individuals, institutes of technology and polytechnics were the largest in 2005 with 213,600 students enrolled, accounting for 42 percent of all enrolments (or 28 percent of equivalent full-time students).

Figure 5.5: Formal students by provider type



Wānanga provide programmes with an emphasis on the application of knowledge regarding ahuatanga Māori (Māori traditions) according to tikanga Māori (Māori custom). Wānanga have been successful in creating opportunities for attracting many Māori (and non-Māori) into tertiary study. The success of Te Wānanga o Aotearoa in this regard saw over 60,000 new learners enter certificate and diploma study since 2000, making this provider New Zealand's largest in terms of head count, and second largest in terms of the number of equivalent full-time students.

However, Te Wānanga o Aotearoa has come under increasing scrutiny in the last few years. In February 2005, the government announced a package of actions, including the appointment of a Crown observer, in response to concerns raised about its financial management and governance.

Recent government policy aimed at managing the public costs of large growth at tertiary education providers has seen the number of learners at this institution fall for the second year in a row. Historic levels of growth over the last few years have likely also taken up much of the existing demand. Notwithstanding this, over 62,000 New Zealanders (or 12 percent of all students) were enrolled in one of the country's three wānanga during 2005 (with 57,500 of them at Te Wānanga o Aotearoa). Rates of completion



Learners in tertiary education

and progression to higher-level study also remain relatively high for wānanga students.

Around 77,000 learners studied at one of the nearly 300 privately owned tertiary providers offering formal recognised learning in 2005. In total, an estimated 10 percent of formal learning, and 16 percent of all formal provider-based learning is undertaken outside of the eight universities, two remaining colleges of education, three wānanga and 20 institutes of technology and polytechnics.

Table 5.2 shows the different shares of formal provision by level across the different parts of the sector. These are discussed in more detail in chapters 6 to 9.

TYPES OF LEARNERS

As the range of learning and settings is diverse, so is the range of learners. The concept of the traditional student as a 17, 18 or 19 year old coming straight from school has increasingly been replaced by a more varied student mix.

In 1995, the average age of students enrolled at a tertiary education provider was 25.9 years. Forty-five percent of students in 1995 studied at degree level or higher and 41 percent were at a university. This compares to an average age of 33 years in 2005, with 37 percent studying at degree level or higher and with 33

percent attending a university. Also, the proportion of first-year students who were in employment prior to study has increased over the last five years, from 10 percent in 2000 to 17 percent in 2005.

Women make up 55 percent of all formal learners enrolled at tertiary education providers, ranging from around 50 percent at institutes of technology and polytechnics, and 55 to 56 percent at universities and private providers, through to 70 percent at wānanga and nearly 80 percent at colleges of education. In workplace training, the percentage of female trainees has increased from 16 percent in 1996 to 28 percent in 2005.

Of all women aged 15 years or over in 2005, 2.7 percent were undertaking formal learning in industry training, compared to 15.4 percent in provider-based learning. In 2005, 12.9 percent of men aged 15 years or over were enrolled in tertiary education providers and 7.5 percent in workplace-based training.

There are noticeable differences in the share of women in workplace training across industry groups. While over all workplace training 28 percent are women, this share is over 90 percent in hairdressing, community support services and pharmacy industry groups, while it is less than 2 percent in building and construction, plumbing and gas fitting, and boating industries.

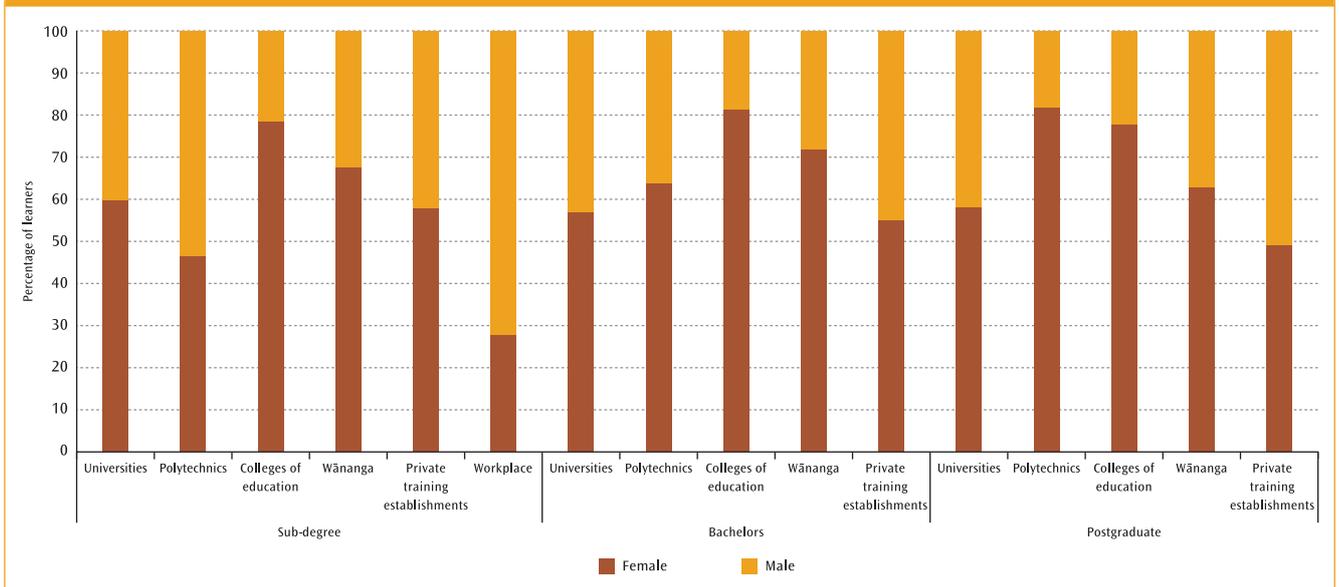
Table 5.2: Formal students by qualification level and sub-sector

Sub-sector	Level of study							Total
	1-3 Certificates	4 Certificates	5-7 Diplomas	7 Bachelors	8 Honours/ Postgraduate cert./dips	9 Masters	10 Doctorates	
	Percentage of students							
Universities	3	2	14	80	83	88	98	25
Polytechnics	38	22	44	16	11	5	0.3	31
Colleges of education	0.2	0.3	2	3	1	2		1
Wānanga	12	11	7	1	0.4	2		9
Total tertiary education institutions	51	35	66	98	95	96	100	64
Other tertiary education providers	1	1	2	0	3	0		1
Private training establishments	16	10	28	2	3	4		11
Provider-based	71	46	95	100	100	100	100	79
Workplace-based	34	60	5	0	0	0	0	25

Notes:

1. The total for providers also includes STAR students and those in non-government-funded providers.
2. The total for workplace learners also includes Gateway learners.

Figure 5.6: Learners in tertiary education by qualification level, gender and provider type



The Modern Apprenticeships scheme is predominantly male also, although the share of women apprentices has risen slightly from 6 percent in 2001 to 8 percent in 2005.

The share of women in tertiary education providers has remained relatively constant at around 55 percent over the last five years. However, underlying this there is continued growth in the proportion of women doing doctorates. In 2004, women outnumbered men for the first time at doctorate level, increasing in 2005 to nearly 52 percent of all doctoral students. Although still a minority, there are relatively more men studying at level 4, the area most traditionally associated with vocationally oriented or trades-related training.

The share of students who are women is highest at colleges of education, where teacher education has traditionally been dominated by women, and at wānanga, which have been successful at attracting many women into study, both at sub-degree and at degree level.

Older students are increasingly undertaking tertiary study. Students aged 25 years or over made up 48 percent of students in 1995, but 59 percent in 2005. In equivalent full-time student terms, the percentage of students aged 25 years or over rose from 34 to 45 over the last decade. However, 18 to 24 year olds remained the largest group in 2005, at 50 percent of the total equivalent full-time student units.

The growth in the number of students aged 25 years or over has largely been in level 1 to 4 certificates, where they have grown from 53 percent of all students in 1995 to 68 percent in 2005. At bachelors level, students aged 25 years or over made up 37 percent of all students in 2005, down from 43 percent in 2000. At postgraduate level, students aged 25 years or over made up 78 percent of all students in 2005, up from 75 percent in 2000 and 69 percent in 1995.

Students aged 25 years or over are more likely to be studying part-time than those aged less than 25 years. In equivalent full-time student terms, students aged 25 years or over made up 60 percent of all students in level 1 to 4 certificates, 50 percent of students in level 5 to 7 certificates and diplomas, 29 percent of bachelors students, and 71 percent of postgraduate-level students.

Students aged 40 years or over now make up 27 percent of all students (or 18 percent of total equivalent full-time student units). This is up from 17 percent of students (or 9 percent of total equivalent full-time student units) in 1995. Most of this growth has been at sub-degree level in institutes of technology and polytechnics and in wānanga. At degree level and above, students aged 40 years or over make up 16 percent of all students (or 10 percent of total equivalent full-time student units). While there are nearly 14,000 more students aged 40 years or over enrolled in degree or higher-level programmes,



Learners in tertiary education

their share of 16 percent at this level has not increased much in recent years.

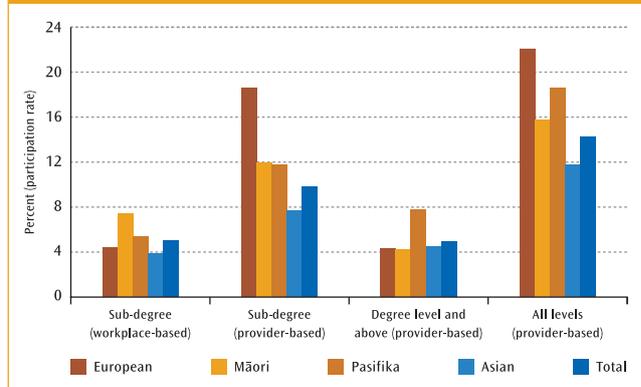
With the exception of the Modern Apprenticeship scheme, which is targeted towards 15 to 21 year olds, learning in the workplace is largely undertaken by older workers. However, there has been increased diversity in the ages of learners in industry training over recent years. The number of learners aged 15 to 19 years has increased by 148 percent since 2000, showing the impact of the Modern Apprenticeships initiative, introduced to facilitate increased access to industry training by young people. Since 2000, the numbers of learners aged 40 years or over have also increased, by 131 percent, indicating that industry training provides opportunities for ongoing development and updating of skills.

Learners aged 15 to 19 years comprised 10 percent of all workplace-based learners in 2005, while of the remainder, 33 percent were aged 20 to 29 years, 23 percent were aged 30 to 39 years and 34 percent were aged 40 years or over. Over 90 percent of doctoral students were aged 25 years or over, and of these, nearly a third was aged 40 and over. The age distribution of doctoral students has not changed much in recent years.

Non-formal learning is mainly undertaken by older people. Around 83 percent of non-formal learners are 25 years or over and over half are 40 years or over.

In 2005, 59 percent of students in tertiary education providers were European, 18 percent were Māori, 18 percent were Asian, 6 percent were Pasifika and 5 percent were affiliated with other ethnic groups.¹ These proportions include some students who affiliated with more than one ethnic group. In workplace-based formal learning, Māori learners accounted for 19 percent (up from 17 percent in 2000), Pasifika learners for 6 percent (up from 5 percent), and all other non-European learners for 7 percent (up from 5 percent). European learners made up 68 percent of all learners, down from 73 percent in 2000.

Figure 5.7: Participation rates in tertiary education by qualification level and setting



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. In the workplace-based rate, the Asian column also includes learners of other non-European, Māori or Pasifika ethnicities.

Māori rates of participation are the highest of any ethnic group at certificate level, while Asian New Zealanders have the highest rates at all other levels. At degree level and above, Māori and Pasifika rates remain lower than those of other groups when adjusted for age differences. The number of Māori learners fell slightly at sub-degree and degree level, but increased at postgraduate level, while the number of Asian learners fell overall, largely at sub-degree level, and Pasifika learners increased slightly over all levels.

On a population basis, more Māori and Pasifika peoples participate in industry training than any other groups. An estimated 7.1 percent of all Māori aged 15 years or over participated in industry training in 2005, compared to 5.6 percent for Pasifika peoples and 4.3 percent for all other people (including European learners). On a labour force basis, an estimated 15.9 percent of all working Māori and 11.1 percent of all working Pasifika peoples were learning on the job via industry training in 2005, compared to 6.4 percent for European workers and 5.9 percent for all other workers.

Māori participation at tertiary education providers has grown strongly over the last 10 years, particularly at sub-degree level at wānanga during the period from 2001 to 2003. However, Māori student numbers fell slightly in 2005 (by 200 students). When converting this number to equivalent full-time student units, Māori participation has fallen for the second year in a row, down by 3 percent from 2004 to 2005.

¹ These proportions include some students who affiliated with more than one ethnic group.

The drop in the number of Māori students was not evenly spread across the sector. Māori numbers fell at wānanga by 10 percent, while at institutes of technology and polytechnics, numbers increased by 4 percent in terms of headcount, but decreased by 3 percent in terms of equivalent full-time students. This indicates that more Māori were enrolling in courses of shorter duration. The number of Māori learners grew at universities by 5 percent (driven by the merger of the two former colleges of education with universities over this period).

The number of Māori students in sub-degree-level programmes increased very slightly in 2005, up by 70 on 2004 numbers. However, in equivalent full-time student terms, there was a 3 percent reduction between 2004 and 2005, almost all of this in wānanga. There was also a drop of 340 students (2 percent) at bachelors level but, unlike at sub-degree level, wānanga were the only part of the sector where Māori students enrolled at bachelors level increased, up 11 percent (or 130 students) from 2004. When universities and colleges of education are treated together, the number of Māori students at bachelors level fell by 3 percent from 2004 to 2005.

The number of domestic Pasifika students increased by 570 students (or 2 percent) between 2004 and 2005, while in terms of equivalent full-time students, the numbers remained unchanged. The number of domestic Pasifika students increased at all qualification levels, although at sub-degree level the number of equivalent full-time students fell by 2 percent. This was driven by a 29 percent fall in Pasifika numbers at wānanga, offset by growth in other sub-sectors.

There were 275 Māori and 95 domestic Pasifika students enrolled at doctorate level in 2005, up 6 percent and 10 percent from 2004 to 2005, respectively. The largest gains in doctoral students were, however, from domestic Asian students, whose numbers increased by 11 percent from 2004 to 2005, to reach 693 students in 2005.

Eighteen percent of all formal domestic students at tertiary education providers were studying for the first time in 2005, down from 26 percent in 2000. Students at private training establishments and at polytechnics are more likely to be studying for the first time, while students at universities and wānanga are less likely to be studying for the first time.

During the period of significant expansion between 1999 and 2002, the number of first-time students with no previous

qualifications increased four-fold, or by 22,500 students. This was driven largely by growth at wānanga (39 percent), private tertiary education providers (30 percent), and institutes of technology and polytechnics (29 percent). However, since 2002, the number of students enrolling with no previous qualifications has fallen by 10 percent. This is likely to be in response to policy changes aimed at managing growth and improving quality and relevance, but also reflects the fact that many of those who previously had no qualifications had now gained a qualification.

Around 18 percent of all domestic students were at school in the previous year. Over half of these went to university in 2005, while a third attended an institute of technology or polytechnic. Students coming straight from school to study degrees at a university represented around 9 percent of all students in 2005. This proportion has not changed much since 2000. More and more students are entering postgraduate study from the workplace. Half of all students at postgraduate level came from employment in 2005, up from 34 percent in 1998.

INTERNATIONAL COMPARISONS

The Organisation for Economic Co-operation and Development publishes a number of annual indicators that allow comparisons to be made of various aspects of the education systems of the 30 participating countries, as well as a number of other partner countries.

One widely used indicator is enrolment rate, the percentage of the population enrolled at various levels of education. This is published by age group and shown in Figure 5.8 below.

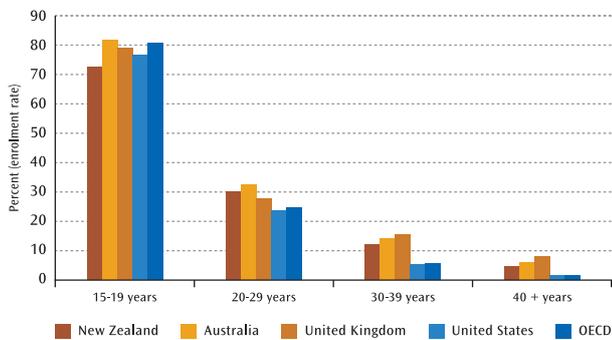
New Zealand has relatively high enrolment rates of older age groups, the third highest in the OECD at ages 40 years or above, the third highest at ages 30 to 39 years, and the sixth highest at ages 20 to 29 years. Our enrolment rate of 72.5 percent for ages 15 to 19 years is, however, the second lowest in the OECD. However, the enrolment rate for this age group reflects enrolments both at schools and at tertiary education providers.

Another indicator, the entry rate, is designed to provide a measure of first-time entry to different levels of education. In this measure New Zealand ranks top in the OECD at levels 5A (bachelors and above, excluding doctorates) and 5B (diploma level), and is also above average in the advanced research programmes (i.e. doctorates). However, this indicator is artificially inflated in countries with a high level of new entrants at older ages, such as New Zealand.



Learners in tertiary education

Figure 5.8: OECD enrolment rate in 2004 by age group and selected countries

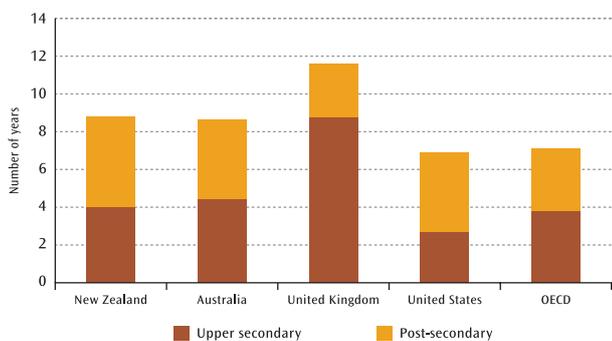


Source: OECD (2006), *Education at a glance: OECD indicators 2006*, Table C1.2, page 266.

Note: The enrolment rate is the percentage of the population enrolled in formal education by age group.

Another indicator of participation used is called educational expectancy, the years that a student might be expected to be enrolled in education, at various levels. Figure 5.9 below, for example, shows that New Zealand has a relatively high expectancy in tertiary education, in fact the highest in the OECD at all post-secondary levels, but only just above average for upper secondary-level study.

Figure 5.9: OECD education expectancy in 2004 for selected countries



Source: OECD (2006), *Education at a glance: OECD indicators 2006*, Table C1.1, page 265.

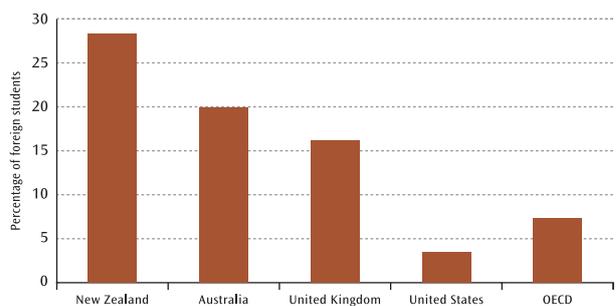
Notes:

1. Upper secondary includes all upper secondary study in schools, as well as all study at register levels 1 to 3 in tertiary education providers.
2. Post-secondary includes all study from level 4 and above. This is broader than the OECD level 'tertiary education' which relates to diploma level and above (ISCED levels 5 and 6 – see the technical notes in chapter 17 for more information).

In terms of the participation of international students, New Zealand compares favourably with other OECD countries. At 28.3 percent, New Zealand has the highest share in the OECD at tertiary level of students who are not citizens (including

permanent residents and non-permanent residents). At advanced research programme (doctorate) level, 36.6 percent of students are non-citizens, third to Switzerland and the United Kingdom.

Figure 5.10: Foreign students in 2004 as a percentage of total students

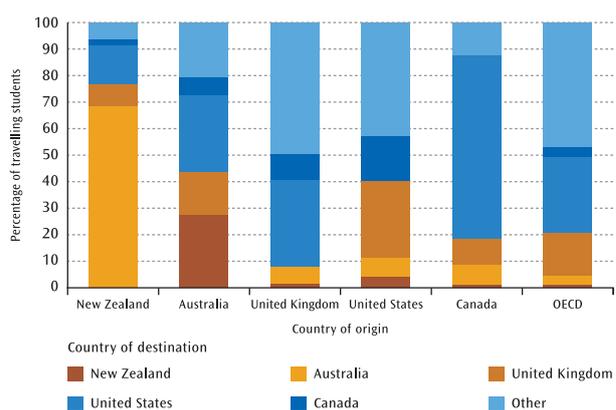


Source: OECD (2006), *Education at a glance: OECD indicators 2006*, Table C3.1, page 303.

Note: This graph relates to ISCED levels 5 and 6, i.e. diploma level and above.

The OECD data also allows comparison of both the origin and destination of students who travel abroad to study. Of the New Zealand citizens studying abroad, over 90 percent are studying in one of just three countries, with 68 percent studying in Australia, 15 percent in the United States and 8 percent in the United Kingdom. Of all OECD citizen students studying outside their country of citizenship, 1 percent studied in New Zealand, while 25 percent were studying in the United States.

Figure 5.11: Percentage of students studying abroad in 2004 by country of destination/origin



Source: OECD (2006), *Education at a glance: OECD indicators 2006*, Table C3.3, page 308.

Notes:

1. Upper secondary includes all upper secondary study in schools, as well as all study at register levels 1 to 3 in tertiary education providers.
2. Post-secondary includes all study from level 4 and above. This is broader than the OECD level 'tertiary education' which relates to diploma level and above (ISCED levels 5 and 6 – see the technical notes in chapter 17 for more information).

AN OVERVIEW

Provision of qualifications at levels 1 to 3 of the New Zealand Register of Quality Assured Qualifications has continued to grow in a number of areas. The number of students enrolled in student component-funded level 1 to 3 certificates has continued to increase, although the volume of provision has stabilised when counted in terms of equivalent full-time students. Within this area, the number of students studying for less than six weeks has grown the fastest. There has been a decrease in the number of students in foundation education qualifications, offset by an increase in those in vocational qualifications. The number of students in courses of a week or less has also continued to increase.

There has been a continued increase in the provision of tertiary education opportunities in schools through the Secondary-Tertiary Alignment Resource funding and Gateway. The number of students in school and tertiary education institution-based adult and community education courses has decreased in response to policy changes.

In 2005, there were 483,000 students enrolled in formal education at levels 1 to 3. The largest number were student component-funded students (206,500) followed by students in courses of one week or less (136,000) and those in industry training (121,200). Up to 360,000 learners participated in non-formal education at this level. The actual total number is not known precisely as many learners will have participated in more than one area during the year. Of the non-formal learners, the largest numbers were involved in adult and community education through tertiary education institutions and schools.

Students accessing education at this level tend to be aged 25 and over. There has been a definite shift towards older-aged students in student component-funded provision. Approximately half of the students accessing adult and community education and courses of one week or less are aged 40 years and over.

There has been an increase in the proportion of students accessing student component-funded qualifications who are already in employment, and a corresponding decrease in the proportion unemployed or on benefits. The number of students in Training Opportunities and Youth Training (both targeted to people who are unemployed) has continued to decrease.

LOOKING TO 2006

During 2005, the Tertiary Education Commission conducted several reviews that will impact on funding of level 1 to 3 qualifications in 2006.

The most significant review was of provision in student component funding categories A1 (sub-degree arts, social sciences and general education) and J1 (sub-degree business and law education). The review had a particular focus on provision by tertiary education institutions, including provision sub-contracted to private training establishments. The purpose of the review was to investigate the provisions within the two funding categories to ensure they are of high quality and meet the needs of stakeholders. The review focused on large areas of funding and high growth. The results of the review have informed discussions on 2006/08 profiles of tertiary education organisations.

The Tertiary Education Commission also started a three-year review of student component funding to private training establishments. The 2005 stage of the review looked at one-third of provision covering the areas of personal services, tourism, business and management, and philosophy and religion. The purpose of the review is to shift funding from areas of low relevance to those of higher strategic relevance. The results of the 2005 review have influenced funding decisions for 2006. The Tertiary Education Commission also reviewed dive-related provision to ensure that this provision meets the needs of the dive industry.

The other areas where there are significant funding changes for 2006 are in adult and community education provided by tertiary education institutions and short awards. In 2006, there is a ring-fenced allocation of \$35.5 million available to institutions and the funding rate has been further decreased. In 2007, funding will be reduced further to \$17.7 million and made available to all providers under a new funding framework. Funding for short awards (qualifications of fewer than 40 credits often involving only a few hours of education) has been limited to \$22.8 million in 2006 within the student component. First-aid and public sector knowledge short awards will not be funded from 2006, as they have been identified as areas that are more appropriately funded privately. Arrangements for funding short awards will be reviewed in 2006 with longer-term arrangements in place from 2007.

ANALYTICAL TABLES: An associated set of tables on the learners at level 1 to 3 qualifications is available on the Education Counts website, Tables ENR1-38, EFT1-36, PPN1-13, PRG1-15, TTP1-3, SAG1-3, ACE1-4, COM1-35, TTA1-3 and ARN1-18. Detailed technical information on the data presented here can be found in chapter 17.



Learners in tertiary education

LEVEL 1 TO 3 QUALIFICATIONS

Level 1 to 3 qualifications are equivalent to a senior secondary school education. The qualifications provide second-chance learning, 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.

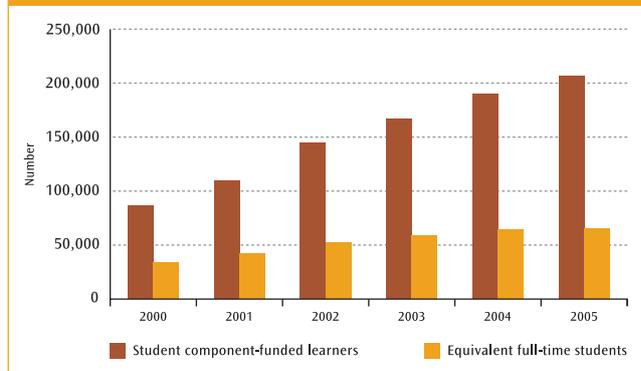
This chapter looks first at formal students who are funded through the Student Component Fund. Students funded through other funding streams have been excluded in this first section. Therefore, the numbers will be lower than those presented elsewhere in this report for level 1 to 3 certificates. The chapter then looks at learners in targeted training programmes – namely Training Opportunities and Youth Training – and industry training. This is followed by a section on provision of tertiary education in schools, funded through the Gateway programme and the Secondary-Tertiary Alignment Resource, most of which is at levels 1 to 3.

The last section looks at non-formal education. This covers adult literacy, English for Speakers of Other Languages, and Adult and Community Education. While this learning is not necessarily linked to the attainment of qualifications, most of the learning is equivalent to levels 1 to 3 of the qualifications register.

STUDENT COMPONENT-FUNDED LEARNERS

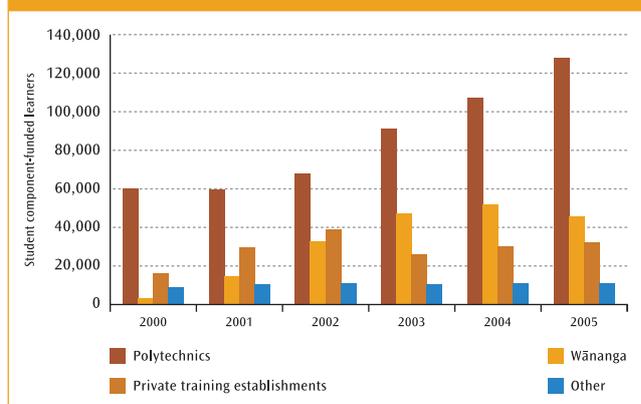
The number of learners in level 1 to 3 qualifications funded through the Student Component increased by 9 percent to 206,500, from 2004 to 2005. Compared to five years earlier, the number has more than doubled. There were 86,700 student component-funded students in level 1 to 3 qualifications in 2000. However, in full-time equivalent student terms, the increase was just less than double, from 33,800 full-time equivalent students in 2000 to 65,000 in 2005. This is a result of a large increase in the number of people undertaking less than seven weeks' full-time equivalent study at certificate level during the year.

Figure 6.1: Learners and equivalent full-time students in level 1 to 3 certificates



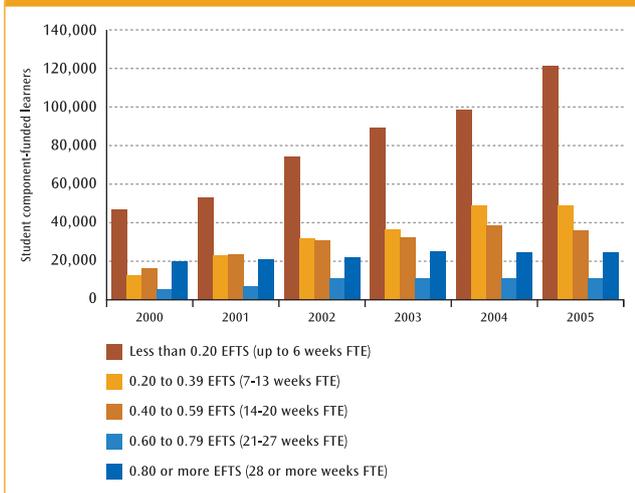
Sixty-two percent of the learners at this level in 2005 were enrolled with polytechnics, where numbers have increased significantly since 2002. The next largest sub-sector in 2005 was wānanga, where there was substantial growth in learner numbers to 2004, followed by a decrease in 2005. Numbers in private training establishments increased from 1999 to 2002, dropped off in 2003 and have slowly increased since then.

Figure 6.2: Learners in level 1 to 3 certificates by sub-sector



As noted earlier, most of the increased participation has been in students undertaking less than 0.2 equivalent full-time student units (EFTS) study during the year (less than seven weeks of full-time equivalent study). The number of students doing these shorter periods of study has risen nearly four-fold since 2000. In 2005, they made up almost half of level 1 to 3 certificate students funded through the Student Component Fund. In contrast, there has been very little growth in the number of students undertaking 0.6 or more EFTS of study or more during the year.

Figure 6.3: Learners in level 1 to 3 certificates by annual study load



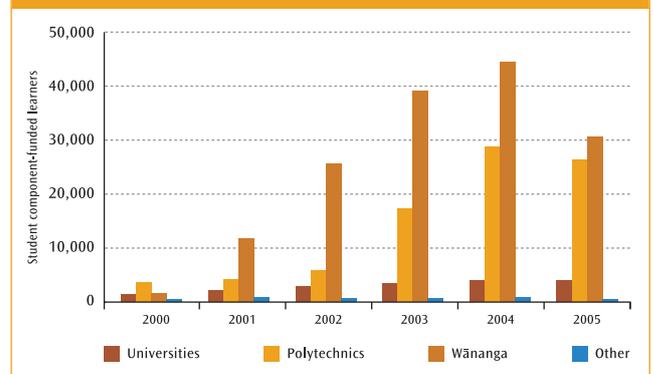
Seventy-three percent of students undertaking less than 0.2 EFTS were in polytechnics in 2005. There were 12 percent of these students in private training establishments and 11 percent in wānanga. Seventy-one percent of the students were European. Seventeen percent were Māori, 10 percent Asian and 4 percent Pasifika. More than two-thirds of these students were aged 30 and over. Just over half were male.

FOUNDATION EDUCATION QUALIFICATIONS

A significant proportion of the study for level 1 to 3 certificates is focused on developing foundation competencies, including literacy, numeracy, language and life skills. Foundation education covers study towards qualifications in mixed field programmes (with a focus on foundation education), English language, ESOL and te reo Māori. In 2005, there were 59,000 students studying for qualifications in these areas. They represented 29 percent of students, and 28 percent of equivalent full-time students, in level 1 to 3 certificates, funded through the student component in 2005.

The wānanga were the largest providers of foundation education qualifications in 2005, with 51 percent of students, followed by polytechnics with 44 percent of students. In both sectors, the number of students grew substantially until 2004 and decreased in 2005. Wānanga had the largest decrease, at 31 percent, compared to an 8 percent decrease for polytechnics.

Figure 6.4: Learners in foundation education level 1 to 3 certificates by sub-sector



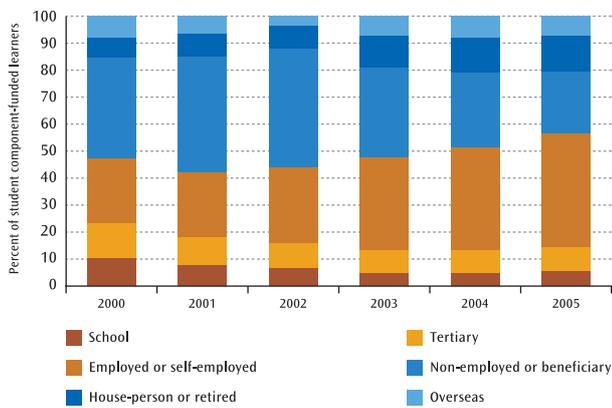
A large proportion of these students (61 percent) were enrolled in one of three large nationally provided programmes. These were Certificate in KiwiOra, run by Te Wānanga o Aotearoa (15,300 students); LifeWorks, run by the Open Polytechnic (12,100 students) and MahiOra, run by Te Wānanga o Aotearoa (9,100 students).

In 2005, 42 percent of students in foundation education qualifications were employed in the year prior to enrolment for study. A further 23 percent were non-employed or beneficiaries and 14 percent were house-persons or retired. Over the period from 2000 to 2005, the proportion of these students who were employed in the year prior to study increased from 24 percent to 42 percent. Over the same period, the proportion who were non-employed or beneficiaries decreased from 37 percent to 23 percent. These two trends reflect that while the job market improved over this time, there continued to be a group of students seeking foundation qualifications, even though they had entered employment. The other notable change was that the proportion who were house-persons or retired increased from 8 percent in 2000 to 14 percent in 2005.



Learners in tertiary education

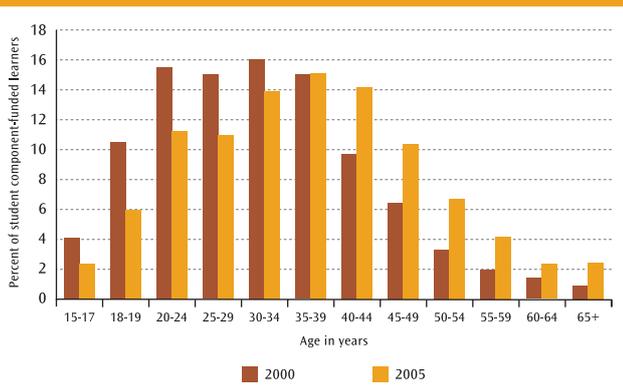
Figure 6.5: Learners in foundation education level 1 to 3 certificates by prior activity



In 2005, half of the students in these qualifications had no school qualifications. A further 20 percent had the equivalent to NCEA Level 1, another 19 percent had the equivalent to NCEA Level 2 and 11 percent had the equivalent to NCEA Level 3.¹

In 2005, more than half (55 percent) of these students were aged 35 and over and just over a quarter were aged 45 and over. This is a shift from the age distribution in 2000, which had higher proportions of students in younger age groups. In 2000, 55 percent were aged 30 and over and 24 percent were aged 40 and over.

Figure 6.6: Learners in foundation education level 1 to 3 certificates by age group



1 These percentages are after excluding students with overseas or 'unknown' school qualifications. Overseas qualifications are not reported by level. The number of students with overseas qualifications has increased significantly with the growth of the KiwiOra certificate, which is aimed at new permanent residents.

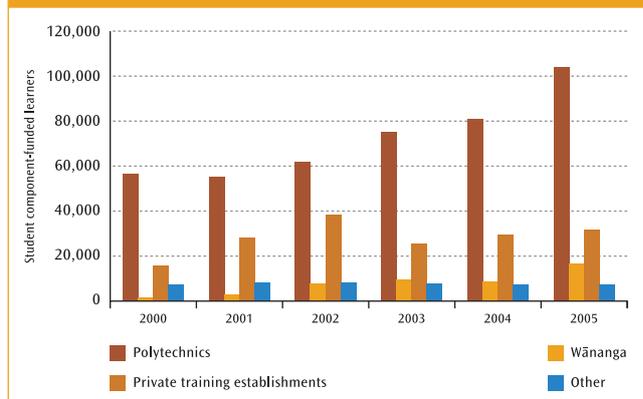
In 2005, just over a third of students in these qualifications were European and just over a quarter were Māori. Asian students made up 31 percent of students, with many of these students being enrolled in KiwiOra. Pasifika students made up only 7 percent. From 2000 to 2005, the proportion of European students has increased from 24 to 36 percent, while the proportion of Māori students has decreased from 41 to 27 percent, reflecting the drop in enrolments in this type of qualification in the wānanga. The proportion of Pasifika students has remained the same and the proportion of Asian students has increased from 23 percent to 31 percent.

Nearly two-thirds of students in these qualifications in 2005 were female. From 2001 to 2005, there was an increase in the proportion of male students in these qualifications from 28 percent in 2001 to 38 percent in 2005.

VOCATIONAL QUALIFICATIONS

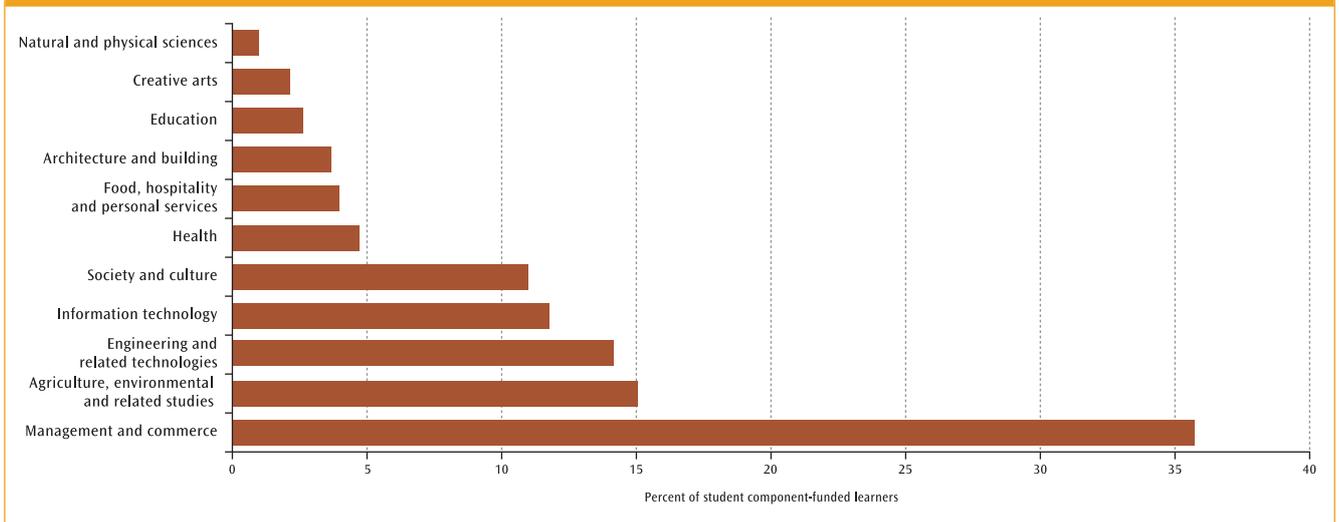
In 2005, there were around 155,500 students enrolled in vocationally oriented certificates² at levels 1 to 3, funded through the student component. Of these students 67 percent were enrolled in polytechnics, 20 percent in private training establishments and 11 percent in wānanga. There has been significant growth in provision of these qualifications through polytechnics since 2001. Student numbers in private training establishments have been slowly increasing, since a sharp decrease from 2002 to 2003, as a result of funding restrictions imposed at that time. The numbers at wānanga have nearly doubled from 2004 to 2005.

Figure 6.7: Learners in vocational level 1 to 3 certificates by sub-sector



2 That is, all qualifications not included as foundation education qualifications in the previous section.

Figure 6.8: Learners in vocational level 1 to 3 certificates in 2005 by field of study

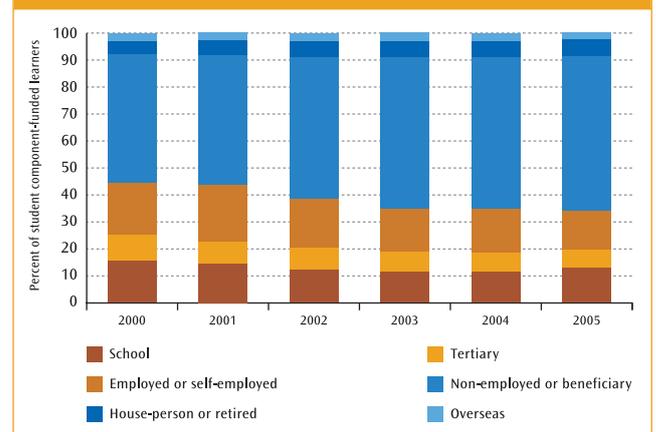


The most popular field of study for vocational qualifications was management and commerce, with 36 percent of students. Within this field, the most popular qualifications were in text processing and office tools (42 percent of students studying qualifications in this field), general business management (24 percent) and real estate (18 percent). The next most popular field of study was agriculture, environmental and related studies, with 15 percent of students. Around a third of the students in this field were taking courses relating to safe practices in pest and weed control. A further 14 percent were enrolled in qualifications classified as engineering and related technologies. Of these students, over half were in qualifications relating to automotive vehicle operation.

Qualifications relating to information technology accounted for 12 percent of students. They were mostly doing general computing certificates. Society and culture qualifications made up 11 percent of students. Around a third of these students were studying towards qualifications in tikanga – Māori customs. The rest were mostly studying across various aspects of social services and sports and recreation.

In 2005, 57 percent of students in vocational qualifications were employed in the year prior to enrolling for study, up from 48 percent in 2000. This group had the largest increase in numbers from 2000 to 2005, reflecting the expansion of courses aimed at upskilling people in the workforce. People who had been unemployed or beneficiaries made up 14 percent of students in 2005, down from 19 percent in 2000. Students coming straight from school made up 13 percent of students in 2005, similar to the 2000 proportion of 15 percent.

Figure 6.9: Learners in vocational level 1 to 3 certificates by prior activity



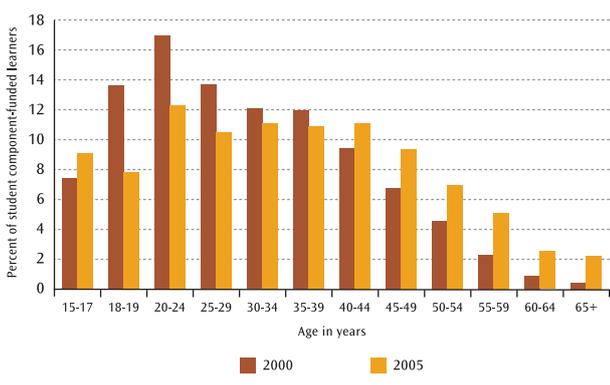


Learners in tertiary education

In 2004, 40 percent in vocational qualifications had no school qualifications. A further 24 percent had the equivalent of NCEA Level 1, 23 percent had the equivalent of NCEA Level 2 and 13 percent had the equivalent of NCEA Level 3.³ From 2000 to 2005, the main growth has been in the number of students with no formal qualifications, reflecting the expansion of certificates targeted to those with low education and low workplace skills.

As with foundation education qualifications, there has been a shift from 2000 to 2005 towards a greater proportion of older students participating in these qualifications. In 2005, 48 percent of students were aged 35 and over and 26 percent were aged 45 and over. This compares with 48 percent of students aged 30 and over in 2000 and 24 percent of students aged 40 and over.

Figure 6.10: Learners in vocational level 1 to 3 certificates by age group



In 2005, two-thirds of students in these qualifications were European, a quarter Māori, 7 percent Asian and 6 percent Pasifika. The main change from 2000 in the ethnic composition was an increase in the proportion of Māori students from 20 percent to 25 percent. Asian students also increased from 5 percent to 7 percent.

Just over half the students in these qualifications in 2005 were female. From 2000 to 2005 there was a small increase in the proportion of male students in these qualifications from 43 percent to 48 percent.

RETENTION AND COMPLETION

This analysis of retention and completion, and the following analysis of progression, looks at all level 1 to 3 certificate students enrolled in student component-funded providers, irrespective of funding source. This is a somewhat larger group of students than discussed in the previous sections. It has been necessary to consider them in this way as students can take courses funded from different sources in the process of completing the same qualification.

Overall, 36 percent of students who started study towards a level 1 to 3 certificate in 2004 neither completed nor continued in study in 2005 (first-year attrition rate). This was a slightly higher proportion than for students starting in 2003 (33 percent).

Looking over a five-year period, 33 percent of students who started study towards a level 1 to 3 certificate in 2001 had completed the qualification and a further 5 percent were still studying towards it. This was an improvement on the number of students who started in 2000, of whom only 30 percent had completed five years later and 4 percent were still studying.

First-year attrition rates were highest in polytechnics and private training establishments, with wānanga having substantially lower rates. Over a five-year period, completion rates were similar across the three main sectors involved in level 1 to 3 certificate provision for students starting in 2001. This is in contrast to students starting the previous year, where completion rates were much higher in wānanga than in the other two sectors. Students in polytechnics and wānanga were more likely than students in private training establishments to still be studying after five years.

Men tended to have higher rates of first-year attrition than women. Over a five-year period, women were more likely to complete a level 1 to 3 certificate than men. A similar proportion of men and women continued to study after five years.

European and Pasifika students had the highest rates of first-year attrition, with Māori having somewhat lower rates and Asians having the lowest rates of any ethnic group. Asian students had the highest rates of completion over five years, followed by Europeans, with Māori and Pasifika students having the lowest rates of completion. However, Māori students were much more likely to be continuing to study towards completing a level 1 to 3 certificate after five years.

³ These percentages are after excluding students with overseas or 'unknown' school qualifications. Overseas qualifications are not reported by level. The number of students with overseas qualifications has increased significantly with the growth of the KiwiOra certificate, which is aimed at new permanent residents.

First-year attrition rates were fairly even across age groups, with those aged 25 to 39 having somewhat lower rates than other age groups. Students aged under 18 were less likely to complete a level 1 to 3 certificate over a five-year period. There has been an improvement in completion rates for students aged 25 and over from those starting in 2000 to those starting in 2001. There are no notable differences across age groups in the proportion still studying after five years.

Table 6.1: Attrition, retention and completion rates for level 1 to 3 certificates by sub-sector, gender, ethnic group and age group

	First-year attrition		Five-year retention		Five-year completion	
	Students starting in					
	2003	2004	2000	2001	2000	2001
Percentage of students						
Polytechnics	41	42	31	35	27	30
Wānanga	13	12	43	38	38	32
Private training establishments	38	41	27	32	26	30
Female	26	28	38	41	33	36
Male	41	44	30	33	26	29
European	38	41	35	38	31	34
Māori	28	32	33	38	27	31
Pasifika	37	37	30	34	27	30
Asian	18	17	44	51	42	49
Under 18	38	36	28	30	24	26
18-24	36	36	38	40	33	35
25-39	30	33	35	39	30	34
40 and over	33	38	32	38	29	34
Total	33	36	34	38	30	33

PROGRESSION TO FURTHER STUDY

Level 1 to 3 certificates have two roles – to provide basic employment-related skills and to prepare people for further study at higher levels. In terms of the latter, progression to further study is a key indicator of success.

Just under half of all students completing a level 1 to 3 certificate in 2004 went on to further study in 2005. Of these students progressing directly to further study, about half went on to study at a higher level and half at the same level. Students are only slightly more likely to engage in further study over a five-year

period following completion. However, over a five-year period, they are much more likely to move on to higher-level study, than in the year immediately following completion.

The rates of progression to study in the following year are higher for students at polytechnics and wānanga than for students at private training establishments. This is true both for students going to any level and to higher levels. Over a five-year period, students completing study at wānanga have the highest progression rates, with more than half of completing students moving on to higher levels of study. The lowest progression rates are for students completing study at private training establishments, with only a quarter moving on to higher-level study, over a five-year period. This sub-sector tends to have a greater focus on preparing students for employment.

Women are more likely than men to move to further study in the following year and they are also more likely to move directly to higher-level study. Over a five-year period there is no difference between progression rates for men and women overall, but women are slightly more likely to have progressed to a higher level.

Māori students had the highest level of progression to any level of further study – both in the following year and over a five-year period. European students had the lowest level of progression to any level of study in the following year. However, the differences between ethnic groups other than Māori were less marked over a five-year period. Both Māori and Pasifika students had the highest level of progression to study in the following year to higher-level study. Over a five-year period, Māori students had the highest level of progression to higher-level study, with little difference between the other ethnic groups.

Students under 25 were more likely to progress to further study in the following year at any level. Students aged 18 to 25 are most likely to progress the following year to higher-level study. Over a five-year period, students in the 18 to 25 year age group were most likely to progress to further study, including study at a higher level.



Learners in tertiary education

Table 6.2: Progression rates for level 1 to 3 certificates by sub-sector, gender, ethnic group and age group

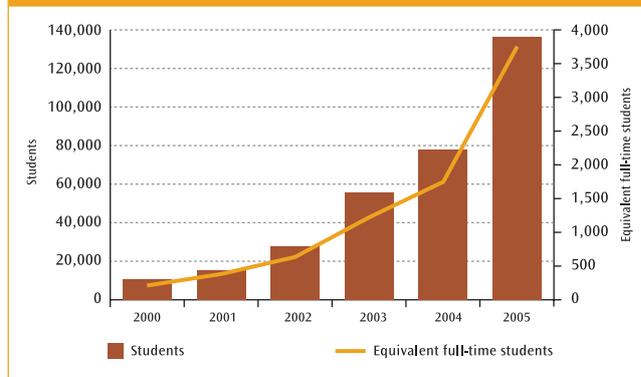
	Students completing in 2004		Students completing in 2000	
	Direct progression		Five-year progression	
	All levels	Higher levels	All levels	Higher levels
	Percentage of students			
Polytechnics	42	21	57	36
Wānanga	45	21	66	53
Private training establishments	38	18	50	25
Female	45	22	54	35
Male	40	19	54	32
European	39	20	54	34
Māori	51	26	63	40
Pasifika	43	25	50	30
Asian	44	19	53	32
Under 18	48	24	56	32
18-24	48	30	59	41
25-39	43	22	52	32
40 and over	39	15	47	24
Total	43	21	54	33

SHORT COURSES

Tertiary providers also provide a range of short courses, of one week or less. While these courses lead to an assessed qualification, they are not included in the main counts of formal enrolments as discussed above. Nearly all of these courses are funded from the Student Component Fund.

The number of people enrolling in courses of one week or less has increased dramatically over the last five years. In 2005, 136,000 students enrolled in these courses at levels 1 to 3, compared with only 10,500 in 2000. Of the 136,000 students enrolled in 2005, 35,000 were also enrolled in longer duration qualifications. These short courses represented 3,750 equivalent full-time students in 2005, compared with 210 equivalent full-time students in 2000. Funding for these courses has been capped for 2006, as discussed at the start of this chapter.

Figure 6.11: Learners in courses of one week or less



In 2005, these courses were provided by all 20 polytechnics, 11 private training establishments, the three wānanga, one university and one other tertiary education provider. However, 99 percent of students were enrolled with polytechnics. In 2005, 47 percent of the students were female. Seventy-eight percent of students were aged 25 and over, with 45 percent aged 40 and over. Seventy percent of the students were European, 17 percent were Māori, 5 percent Pasifika and 5 percent Asian. About half of the students were enrolled in courses in the broad field of study of health. These were nearly all first-aid courses. Other popular fields of study were architecture and building (20 percent of students) and agriculture, environmental and related studies (13 percent of students).

INDUSTRY TRAINING

Industry training is discussed in more detail in the next chapter. This section presents some general statistics to indicate the number and characteristics of industry trainees at levels 1 to 3. The numbers include modern apprentices. However, modern apprentices are not discussed separately, as only 9 percent of them are studying towards qualifications below level 4.

In 2005, there were 121,224 industry trainees engaged in training programmes at levels 1 to 3. They made up 61 percent of all industry trainees. More than half of them were engaged in programmes at level 3, a third were engaged in programmes at level 2 and 12 percent in programmes at level 1. Pasifika trainees were most likely to be studying at these levels, with 78 percent of all Pasifika industry trainees engaged at levels 1 to 3. European trainees were least likely to be studying below level 4, with only 56 percent at levels 1 to 3.

In 2005, there were 12,512 national certificates at levels 1 to 3 issued to industry trainees, making up 52 percent of the total national certificates issued. Trainees attaining level 1 to 3 certificates were more likely to have no school qualifications (15 percent) than those attaining certificates at level 4 or higher (9 percent).

TARGETED TRAINING PROGRAMMES

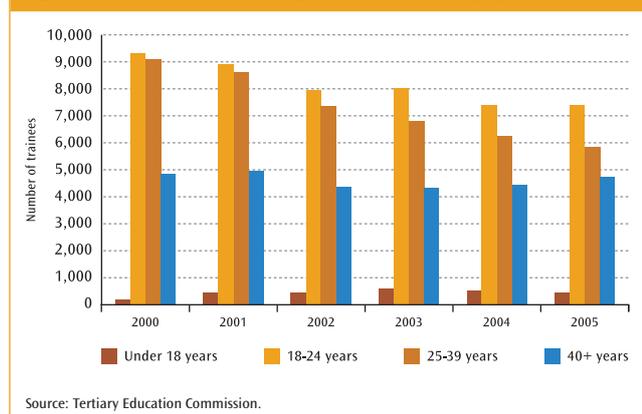
TRAINING OPPORTUNITIES

Training Opportunities is a labour market programme providing foundation and vocational skills training at levels 1 to 3. It is targeted to people who are disadvantaged in terms of employment and educational achievement. Training Opportunities provides full-time, fully funded training. The majority of learners enter with no or low qualifications.

The number of trainees in Training Opportunities has continued to decline. In 2005, a total of 16,420 individuals participated, compared with 17,760 in 2004 and 21,870 in 2000. This decrease is probably related to reducing unemployment rates over this period.

In 2005, 41 percent of trainees were Māori, 34 percent were European and 12 percent Pasifika.⁴ Just over half the trainees were women. Forty percent of the trainees were aged 18 to 24, 32 percent were aged 25 to 39 and 26 percent were aged 40 and over. Over the period 2000 to 2005, the decrease in numbers has been in trainees aged under 40 years.

Figure 6.12: Learners in Training Opportunities by age group

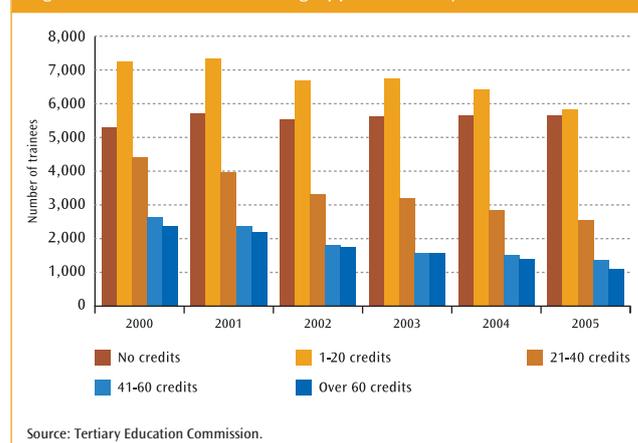


Credit attainment

In 2005, 35 percent of trainees gained between 1 and 20 credits on the National Qualifications Framework and 30 percent gained more than 20 credits as a result of participating in Training Opportunities. However, 34 percent of trainees gained no credits for their participation. Since 2000, the proportion of trainees gaining no credits has increased from 24 to 34 percent, while the proportion gaining over 20 credits has decreased from 43 to 30 percent.

The number of trainees gaining no credits has remained fairly constant, but fewer trainees have gained higher numbers of credits. This decrease may reflect shorter periods of engagement in training as the labour market has improved.

Figure 6.13: Learners in Training Opportunities by credits attained



In 2005, Pasifika trainees were more likely than trainees from other ethnic groups to have gained no credits (37 percent of Pasifika trainees) and less likely to have gained more than 20 credits (28 percent of Pasifika trainees). Women were less likely to have gained no credits than men (33 percent compared to 36 percent) and more likely to have gained more than 20 credits (36 percent compared to 28 percent).

Outcomes

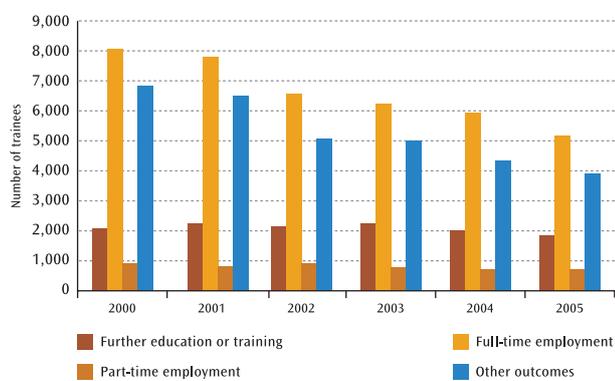
Two out of three learners achieved a positive outcome, that is, they moved into employment or further education, within two months of leaving a Training Opportunities programme in 2005. Half went on to employment and 16 percent moved into further education and training.

⁴ Ethnic group is reported on a prioritised basis, so if a person declares affiliation with more than one ethnicity, only one is recorded, with the ethnic group recorded based on a prioritised order: Māori, Pasifika, Asian, other, European.



Learners in tertiary education

Figure 6.14: Learners in Training Opportunities by outcome achieved



Source: Tertiary Education Commission.

Note: Outcomes were achieved within two months of completing the programme.

The proportion of each ethnic group achieving positive outcomes in 2005 was fairly similar. However, Europeans had a higher proportion moving into employment (55 percent), while Asians had a higher proportion moving into further education or training (24 percent).

There were also similar proportions of positive outcomes for males and females in 2005. However, a higher proportion of females moved on to further education and training (18 percent of females compared to 13 percent of males) and a lower proportion to employment (48 percent of females compared to 54 percent of males). Females were also more likely to move into part-time employment than males (8 percent of females compared to 4 percent of males).

YOUTH TRAINING

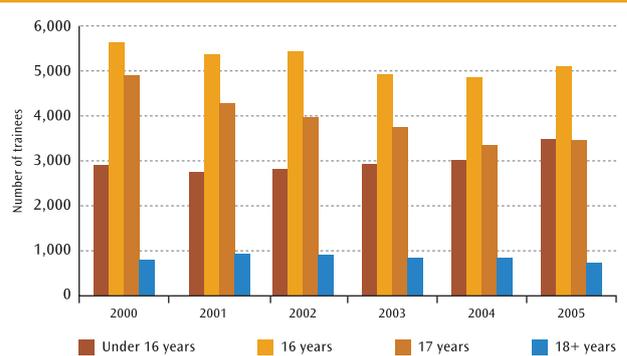
Youth Training provides foundation and vocational skills training at levels 1 to 3 to young people who have left school with no or very low qualifications. It provides full-time, fully funded training towards employment or further education and training.

The number of trainees in Youth Training has continued to decline. In 2005, a total of 10,890 individuals participated, compared to 13,120 in 2000. This decrease probably related to reducing unemployment rates over this period.

In 2005, 49 percent of trainees were Māori, 39 percent were European and 10 percent were Pasifika.⁵ Just over half of the trainees were male. Two-thirds of the trainees were aged 16 or

17. Just over a quarter were under 16. These trainees had school exemptions and were referred to Youth Training by schools, alternative education or truancy services. From 2000 to 2005, the largest drop in numbers has been in trainees aged 17, while the number of trainees aged under 16 has grown steadily since 2001.

Figure 6.15: Learners in Youth Training by age group



Source: Tertiary Education Commission.

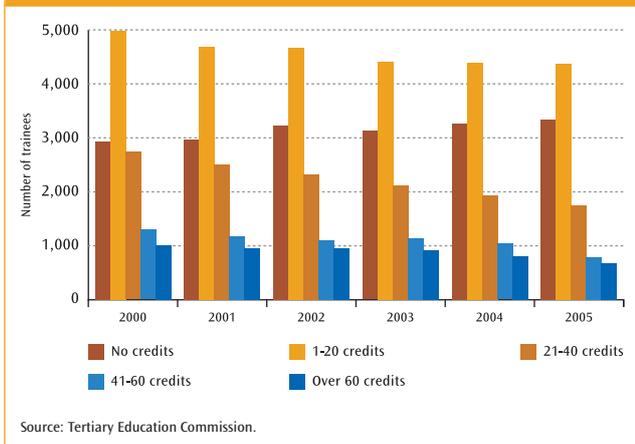
Credit attainment

In 2005, 40 percent of trainees gained between 1 and 20 credits on the National Qualifications Framework and 29 percent gained more than 20 credits as a result of participating in Training Opportunities. However, 31 percent of trainees gained no credits for their participation. Since 2000, the proportion of trainees gaining no credits has increased from 23 percent to 31 percent, while the proportion gaining over 20 credits has decreased from 39 percent to 29 percent.

The number of trainees gaining one or more credits has declined, while the number gaining no credits has steadily increased. This change may reflect shorter periods of engagement in training as the labour market has improved.

⁵ Ethnic group is reported on a prioritised basis, so if a person declares affiliation with more than one ethnicity, only one is recorded, with the ethnic group recorded based on a prioritised order: Māori, Pasifika, Asian, other, European.

Figure 6.16: Learners in Youth Training by credits attained

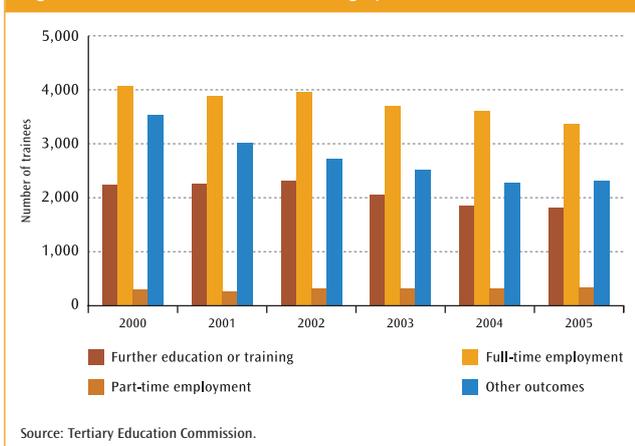


In 2005, Pasifika trainees were more likely than trainees from other ethnic groups to have gained no credits (34 percent of Pasifika trainees) and less likely to have gained more than 20 credits (27 percent of Pasifika trainees). The attainment of credits was similar for males and females, although female trainees were slightly more likely to gain more than 20 credits (31 percent of females compared with 28 percent of males).

Outcomes

Seventy percent of trainees achieved a positive outcome, that is, moving into employment or further education within two months of leaving a Youth Training programme in 2005. Nearly half went on to employment and a further 23 percent to further education and training.

Figure 6.17: Learners in Youth Training by outcome achieved



Note: Outcomes were achieved within two months of completing the programme.

European trainees were more likely than trainees from other ethnic groups to move on to employment (53 percent of European trainees). Pasifika trainees were more likely to move on to further education and training (25 percent of Pasifika trainees). Male trainees were more likely than females to move on to employment (52 percent of male trainees). Females were more likely to move on to further education and training (26 percent of female trainees).

Post-placement support

In 2004, a pilot post-placement support programme was introduced. Three streams of support were piloted:

- continued learning while in employment
- enhanced support for learners to access further education or training at levels 3 and 4, and
- an incentive scheme for providers to supply individualised support leading to sustainable employment and/or further education and training outcomes.

The pilots were evaluated in 2005. The main findings of the evaluation were:

- Providers reported that post-placement support was effective in sustaining former learners in employment and further training placements. The overall retention rate of those receiving any of the three options was 71 percent.
- A key success factor to sustaining placements was the flexibility given to tailor programmes to meet each individual's needs.
- The option of providing continued learning in employment was not as successful as the other two. Providers reported that this option was under-funded.

As a result of the evaluation report, the Tertiary Education Commission has implemented changes to post-placement support for 2007. Provision of continued learning and individualised support will be merged and payments increased.



Learners in tertiary education

TERTIARY EDUCATION WITHIN SCHOOLS

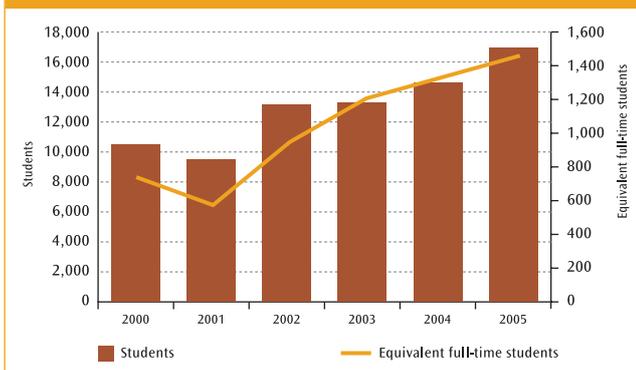
THE SECONDARY-TERTIARY ALIGNMENT RESOURCE

The Secondary-Tertiary Alignment Resource (STAR) assists schools to better meet the needs of their senior secondary students, by providing additional funding to schools to access a wide range of courses that provide greater opportunities for senior students. Courses can provide work-based learning and/or lead towards attainment of credits in NCEA or recognised tertiary qualifications.

Funding is provided to all secondary and composite schools based on their senior secondary rolls. The funding can be used to support courses within the school, employ a STAR co-ordinator or purchase courses from tertiary education providers.

In 2005, 17,000 students undertook courses at tertiary education providers, funded through the STAR programme. This was an increase of 16 percent on 2004 and represented 11 percent of senior secondary school students (years 11 and over) in 2005. These courses represented 1,460 equivalent full-time students, an increase of 9 percent on 2004.

Figure 6.18: Students and equivalent full-time students in STAR courses



In 2004, courses for STAR students were provided by 19 polytechnics, 10 private training establishments, three universities and one other tertiary education provider. Students in polytechnics made up 85 percent of STAR students in tertiary providers. Fifteen percent of students were in private training establishments, 2 percent in universities and 1 percent

in the other tertiary education providers. The numbers and proportions of STAR students in universities and private training establishments have steadily increased from 2000, when nearly all students were in polytechnics. The most popular fields of study were food, hospitality and personal services (20 percent), engineering and related technologies (18 percent) and management and commerce (17 percent).

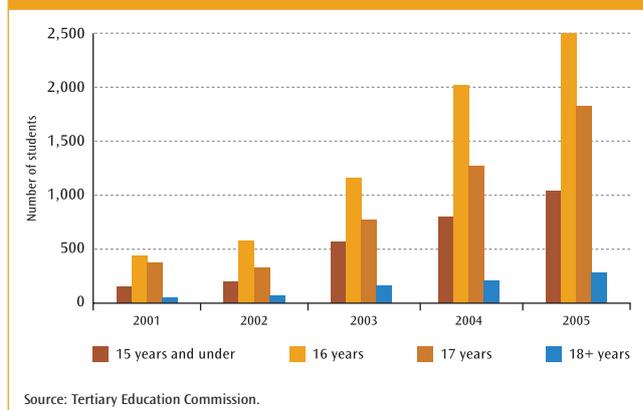
GATEWAY

Gateway is designed to broaden educational options for senior secondary school students by offering them workplace learning integrated into their school education. The programme was originally established in 2001 for decile 1 to 5 schools, and is being expanded to include all decile 6 schools by 2008. From 2007, Gateway will be expanded to include all decile 7 to 10 schools. Fifty new schools launched Gateway during 2005, with a total of 176 schools participating in the programme.

Gateway leads to assessment for credits linked to the National Qualifications Framework and therefore counts towards national qualifications. Students pursue individual learning programmes, gaining new skills and knowledge in a workplace in their local community as well as earning credits.

During 2005, a total of 5,630 students participated in Gateway, a 35 percent increase on 2004. Half of the students were European, 32 percent Māori, 12 percent Pasifika and 2 percent Asian.⁶ Just under half of the students were female. Three-quarters were aged 16 or 17 years. Nineteen percent were under 16 years and 5 percent were aged over 17 years.

Figure 6.19: Gateway students by age group



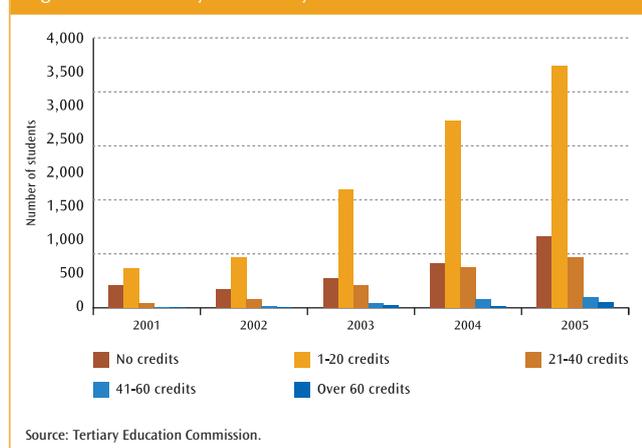
⁶ Ethnic group is reported on a prioritised basis, so if a person declares affiliation with more than one ethnicity, only one is recorded, with the ethnic group recorded based on a prioritised order: Māori, Pasifika, Asian, other, European.

During 2005, students were placed in 36 different industries with the top five – hospitality, retail, motor industries, education, and building and construction – accounting for 50 percent of all placements.

Credit attainment

In 2005, 64 percent of Gateway students gained between 1 and 20 credits on the National Qualifications Framework through participating in Gateway. A further 16 percent gained more than 20 credits. However, 19 percent gained no credits, a significant decrease from 34 percent of Gateway students in 2001.

Figure 6.20: Gateway students by credits attained

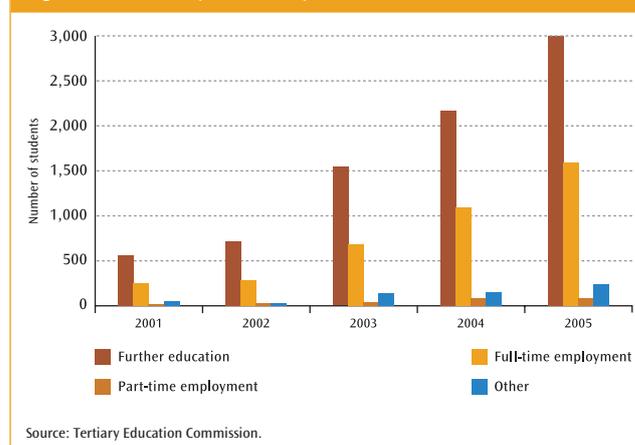


In 2005, Pasifika students were more likely than other ethnic groups to have attained no credits (24 percent of Pasifika students) and European students were more likely to have gained more than 20 credits (21 percent of European students). There was little difference in credit attainment between males and females.

Outcomes

In 2005, 61 percent of students completing a Gateway placement carried on to further education at school or with a tertiary provider and 34 percent moved into employment (including the 6 percent of Gateway students who moved into a Modern Apprenticeship).

Figure 6.21: Gateway students by outcome achieved



In 2005, Asian students were more likely than students from other ethnic groups to move on to further education after Gateway (79 percent of Asian students) and less likely to move to employment (17 percent). European students were more likely than students from other ethnic groups to move to employment (40 percent of European students) and less likely to move to education (57 percent).

In 2005, female students were more likely than males to move to further education (68 percent of females compared to 55 percent of males). Males were more likely to move to employment (44 percent of males compared to 26 percent of females).

NON-FORMAL EDUCATION

ADULT LITERACY

In 2005, the Adult Literacy Pool was operating under general foundation learning guidelines. A considerable increase in applications led to the fund being oversubscribed. Hence, many applications were not funded. In total, 54 projects, valued at over \$3 million, were approved for funding.

Since this fund has been in operation, there has been a gradual increase in intergenerational and functional literacy projects. While the North Island continues to attract the majority of the funds from this pool, the regional balance is improving. Over 20 percent of the projects funded were in the South Island in 2005.



Learners in tertiary education

More than 3,200 learners participated in various learning opportunities through this pool. There was also an emphasis on building provider capability especially among Youth Training and Training Opportunity providers. Support to these providers was made available through Adult Literacy Advisory Services, which were managed regionally.

Workplace literacy education

In 2005, the Workplace Basic Skills Fund funded 47 projects, involving a total of over 900 employees/learners. The majority of workplace literacy projects/applications are provider-led. However, this is gradually changing with a number of employers now leading the literacy provision in their workplaces.

Refugee and migrant literacy education

The National Association of ESOL Home Tutor Schemes administers 23 schemes operating nationally that provide English language skills and resettlement support to migrants. In 2005, 6,475 adult learners received English for speakers of other languages (ESOL) tuition and resettlement support from 3,079 volunteers. Of those 6,475 learners, 4,122 were refugees, asylum seekers or in the family reunification category. The schemes trained 981 new volunteers to certificate level, including six bilingual tutors, and held 65 in-service workshops. Literacy tuition at a beginner level was provided to 738 learners.

The Multicultural Learning and Support Services provides language and settlement support to migrants. The service provided 16 ESOL literacy courses and three community language classes. In 2005, 263 learners received ESOL tuition. Three community languages courses were also provided for 42 learners.

The national ESOL Advisory Services commenced in 2003. Services in 2004 were available in Auckland central, South Auckland and Wellington. The Hamilton and Christchurch services commenced in September 2005, with a total of 1,516 migrants assessed across all centres.

Refugee Study Grants were expanded in 2005. Grants gave the opportunity for refugee learners to access ESOL study at tertiary institutions free of charge. There were 300 places across 11 institutions.

Academic Migrant Grants were also offered for the first time in 2005. Grants gave the opportunity for migrants with tertiary qualifications to access employment-focused ESOL study at

tertiary institutions free of charge. There were 125 places across eight institutions.

English for Migrants

The English for Migrants programme, introduced in 1998, offers English language training for new arrivals to New Zealand. The funding for this programme comes from the participating migrants, who pay a tuition fee in advance as part of the immigration process. Migrants have up to three and a half years to take up their training. Providers are contracted to deliver English language to suit the needs of the migrants.

Currently, there are 137 providers contracted nationwide, with private language schools being the most popular type of provider. As of 31 December 2005, 14,309 migrants who have pre-purchased English language tuition have registered and 7,814 migrants have used up their entitlement, with a further 2,141 migrants having participated but who have not yet used all their entitlement. During 2005, 2,597 migrants have been identified as having their entitlements expired and have had their entitlements returned to the Department of Labour. The largest groups of migrants to pre-purchase tuition were from China and Korea.

ADULT AND COMMUNITY EDUCATION

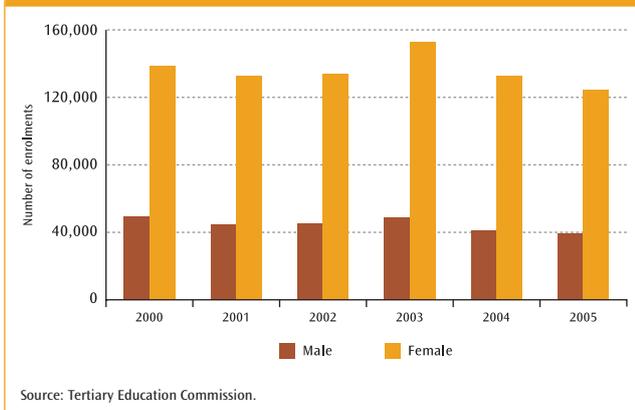
The Tertiary Education Commission provides funding to community organisations to deliver Adult and Community Education (ACE) activities and programmes within their community. Limited information is available on the learners receiving education from these community organisations. However, information is available about learners attending ACE courses at schools and tertiary education institutions.

ACE in schools

Secondary schools provide community education programmes for adults in addition to their regular daytime curriculum. In 2005, there were 164,000 enrolments in school community education programmes, a decrease of 6 percent from 2004.⁷

⁷ This is a count of the total number of course enrolments at schools. Individual learners may be counted in more than one course. It is not possible, from the available data, to calculate the number of individuals enrolling.

Figure 6.22: Enrolments in community education in schools by gender



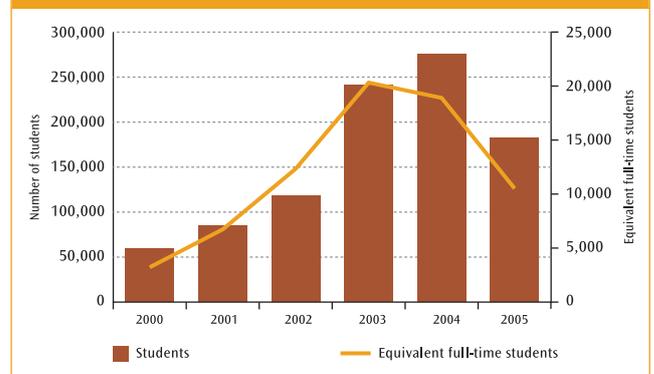
In 2005, 84 percent of enrolments were from European students, 9 percent from Asian students, 5 percent from Māori students and 2 percent from Pasifika students.⁸ Three-quarters were women. Forty-four percent were aged from 30 to 49 years.

The most popular subjects for women were art, music and crafts (21 percent of enrolments), fitness, sport and recreation (18 percent) and home management and maintenance (8 percent). For men, the most popular subjects were art, music and crafts (15 percent), fitness, sport and recreation (11 percent) and languages (other than English and Māori) (10 percent).

ACE in tertiary education institutions

In 2005, 183,000 learners enrolled in ACE courses provided by tertiary education institutions, a decrease of 34 percent on 2004 numbers. These courses represented 10,500 equivalent full-time students in 2005, a decrease of 44 percent on 2004 provision. The decrease in provision has been in response to policy changes to restrict the overall provision of ACE through tertiary education institutions, following the dramatic growth in provision from 2002 to 2003. In 2005, the funding rate for this area was lowered from \$5,700 to \$5,000 per equivalent full-time student. In 2006, a ring-fenced funding pool for tertiary education institution-ACE was introduced for one year only, to be followed in 2007 by funding of all ACE provision through a single pool of funding, as discussed at the start of this chapter.

Figure 6.23: Learners in community education in tertiary education institutions



ACE courses were provided by 19 polytechnics, eight universities, two colleges of education and two wānanga in 2005. Eighty percent of students were enrolled at polytechnics, followed by 15 percent at universities. In 2005, the most popular fields of study were management and commerce (28 percent) and society and culture (24 percent). Just over half of the students were female. Eighty-four percent were aged 25 and over, with more than half aged 40 and over. Seventy-two percent were European, with Māori making up 17 percent, Asians 5 percent and Pasifika 4 percent.

⁸ Ethnic group is reported on a prioritised basis, so if a person declares affiliation with more than one ethnicity, only one is recorded, with the ethnic group recorded based on a prioritised order: Māori, Pasifika, Asian, other, European.



Learners in tertiary education

AN OVERVIEW

The recent substantial increases in level 4 qualifications and in workplace learning are notable features of the tertiary education system at a time when overall learner growth is slowing.

The number of learners in level 4 qualifications in provider-based learning increased significantly between 2004 and 2005, compared with a lower increase for those in level 5 to 7 diplomas and certificates and a slight fall in those enrolled in bachelors qualifications. From 2001 to 2005, the relative growth in the number of learners in level 4 qualifications in provider-based learning was 10 times greater than for those in bachelors qualifications. Over the same period, learners in level 5 to 7 certificate and diploma qualifications increased slightly more than for bachelors qualifications.

The number of learners in workplace learning, industry training and Modern Apprenticeships increased very significantly from 2004 to 2005. Between 2000 and 2005, the numbers of learners in the workplace increased twice as fast as those in provider-based tertiary education. This is in part due to the increased focus by industry and government on skills development and productivity growth in the workplace. Also, the success of the Modern Apprenticeships scheme, and its popularity with industry and young people, are reflected in the significant growth in participation.

LOOKING TO 2006

There are early indications that growth in enrolments at level 4 to 7 certificate and diploma qualifications will continue to slow in 2006. Reasons for this may include reduced demand from learners for particular programmes and the effect of the government's prioritisation of the provision of sub-degree qualifications in recent years.

The current statement of tertiary education priorities signals the government's intention to shift funding away from provision that does not contribute to New Zealand's broad national goals. Since 2004, there have been funding changes intended to shift publicly funded programmes of study to improve their alignment with the priorities for the sector as set out in the statement of tertiary education priorities and the tertiary education strategy. These funding changes included:

- possible funding reductions for some certificates and diplomas as part of the strategic realignment process (Quality Reinvestment Programme) for institutes of technology and polytechnics and wānanga
- no funding of growth in certificate or diploma qualifications above 200 equivalent full-time students in any rolling 12-month period
- a three-year review, started by the Tertiary Education Commission, of student component funding of private training establishments, and
- capping of funding of short awards (qualifications of fewer than 40 credits).

These changes are expected to have an impact on sub-degree enrolments in 2006.

Workplace learning has received increased funding as part of the government's moves to ensure investment in both high-quality and relevant tertiary education provision. Preliminary information from the Tertiary Education Commission indicates that the number of industry training learners in June 2006 was 13,000 higher than in June 2005.

MID-REGISTER AND WORKPLACE LEARNING QUALIFICATIONS

Level 4 to 6 qualifications, together with level 7 certificates and diplomas, are also known as mid-register or sub-degree qualifications. Workplace learning qualifications can include learning at almost all levels of the register. All of these qualifications are usually of a specialised nature, vocationally oriented, and of shorter duration than a bachelors degree.

Mid-register qualifications provide continuing pathways for learners progressing from school and they create entry points into the system for those seeking to gain vocation-ready qualifications or change careers. The level of complexity of study approximates to advanced trades, technical and business qualifications. They can also be used as pre-requisite qualifications for higher-level programmes such as bachelors degrees.

All qualifications at level 4 are certificates while those at levels 5 to 7 are either certificates (advanced level) or diplomas. These certificates and diplomas are either registered on the National Qualifications Framework or are approved 'local provider' qualifications.

ANALYTICAL TABLES: An associated set of tables on the students in mid-register qualifications and workplace qualifications is available on the Education Counts website. Tables ITP1-16, ITA1-4, ITF1 and TTP1-3 refer to industry training. See also the participation and achievement tables. Detailed technical information on the data presented here can be found in chapter 17.



Learners in tertiary education

The terms ‘national certificate’, ‘national diploma’ and, more recently, the ‘national postgraduate certificate’ refer to qualifications on the National Qualifications Framework. All workplace learning qualifications are listed on the framework. For workplace learning, national certificates at levels 1 to 3 provide entry-level trade and vocational skills while at level 8 – the highest level in which workplace learning is currently undertaken – national postgraduate certificates continue the professional development of the areas that learners studied earlier.¹

The modular nature of certificate and diplomas often allows for them to build on each other. For example, the National Certificate in Electrical Engineering (Electrician) at level 4 can be followed up with study in the National Certificate in Electrical Engineering (advanced trade level) at level 5 and then by the National Diploma in Engineering at level 6.

Many qualifications on the National Qualifications Framework automatically recognise credit from standards-based local provider qualifications which, in many cases, are designed to provide a pathway into framework qualifications offered by a tertiary education provider. For example, some local provider qualifications specialise in pre-trades training and comprise level 2 unit standards from the framework. This enables a learner to enter into an apprenticeship and undertake the required level 3 framework qualification.

This chapter starts with describing the overall provision of mid-register and workplace qualifications. It then looks at key trends for provider-based learners at levels 4 to 7, followed by workplace learners who are learning while in employment. Provider-based learning takes place in tertiary education organisations, such as institutes of technology and polytechnics. Workplace learning involves employees gaining standards-based knowledge and skills that count towards nationally recognised qualifications. While workplace learning spans levels 1 to 8 on the framework, the majority of learners in workplace learning study at level 4, so they are detailed in this chapter.

The second to last section of this chapter has a commentary on the workplace learning programme Skill Enhancement, which is targeted to young Māori and Pasifika peoples, and the last section contains international comparisons.

This chapter only considers learners who are engaged in formal programmes of study of more than one week’s full-time duration at any time during the year.

National Qualifications Framework

A key feature of the National Qualifications Framework is that by design it provides a process for skills, knowledge and understanding gained outside of institutional education or training to be recognised formally and credited to a qualification (commonly known as ‘Recognition of Prior Learning’). This enables people who hold low-level or no qualifications the opportunity to move ahead by achieving nationally recognised qualifications. Also, the National Qualifications Framework comprises unit standards, which are designed in conjunction with industry experts and contribute to relevant and nationally recognised qualifications. The flexibility of transferable credit gained from unit standards also means that knowledge and skills can be transferred between qualifications and tertiary education organisations.

OVERALL PROVISION

The number of learners studying at mid-register levels and the number of qualifications offered at those levels has grown significantly over recent years.

Enrolments in provider-based level 4 qualifications grew by 9 percent between 2004 and 2005, compared to 2 percent for those in level 5 to 7 sub-degree qualifications. In workplace learning, the number of learners grew by 16 percent between 2004 and 2005.

Over the last five years, the number of learners in the workplace has increased by 70 percent – nearly twice that of provider-based learners (36 percent) – with workplace learners accounting for 25 percent of all learners in 2005 (Table 7.1).

In provider-based education alone, the number of learners in these qualifications increased by 59 percent over the last five years, and accounted for 18 percent of all learners in 2005. In particular, the growth in the number of learners in level 4 certificates has increased substantially – by 155 percent over the last five years, compared to 14 percent for learners in bachelors degree-level qualifications and 36 percent for learners in all qualifications.

This increase in learners is reflected by the 46 percent increase in the number of certificate and diploma qualifications offered at levels 4 to 7 over the last five years. This compares with a 20

¹ Currently, there is only one such qualification – the National Postgraduate Certificate in Professional Practice in Design and Construction Consultancy (International Consultancy).

percent increase for all qualifications in all levels in the same period. The number of different level 4 certificates alone has increased by 88 percent over this period.

Similarly, in workplace learning, the number of different qualifications undertaken by learners, at all levels, has

increased by 533 (55 percent) over the last five years. Notably, there has been a significant increase in the number of higher-level qualifications – from only one qualification higher than level 4 in 2001 to 127 in 2005.

Table 7.1: Number of learners and qualifications offered by level of study and mode of learning

Level of study	Learners				Qualifications			
	2001	2005	Change 2001-2005		2001	2005	Change 2001-2005	
			Number	Percent			Number	Percent
Provider-based learning (all types of qualifications)								
1-3 Certificate	153,603	238,337	84,734	55	1,631	1,720	89	6
4 Certificate	21,091	53,828	32,737	155	222	418	196	88
5-7 Certificate or diploma	56,100	68,743	12,643	23	615	804	189	31
7 Bachelor degree/graduate certificate or diploma	134,267	153,277	19,010	14	633	738	105	17
8 Honours degree/postgraduate certificate or diploma	13,303	17,902	4,599	35	350	427	77	22
9 Masters degree	10,969	13,139	2,170	20	210	263	53	25
10 Doctorate degree	3,812	4,832	1,020	27	16	23	7	44
4 to 7 Certificate or diploma	77,191	122,571	45,380	59	837	1,222	385	46
Sub-total (a)	371,310	504,434	133,124	36	3,677	4,393	716	20
Workplace learning (all NQF qualifications)								
1 National certificate	4,783	14,981	10,198	213	42	57	15	36
2 National certificate	21,543	41,602	20,059	93	199	249	50	25
3 National certificate	28,546	64,641	36,095	126	270	436	166	62
4 National certificate	49,219	71,872	22,653	46	464	640	176	38
5 National certificate or diploma	7	3,018	3,011	43,014	1	82	81	8,100
6 National certificate or diploma	0	1,082	1,082	–	0	42	42	–
7 National certificate or diploma	0	2	2	–	0	2	2	–
8 National postgraduate certificate	0	0	0	–	0	1	1	–
4 to 7 National certificate or diploma	49,226	75,974	26,748	54	465	766	301	65
Sub-total (b)	95,263	161,676	66,413	70	976	1,509	533	55
Total (a) + (b)	466,573	666,110	199,537	43	–	–	–	–

Source: Workplace learner data is from the Tertiary Education Commission.

Notes:

1. All learner data relates to the total number of learners during the year.
2. Some learners and qualifications are in both modes of learning. The grand total for learners is a count of the total number of unique learners. However, a unique count of all qualifications cannot be calculated readily.
3. Workplace learner data only comprises the two main workplace learning programmes – industry training or Modern Apprenticeships. It excludes learners in Gateway, Skill Enhancement, Training Opportunities, Youth Training and Workplace Literacy.
4. Similarly, provider-based learning comprises those learners in student component-funded tertiary education and excludes learners in targeted or schools-related programmes (such as the Secondary-Tertiary Alignment Resource [STAR]).
5. Learners who were enrolled in more than one qualification level have been counted in each level. Consequently, the sum of the learners in each level may not add to the sub-total number of learners.



Learners in tertiary education

The increase in the number of qualifications has resulted in greater diversity of specialisation. In recent years there have been significantly more learners studying qualifications that specialise in: community and social services, entrepreneurship, security, viticulture, multimedia, hospitality, seafood processing, and community and social services. Also, the breadth of industry training ensures diversity amongst National Qualifications Framework qualifications. The Tertiary Education Commission's 2005 annual report on industry training notes that the industry training organisations' coverage includes: 100 percent of all primary industries (agriculture, forestry, fishing, and mining), 99 percent of all infrastructure and business service industries, 96 percent of all manufacturing and construction industries, 27 percent of the property and business services industry and 28 percent of community service industries. The New Zealand Qualifications Authority website notes that there are national certificates in areas as diverse as adventure tourism, animal care, aircraft servicing, aquaculture, boatbuilding, casino gaming, computing, customer service, early childhood care, electronics, engineering, design, forestry, fitness, hospitality, joinery, mental health, performing arts, pharmacy, printing, science, skiing, surveying, tourism, whakairo and woolhandling.

Investing in New Zealand's human and social capital

Most level 4 to 7 certificates and diplomas, including workplace learning qualifications, are vocationally specialised and therefore have close links with industry. Education in these qualifications produces, amongst others, many of New Zealand's technicians, tradespersons, information technology professionals, business administrators, contemporary artists, and tourism and hospitality professionals.

The New Zealand Qualifications Authority says that "the skills and knowledge that are required for...[these qualifications]...are exactly what employers say they need. These qualifications are nationally recognised because industry designs them". They cater for the needs of New Zealand's primary and secondary industries, infrastructure and business service industries, and community service industries, and they also respond to the development needs of newer niche industries such as viticulture and multimedia.

Mid-register qualifications are increasingly sought-after qualifications; the total number of learners gaining these qualifications in provider-based education has increased by 60 percent over the last five years. The number completing bachelors degrees over the same period rose by 14 percent. Some of the reasons for this growth are the:

- skill shortages in the labour market over recent years and desire to gain vocation-ready qualifications quickly
- increasing employment and financial returns for those with vocationally specialised sub-degree qualifications
- increased promotion of industry training via the Skill New Zealand campaign
- employees and employers seeking productivity gains and skills via workplace learning
- tertiary education organisations responding to new or growing industry needs, and
- increased government funding.

Workplace learning is making a very significant contribution to upskilling the labour force and enhancing business productivity. Also, workplace learning is providing educational opportunities for disadvantaged people, a key objective of the government's industry training policy.

Mid-register, sub-degree qualifications also contribute significantly to New Zealand's social development. Thirty percent of mid-register qualifications listed on the KiwiQuals website have a focus on arts, society and culture, with specialisation in fashion, screen acting, creative design, religion, te reo Māori, Māoritanga, youth and community.

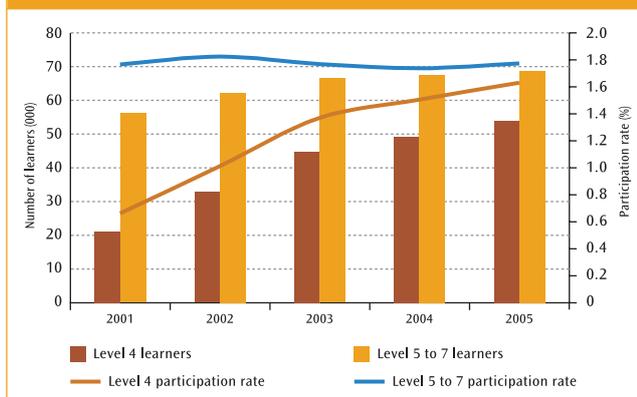
PROFILING PROVIDER-BASED LEARNERS

The significant increase in the number of New Zealanders engaging in provider-based tertiary education over the last five years has resulted in a greater diversity in its learner population and in its types of provision.

From 2004 to 2005, the numbers of learners enrolled in mid-register qualifications at levels 4 to 7 increased by 5 percent. Growth over the last two years has slowed compared to that of previous years and Figure 7.1 shows the stabilising of the participation rates for these qualifications. Between 2001 and 2005, enrolments at levels 4 to 7 increased by 59 percent. In particular, the number in level 4 certificates alone increased by 155 percent over this period.

In 2005, 1.7 percent of all New Zealanders aged 15 years or over were enrolled in a level 4 certificate while 2.1 percent were enrolled in a level 5 to 7 certificate or diploma qualification.

Figure 7.1: Learners in level 4 to 7 certificate and diploma qualifications



The last five years have seen the institutes of technology and polytechnics, the main traditional provider of level 4 certificates, grow their enrolments at this level by 153 percent to 27,100. This is just over half of all provider-based learners in level 4 certificates (Figure 7.2). Between 1999 and 2003, the wānanga also experienced significant growth at this level – mostly in te reo Māori qualifications. By contrast, the number of learners in level 5 to 7 certificate and diploma qualifications has increased at a slower rate (Figure 7.3). Again nearly half of these learners are in polytechnics (48 percent) but in recent years the growth in the number of learners has been greatest in the wānanga, up 178 percent over the last five years.

Figure 7.2: Learners in level 4 certificate qualifications by type of provider

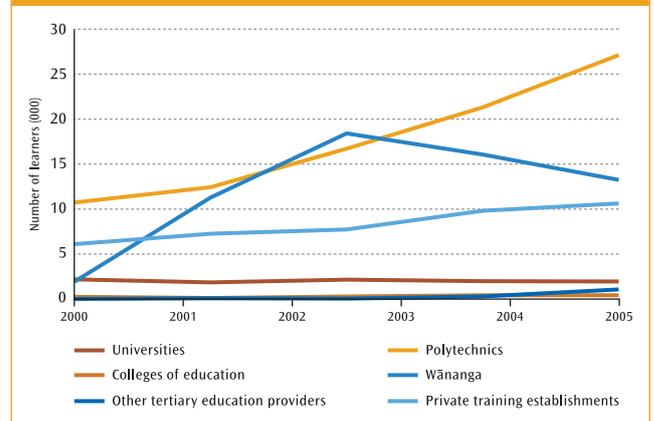
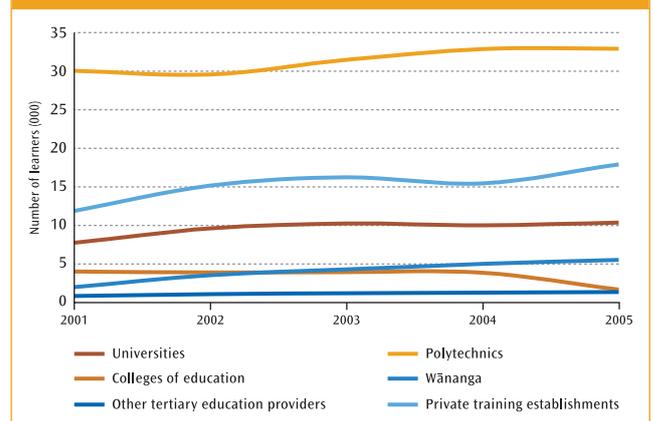


Figure 7.3: Learners in level 5 to 7 certificate and diploma qualifications by type of provider



The average age of learners across all levels of the register was 28 years in 2005. This reflects a significant increase in the number of older learners engaging in tertiary education over recent years, mainly at levels 1 to 3. Around two-thirds of learners in below bachelors-level qualifications were aged 25 years or over, compared with 37 percent at bachelors level.

Of all the register levels, level 4 has seen the greatest increase in mature learners. In 2005, there were more than four times as many learners aged 40 years and over in level 4 as there were in 2001. The number of level 4 learners was 18,000 in 2005 and just over half of these were women. Māori accounted for 34 percent. By comparison, the number of learners aged over 40 years in level 5 to 7 certificate and diploma qualifications grew by only 33 percent over the last five years to 17,100 in 2005. Women accounted for 66 percent of these learners, while Māori accounted for 22 percent.

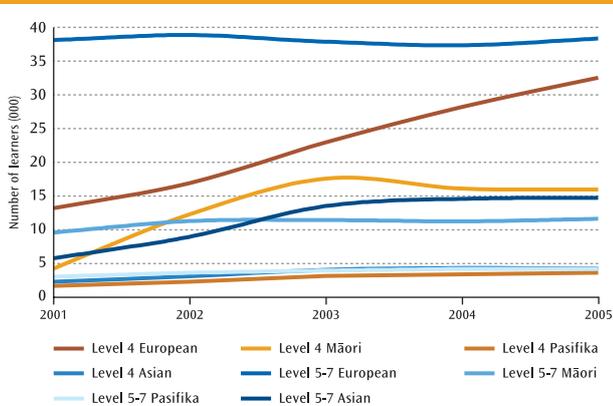


Learners in tertiary education

The age profile of first-time learners in the mid-register levels is skewed by the few school leavers who go directly into these qualifications after leaving school. Only 18 percent of first-year learners in level 4 certificates in 2005 were attending secondary school in 2004 and, similarly, only 25 percent of first-time learners in levels 5 to 7 certificate and diploma qualifications in 2005 were attending secondary school in 2004. These figures contrast with the number of first-year learners in bachelors degree-level qualifications, 60 percent of whom had attended secondary school in 2004.

All of the four main ethnic groups are represented in the learners in level 4 to 7 certificate and diploma qualifications. Their growth rates reflect the success of tertiary providers at engaging many non-traditional learner groups over recent years including mature learners and those with low or no qualifications. In 2005, the majority of learners studying in level 4 to 7 certificate and diploma qualifications identified as being of a European ethnicity (58 percent) followed by those who identified as Māori (23 percent), Asian (15 percent) and Pasifika (6 percent). The growth in the number of learners in level 4 certificates offered has led to increased representation by Māori and Pasifika at this level. The number of Māori learners in level 4 certificates has increased by 277 percent over the last five years to 15,900 in 2005, while the number of Pasifika learners increased by 114 percent to 3,600 (Figure 7.4). European learners in these qualifications increased by 147 percent to 32,500. The dip in Māori learners in 2004 reflects the fall in enrolments in the wānanga sector in 2004. Compared with level 4 certificates, learner growth in level 5 to 7 certificate and diploma qualifications has been relatively slow.

Figure 7.4: Learners in level 4 to 7 certificate and diploma qualifications by ethnic group



The ethnic distribution of first-year learners in these qualifications is not dissimilar from their representation in the national population, with Europeans accounting for 63 percent, Māori accounting for 26 percent, Pasifika accounting for 8 percent and Asians 6 percent.

Of all learners in level 4 to 7 certificate and diploma qualifications in 2005, employment was the main activity in the previous year for 60 percent, while secondary school was the main activity for 12 percent, and those who were not in the workforce or education and training accounted for 10 percent.

Like level 1 to 3 certificates, level 4 certificates provide access to tertiary education for those with low-level qualifications. In 2005, nearly a third of all learners in level 4 certificates had few (less than 13 NCEA credits) or no school qualifications compared with 16 percent of all learners in level 5 to 7 certificate and diploma qualifications. Furthermore, 52 percent of learners in level 4 certificates did not hold a school qualification greater than NCEA level 1 (formerly School Certificate), compared with 34 percent for level 5 to 7 certificates and diplomas.

Of the 122,600 learners in level 4 to 7 certificate and diploma qualifications, 89 percent (110,600) were domestic learners and 11 percent (13,000) were international learners. Ninety percent of international learners were enrolled in level 5 to 7 certificate and diploma qualifications. After significant growth at the beginning of the decade the number of international learners in tertiary education is beginning to decline.

There has been a slight increase in the diversity of regions which international learners in level 4 certificates are from, with more from the Middle East, North America and the Pacific region. Most international learners studying in level 4 certificates, however, continue to be citizens of countries in Asia (72 percent) or Europe (12 percent). There is no change to the regional distribution of international learners in level 5 to 7 certificate and diploma qualifications, with the majority (91 percent) being from Asia, followed by 4 percent from the Pacific region.

Finally, mid-register qualifications are an increasingly popular option for learners with disabilities. In 2005, 26 percent (6,600) of all learners who identified themselves as having a disability were studying in level 4 to 7 certificate and diploma programmes, up from 22 percent in 2004.

Study choices of learners

Just over half of all provider-based learners in level 4 to 7 certificate and diploma qualifications were enrolled in programmes classified as ‘management and commerce’ and ‘society and culture’ (Figure 7.5). Popular specialisations in the field of management and commerce included international travel and tourism, business marketing, e-business, real estate studies and marine sales and services. Popular specialisations in society and culture included social work, legal studies, organisational psychology, employment support, and theology.

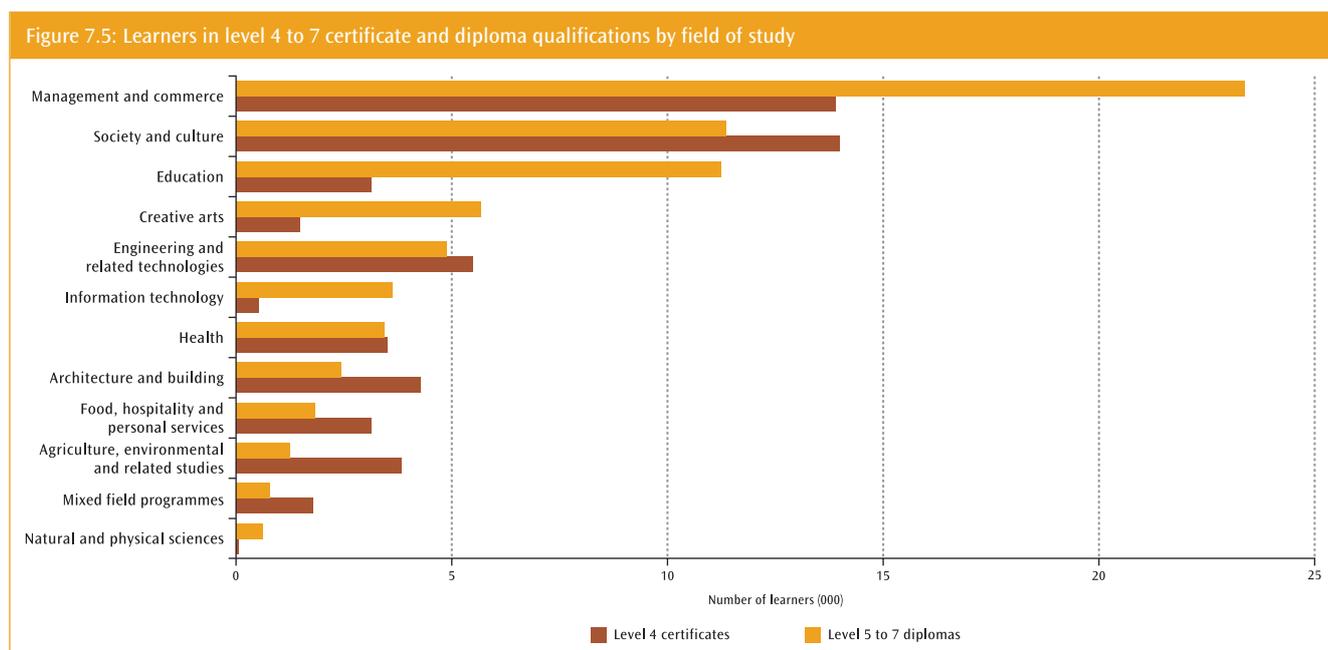
In terms of study load, a learner studying full-time for a full academic year is counted as having a study load of one equivalent full-time student unit (EFTS). A feature of learners at these levels is that the majority study part-time. In 2005, a fifth of all learners in these qualifications had a study load of less than 0.2 EFTS (less than seven weeks of full-time study) while less than a third of learners in level 4 certificates had a study load of 0.8 EFTS or more, compared to 42 percent for level 5 to 7 certificates and diplomas.

Pathways of learners

Provider-based level 4 to 7 certificate and diploma qualifications experience higher rates of first-year learner attrition and lower rates of completion than for most other qualifications.

Two-fifths of learners who started a certificate or diploma at levels 4 to 7 in 2004 did not complete it and were not enrolled in it in 2005 (Table 7.2). This compares with 29 percent for all learners in all qualifications. Also, of the learners who started a level 5 to 7 certificate or diploma, only 29 percent had completed it or were still studying towards it in 2005, compared with 36 percent for learners in level 4 certificates and 39 percent for all learners in all qualifications.

The highest rates of first-year attrition for these mid-register qualifications occur in universities. These rates may be reflective of specialised programmes of study and smaller numbers of learners. Learners in polytechnics have the lowest first-year attrition rates in level 4 certificates (33 percent), while learners in wānanga have the lowest first-year attrition rates in level 5 to 7 certificates and diploma qualifications (28 percent). Compared with all other sectors, learners in private training establishments and wānanga have very high rates of retention and completion over a five-year period.





Learners in tertiary education

Table 7.2: Attrition, retention and completion rates of level 4 to 7 certificates and diplomas by sub-sector

Sub-sector	First-year attrition		Five-year retention		Five-year completion	
	Students starting in					
	2004		2001		2001	
	Level 4	Levels 5-7	Level 4	Levels 5-7	Level 4	Levels 5-7
Universities	58	49	39	24	39	22
Polytechnics	33	49	27	27	24	22
Colleges of education	40	48	41	35	41	33
Wānanga	50	28	46	44	45	41
Private training establishments	49	34	45	44	44	43
Total	42	42	38	34	36	29

Notes:

1. Data relates to domestic students only.
2. Other tertiary education providers have been included in the total for private training establishments.

Male learners' first-year attrition rates are higher than those of female learners in these qualifications and male learners are also less likely to complete their qualification than their female counterparts (Table 7.3). Nearly half of all Asian learners in level 4 certificates drop out in their first year, while those who continue have relatively high rates of qualification completion after five years. By contrast, in level 5 to 7 certificate and diploma qualifications, Asian learners are the least likely learners of any ethnic group to drop out in their first year of study and are the most likely to complete their qualification. Pasifika learners are the least likely of all learners to remain enrolled and/or have completed their qualifications within five years. Older learners are much more likely to complete a level 4 certificate than a level 5 to 7 certificate and diploma qualification.

Table 7.3: Attrition, retention and completion rates of level 4 to 7 certificates and diplomas by gender, ethnic group and age group

Sub-sector	First-year attrition		Five-year retention		Five-year completion	
	Students starting in					
	2004		2001		2001	
	Level 4	Levels 5-7	Level 4	Levels 5-7	Level 4	Levels 5-7
Female	41	41	43	36	41	31
Male	43	44	32	31	29	26
European	40	42	37	34	34	30
Māori	42	46	42	32	40	28
Pasifika	43	41	31	30	30	26
Asian	49	39	38	36	38	33
Other	42	42	39	32	37	29
Under 18	39	42	35	34	33	31
18-24	41	39	37	39	34	35
25-39	42	44	38	32	36	27
40 and over	42	44	39	30	37	26
Total	42	42	38	34	36	29

Note: Refer to notes for Table 7.2.

Continued study at a higher level after completion of a level 4 certificate is becoming more popular. Over the last three years, there has been an increasing percentage of learners who, after completing their level 4 certificate, have continued studying in the next year in a higher qualification.

Learners gaining a level 4 to 7 certificate or diploma from a college of education in 2004 were more likely to continue studying at a higher qualification in 2005 than learners from other sub-sectors (Table 7.4). However, it is noticeable that 66 percent of learners who gain a level 4 certificate from a wānanga progress to higher learning within five years of completion.

Overall, female learners are more likely to progress to higher-level study than males. Pasifika learners are the most likely learners to progress to higher study in the year following completion of their level 4 certificate while Māori learners are the most likely to progress onto higher study within five years after completing their level 4 certificate. Also, learners aged 18 to 24 years are generally the most likely to progress to higher levels of learning within five years of graduation.

Table 7.4: Progression rates for level 4 to 7 certificates and diplomas

Learner groups	Learners completing in					
	2005		2004		2000	
	Level 4	Levels 5-7	Level 4	Levels 5-7	Level 4	Levels 5-7
	Direct higher progression		Five-year higher progression			
	Number of students	Percentage of students	Percentage of students	Percentage of students	Percentage of students	Percentage of students
Female	9,099	7,231	20	18	30	29
Male	4,843	4,458	16	16	24	24
European	7,732	7,730	17	14	26	25
Māori	4,979	2,315	20	24	40	33
Pasifika	883	620	24	22	24	35
Asian	1,092	1,133	21	24	24	32
Other	433	500	16	21	21	25
Under 18	408	323	18	25	21	17
18-24	2,868	3,946	24	20	29	31
25-39	4,859	4,013	19	15	28	25
40 and over	5,807	3,407	15	16	25	26
Universities	683	1,665	31	24	35	31
Polytechnics	4,422	4,477	18	19	28	29
Colleges of education	136	629	34	27	22	42
Wānanga	5,655	1,397	19	24	66	39
Private training establishments	3,091	3,536	15	9	20	16
Total	13,942	11,689	19	17	27	27

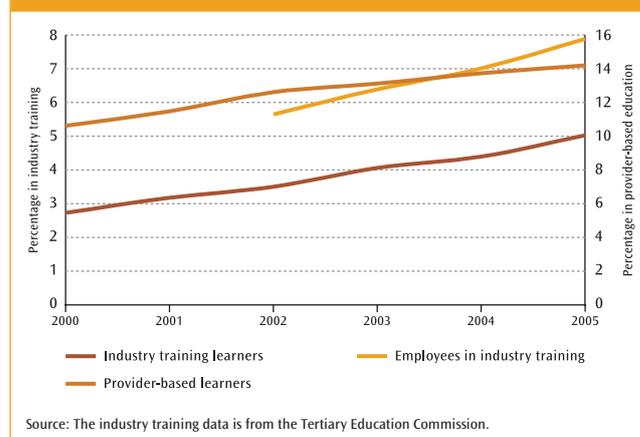
Notes:

1. Data relates to domestic students only.
2. Other tertiary education providers have been included in the total for private training establishments.

PROFILING WORKPLACE LEARNERS

The number of workplace learners increased by 16 percent from 2004 to 2005. The main part of this sector, industry training, is growing relatively faster than the provider-based learning sector. Figure 7.6 shows that while the rate of participation in industry training is lower (5 percent versus 14.2 percent), the demand for industry training learning is increasing faster than that for provider-based learning.

Figure 7.6: Estimated participation rates for learners in industry training and provider-based education



Notes:

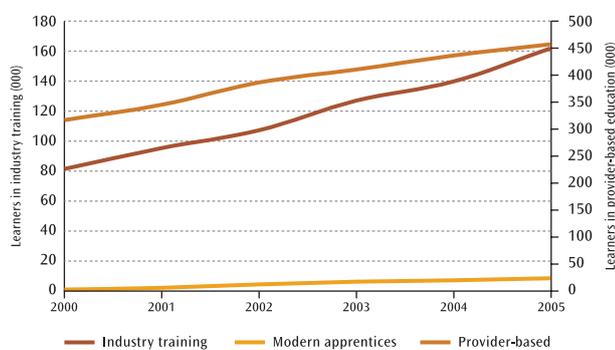
1. Data relates to total learners during the year.
2. In this figure, data on industry training learners and provider-based learners is calculated as the proportion of the population aged 15 years or over who are undertaking learning at any time during the year for a duration of more than one week full-time.
3. Data on employees in industry training is calculated as the number of industry trainees as a percentage of those in employment.
4. Industry training learners also include those in Modern Apprenticeships.

Figure 7.7 shows that the number of learners participating in industry training has increased by 70 percent over the last five years, compared to 36 percent for all other learners. Also, the 161,700 learners in industry training in 2005 surpassed the government's target of 150,000 learners in industry training set for that year.



Learners in tertiary education

Figure 7.7: Learners in industry training and provider-based education



Source: The industry training data is from the Tertiary Education Commission.

Notes:

1. Data relates to total learners during the year.
2. Industry training learners also include those in Modern Apprenticeships.

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

For employees, workplace learning provides the opportunity to gain a qualification while in employment and, for employers, workplace learning provides productivity gains. A Business New Zealand and Industry Training Federation survey showed that 94 percent of firms, in 2003, saw training and skills development as having a positive impact on productivity and staff motivation. Seventy-seven percent thought that training had a positive effect on profitability.

The main workplace learning programmes are:

- Industry training – a workplace learning programme which provides training and learning in the workplace that counts towards a qualification
- Modern Apprenticeships – complements and builds on industry training by attracting young people into careers in industry
- Gateway – a scheme designed to offer workplace learning to senior secondary school learners
- Workplace Literacy – programmes designed to help lift literacy levels for working people.

Gateway and workplace literacy are discussed in chapter 6, which covers learners in level 1 to 3 qualifications.

In both industry training and Modern Apprenticeships, the learner has a training agreement with his/her employer that facilitates the achievement of unit standards or a qualification and that, for Modern Apprentices, has replaced the trade and advanced trade certificates of the past.

Concerns in recent years about skill shortages and barriers to productivity growth have highlighted the need for increased promotion of the benefits of workplace learning. In response to this, a tripartite initiative, Skill New Zealand, was brought together in 2003 by the government, Business New Zealand and the New Zealand Council of Trade Unions. The Skill New Zealand initiative is driven by the needs of employers and employees in business and industry. For further information refer to the Skill New Zealand website at: www.skillnz.org.nz

Industry training

Industry training was introduced in 1992 to assist in the development of an internationally competitive and highly skilled workforce. Since 2000, it has also included the Modern Apprenticeships Scheme.

The Industry Training Act 1992 provided the framework for industry to control the development, implementation and management of industry training programmes. It created industry training organisations that are responsible for setting skill standards and arranging training programmes in the industry they represent. All industry training is assessed against national standards set by the industry training organisations. Industry training leads to credits and qualifications registered on the National Qualifications Framework. Industry training organisations do not provide training themselves, but make arrangements for workplace assessment and off-job delivery of training, such as the purchase of training from a polytechnic or a private training establishment.

Employers who take part in industry training:

- commit to a formal, signed training agreement for each learner
- provide structured on-job training and access to off-job training
- facilitate access to appropriate on-job and off-job assessment

- ensure training meets national standards developed by their industry, and
- enable learners to work towards, and obtain, National Qualifications Framework qualifications.

The Tertiary Education Commission purchases training through the industry training organisations. The training is jointly funded by the government through the Industry Training Fund, and by industry through financial and in-kind (time and resource) contributions.

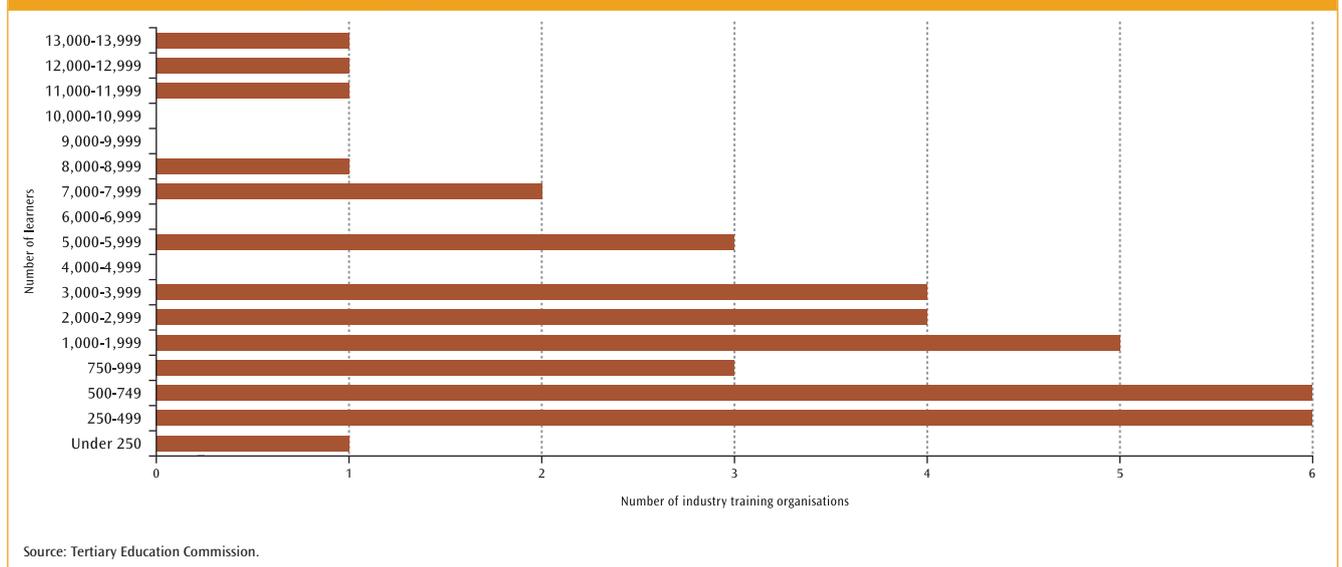
The proportion of the workforce undertaking industry training is another measure of access and demand for workplace learning. As shown earlier in Figure 7.6, in 2005, 7.9 percent of all people in employment were undertaking industry training – up from 5.6 percent in 2002. This is, however, still considerably less than the participation rate of 14.2 percent for people engaged in provider-based learning in 2005.

The strong growth in industry training between 2000 and 2005 is also a reflection of the significant increases in the levels of financial investment in industry training over recent years and also of the increasing number of employers participating in

industry training. In 2005, industry contributed \$55 million in cash (inclusive of goods and services tax) to industry training, representing 29 percent of total funding, compared with \$27 million in 2000. The government invested \$137 million, representing 71 percent of total funding, compared with \$65 million in 2000. In 2005, 31,500 employers were providing workplace learning for their employees, compared to 22,400 employers in 2000. These increases mean a high proportion of New Zealand’s employers and employees have access to formal training. The Tertiary Education Commission’s 2005 annual report on industry training states that, in 2005, industry training organisations covered an estimated two-thirds of all employers and over 73 percent of all employees.

The number of industry training organisations facilitating learner training remained at 41 in 2005. The average number of learners per industry training organisation has increased to 3,100. The size of the industry training organisations varies greatly with around half having fewer than 1,500 learners. The two largest organisations are FITEC (forestry industries), and Competenz (engineering, food and manufacturing industries), both of which have over 12,000 learners (Figure 7.8).

Figure 7.8: Distribution of industry training organisations by number of learners



Notes:

1. Data relates to total number of learners at 31 December 2005.
2. Totals also include Modern Apprenticeship numbers.



Learners in tertiary education

As mentioned above, a key goal of industry training is to improve access to training and to nationally recognised qualifications. In 2005, 26 percent of all learners had no previous qualifications while 15 percent had a tertiary qualification. Approximately 36 percent of participating Māori and 35 percent of participating Pasifika peoples had no previous qualifications.

As a reflection of these backgrounds, 62 percent of learners in industry training were enrolled in national certificate qualifications at levels 1 to 3. Another 36 percent were enrolled in national certificate qualifications at level 4, and 2 percent in national certificate or national diploma qualifications at level 5 or above.

Of the 23,900 National Qualifications Framework qualifications awarded in 2005, 52 percent were at levels 1 to 3, 45 percent at level 4, and 2 percent at level 5 or above. The success of people with no or few previous qualifications is a significant feature of industry training. In 2005, 72 percent of all qualifications awarded to learners with no previous educational qualifications were at level 3 or above.

The growing numbers of learners in industry training over recent years has resulted in significant increases in the participation of women, young people, older people, and Māori and Pasifika peoples. The following sections detail this diversity.

Age

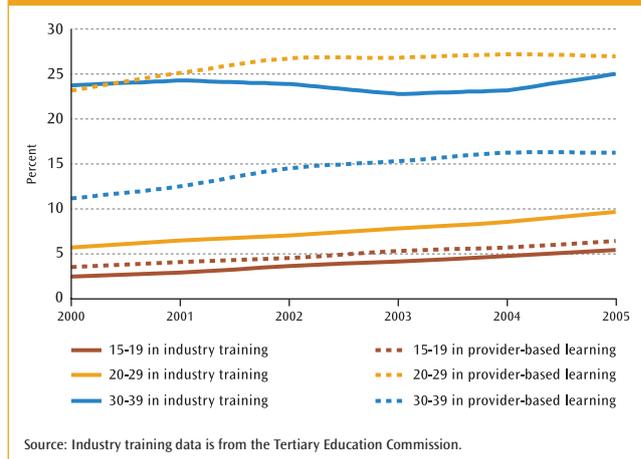
There has been increased diversity in the ages of learners in industry training over recent years. The number of learners aged 15 to 19 years has increased by 148 percent since 2000, showing the impact of the Modern Apprenticeships scheme, introduced to facilitate increased access for young people to industry training. Since 2000, the number of learners aged 40 years and over has increased by 131 percent, indicating that industry training provides opportunities for ongoing development and updating of skills.

Learners aged 15 to 19 years comprised 10 percent of all learners in 2005, while of the remainder, 33 percent were aged 20 to 29 years, 23 percent were aged 30 to 39 years and 34 percent were aged 40 years and over.

Figure 7.9 shows again that the demand for industry training by younger age groups has been increasing while that for provider-based learning has stabilised in comparison. In 2005, an estimated 5.4 percent of people aged 15 to 19 years were

participating in industry training, compared with 9.7 percent of those aged 20 to 29 years, 6.4 percent of those aged 30 to 39 years and 3.1 percent of those aged 40 years or over.

Figure 7.9: Estimated participation rates of learners in industry training and provider-based education by age group



Notes:

1. Data relates to the total number of learners during the year.
2. The participation rate is the percentage of the population in the selected age grouping who were enrolled at any time during the year.
3. Industry training learners also include those in Modern Apprenticeships.

Table 7.5 shows that workers of all ages are learning on the job via industry training. Workers in their 20s are the most likely of all age groups to be learning on the job, with 13.8 percent engaged in industry training.

Table 7.5: Estimated participation rates for workers in industry training by age group

Age group	Number of industry training learners (a)	Percentage distribution of learners	Number of employees in labour force (b)	Percentage distribution of employees	Percentage of employees in industry training (a/b)
15-19	16,596	10.3	139,900	6.8	11.9
20-29	52,619	32.5	381,400	18.6	13.8
40-49	32,862	20.3	515,700	25.1	6.4
50+	21,807	13.5	547,100	26.7	4.0
Total	161,676	100	2,052,600	100	7.9

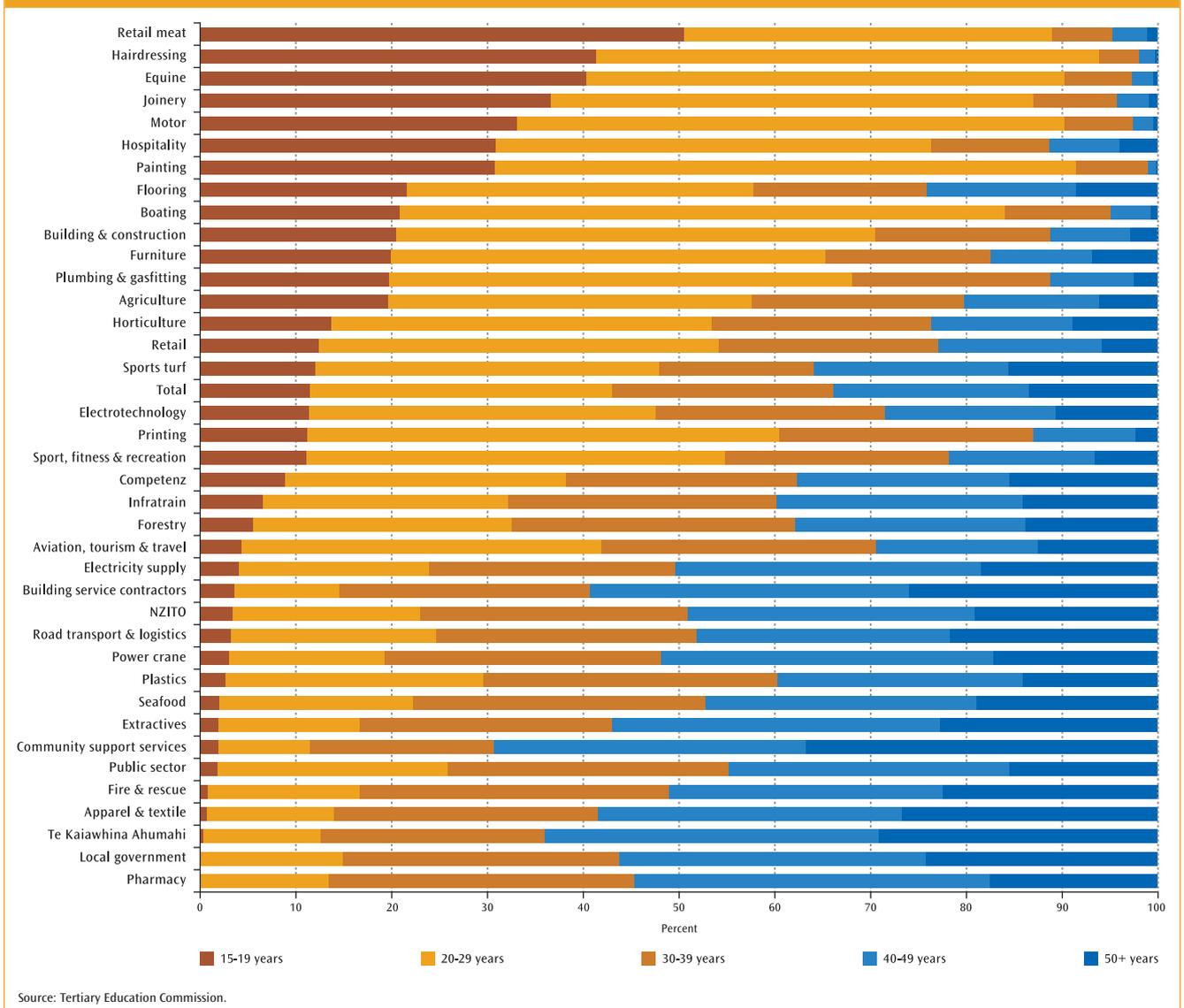
Source: The industry training data is from the Tertiary Education Commission and the employee data is from Statistics New Zealand, *Household Labour Force Survey, June 2005*.

Note: Data relates to total industry training learners during the year.

There is variation in the age distributions of learners across industry training areas (Figure 7.10). Learners aged 15 to 19 years (who are not all Modern Apprentices) accounted for over 30 percent of all learners in the industry areas of painting (31 percent), hospitality (31 percent), motor engineering (33 percent), joinery (37 percent), equine (40 percent), hairdressing (41 percent) and retail meat (51 percent). Also, learners aged 40 years and over accounted for over half of all learners in the

industry areas of electricity supply (51 percent), fire and rescue (51 percent), power crane (52 percent), pharmacy (55 percent), local government (56 percent), extractives industries (57 percent), apparel and textile (58 percent), building service contractors (59 percent), Te Kaiawhina Ahumahi – the social services industry training organisation (64 percent) and community support services (69 percent).

Figure 7.10: Distribution of learners by industry training organisation and age group



- Notes:
1. Data relates to the total number of learners as at 31 December 2005.
 2. Totals also include Modern Apprenticeship numbers.



Learners in tertiary education

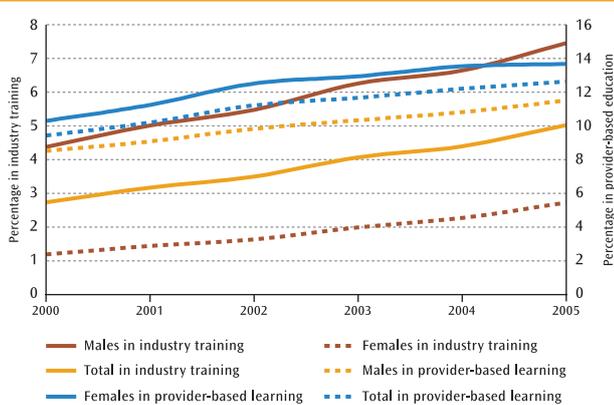
Gender

In contrast with the profile of provider-based learners, industry training learners are predominately male. The significant uptake in workplace learning over recent years, however, has resulted in greater representation of women in industry training.

The number of women in industry training has increased by 147 percent since 2000, compared with 85 percent for men. From 2004 to 2005, the number of female learners increased by nearly a quarter. As a result, women comprised 28 percent (44,975) of all learners in industry training in 2005, up from 22 percent in 2000. The proportion of women in provider-based learning is considerably higher at 56 percent. In recent years, however, the demand for industry training from women has increased at a faster rate than their demand for provider-based learning (Figure 7.11).

Of all women aged 15 years and over in 2005, 2.7 percent were undertaking learning in industry training, compared with 12.9 percent in provider-based learning. Similarly, 7.5 percent of men aged 15 years and over were learning in industry training, compared to 15.4 percent in provider-based learning.

Figure 7.11: Estimated participation rates for learners in industry training and provider-based education by gender



Source: The industry training data is from the Tertiary Education Commission.

Notes:

1. Data relates to the total number of learners during the year.
2. The participation rate is the percentage of the population aged 15 years and over in the selected gender who were enrolled at any time during the year.
3. Industry training learners also include those in Modern Apprenticeships.

An estimated 10.6 percent of all male employees and 4.7 percent of all female employees were learning on the job via industry training (Table 7.6). On this basis, the representation of working women in industry training is significantly smaller than that of working men, with women comprising 46 percent of all workers but only 28 percent of all learners in industry training.

Table 7.6: Estimated participation rates in industry training by gender

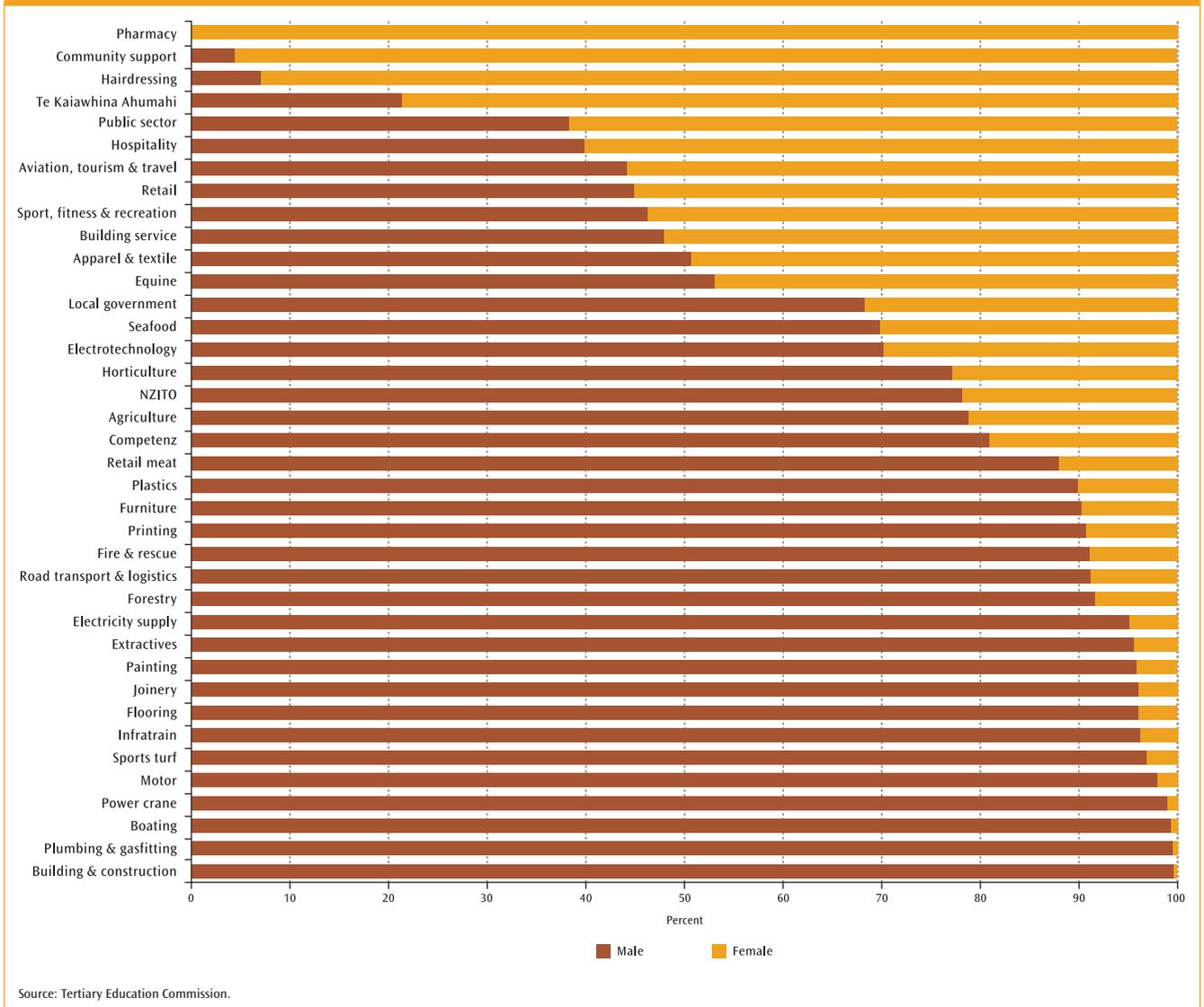
	Number of industry training learners	Percentage distribution of learners	Number of employees in labour force	Percentage distribution of employees	Percentage of employees in industry training
Gender	(a)		(b)		(a/b)
Male	116,701	72.2	1,105,300	53.8	10.6
Female	44,975	27.8	947,300	46.2	4.7
Total	161,676	100	2,052,600	100	7.9

Source: The industry training data is from the Tertiary Education Commission and the employee data is from Statistics New Zealand, *Household Labour Force Survey, June 2005*.

Note: Data relates to the total number of industry training learners during the year.

In percentage terms, the growth in female learners over the last year exceeded that of male learners in industry areas covered by nearly half of the industry training organisations. There remains, however, significant variation in the gender distributions of learners across industries. For example, women made up nearly all learners in the pharmacy, community support, and hairdressing industries, compared with plumbing and building where there were almost no women (Figure 7.12).

Figure 7.12: Distribution of learners in industry training by gender and industry training organisation



Source: Tertiary Education Commission.

Notes:

1. Data relates to the total number of learners as at 31 December 2005.
2. Totals also include Modern Apprenticeship numbers.

Over the last year the number of learners in industry training who did not have any educational qualifications increased by 32 percent for women and 15 percent for men. Forty-two percent of female learners had a school qualification compared with 50 percent for men, 19 percent of female learners had a sub-degree certificate or diploma compared with 20 percent for men, and 10 percent of female learners had a bachelors degree compared to 5 percent for men.

Ethnicity

The rapid growth in the number of learners in industry training over recent years has also increased the diversity in the ethnic composition of workplace learners.

Since 2000, the rate of growth in the number of learners of non-European ethnicity has exceeded that of Europeans. From 2000 to 2005, the numbers of Māori, Pasifika and all other non-

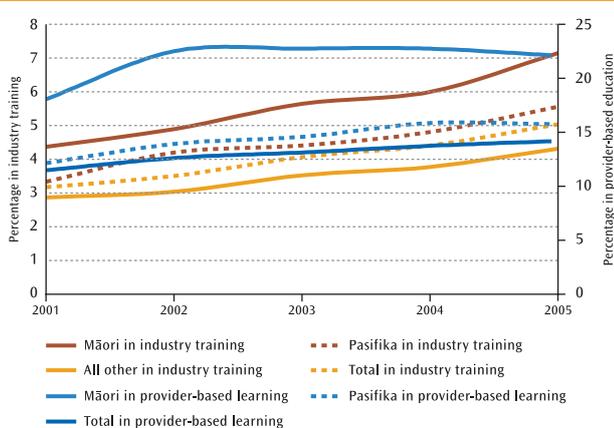


Learners in tertiary education

European learners increased by 107 percent, 126 percent and 195 percent, respectively, compared to 78 percent for European learners. These figures are calculated for learners where the ethnicity is known. Māori learners accounted for 18 percent of all industry training learners in 2005 (up from 17 percent in 2000), Pasifika learners accounted for 6 percent (up from 5 percent), and all other non-European learners accounted for 7 percent (up from 5 percent). European learners now make up 64 percent of all learners, down from 71 percent in 2000.

On a population basis, more Māori and Pasifika participated in industry training than any other group (Figure 7.13). An estimated 7.1 percent of all Māori aged 15 years and over participated in industry training in 2005, compared with 5.6 percent for Pasifika peoples and 4.3 percent for all other ethnic groups. Figure 7.13 also shows that demand by Māori and Pasifika peoples for industry training is increasing, while their demand for provider-based learning is stabilising.

Figure 7.13: Estimated participation rates for learners in industry training and provider-based education by ethnic group



Source: The industry training data is from the Tertiary Education Commission.

Notes:

1. Data relates to the total number of learners during the year.
2. Ethnic group for learners in industry training is based on the single prioritised method of reporting and hence the population data used to calculate participation rates is Statistics New Zealand series 6 resident population projections for 2001 to 2026 by prioritised ethnic group (Māori, Pasifika, Other), June-end 2005.
3. Industry training learners also include those in Modern Apprenticeships.

On a labour force basis, Māori and Pasifika workers have greater demand for industry training than other ethnic groups. In 2005, an estimated 15.9 percent of all working Māori and 11.1 percent of all working Pasifika peoples were participating in industry training. This compared with just 6.4 percent for European workers and 5.9 percent for all other workers (Table 7.7). This means that the representation of working Māori and Pasifika peoples in industry training is significantly higher than for other ethnic groups, with Māori comprising 8.8 percent of all workers and 17.7 percent of all learners in industry training. Similarly, the Pasifika group comprised 4 percent of all workers and 5.6 percent of all learners in industry training.

Table 7.7: Estimated participation rates in industry training by ethnic group

Ethnic group	Number of industry training learners (a)	Percentage distribution of learners (b)	Number of employees in labour force (c)	Percentage distribution of employees (d)	Percentage of employees in industry training (e)
	(a)	(b)	(c)	(d)	(e)
European	103,189	63.8	1,603,800	78.1	6.4
Māori	28,636	17.7	180,000	8.8	15.9
Pasifika	9,101	5.6	82,300	4.0	11.1
Other	10,939	6.8	186,200	9.1	5.9
Not stated	9,877	6.1	—	—	—
Total	161,676	100	2,052,600	100	7.9

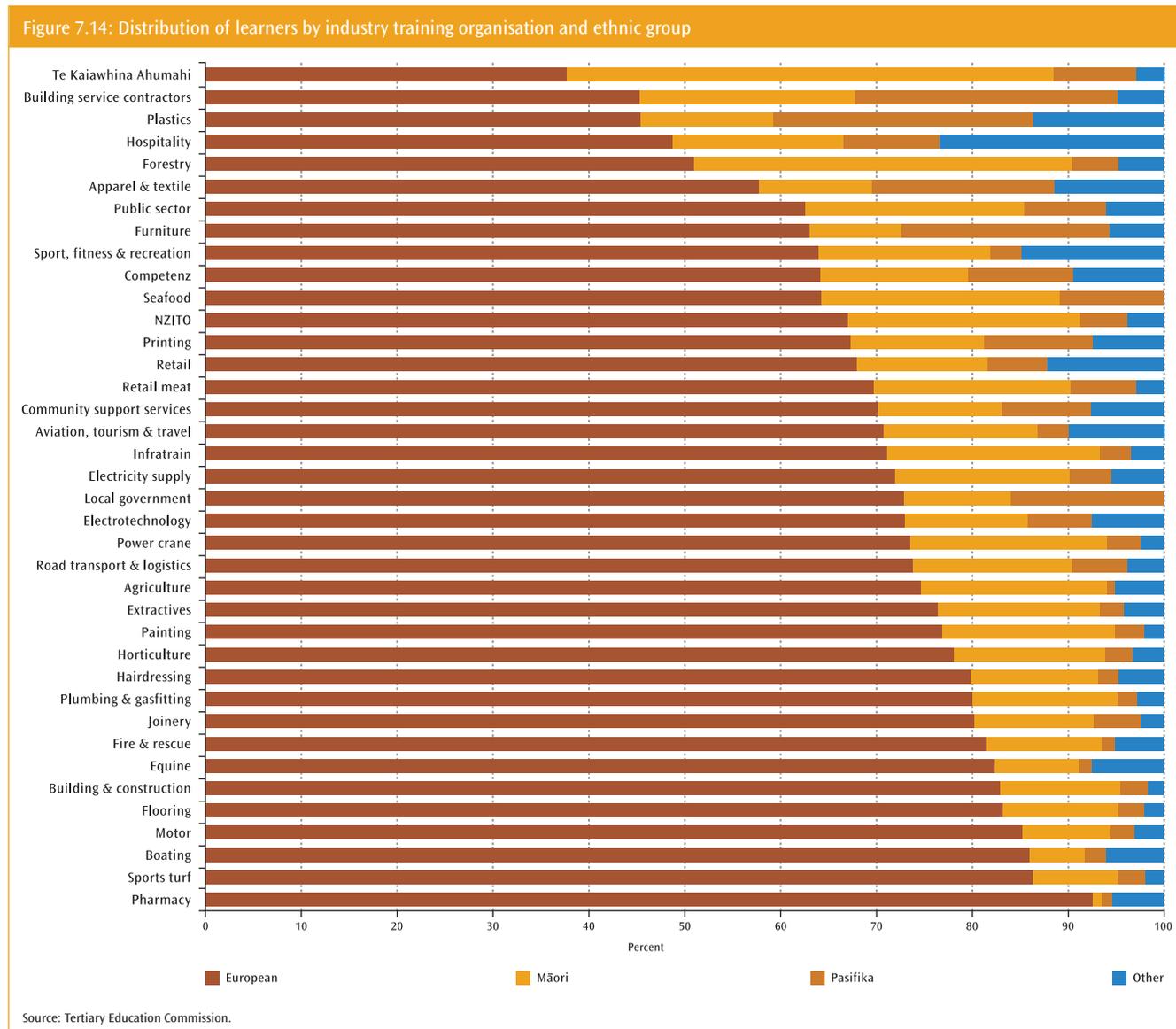
Source: The industry training data is from the Tertiary Education Commission and the employee data is from Statistics New Zealand, *Household Labour Force Survey, June 2005*.

Notes:

1. Data relates to the total number of industry training learners during the year.
2. Calculated for industry training learners where ethnicity is known.
3. Ethnic group is based on the single prioritised method of reporting.

There is variation in the ethnic distributions of learners across industries (Figure 7.14). The proportion of learners who were Māori was 51 percent in the work areas covered by Te Kaiawhina Ahumahi Industry Training Organisation (social and youth work, mental health and counselling), 39 percent in the forestry-related industries and 25 percent in the seafood-related industries.

Pasifika learners made up 27 percent of learners in the industries covered by Building Services Contractors of New Zealand (cleaning, caretaking and security) and the plastics-related industries. Other non-European learners made up 24 percent of the learners in the hospitality industry.



Notes:

1. Calculated for industry training learners where ethnicity is known.
2. Data relates to total number of learners as at 31 December 2005.
3. Totals also include Modern Apprenticeship numbers.



Learners in tertiary education

Māori and Pasifika who enter industry training are, on average, less qualified than other learners. For example, 36 percent of all Māori and 35 percent of all Pasifika learners had no qualifications in 2005, compared to 23 percent of all Europeans and 19 percent of all other learners.

Again, there is a difference in the levels of learning undertaken by learners of different ethnic groups. European learners are more likely than other learners to be enrolled in qualifications at level 4 or above. In 2005, 44 percent of all European learners were studying towards qualifications at level 4 or above compared with 33 percent for Māori learners, 22 percent for Pasifika learners and 26 percent for all other learners. Of all national certificates awarded to Māori learners in 2005, 68 percent were at level 3 or above, compared with 53 percent for Pasifika learners, 53 percent for other non-European learners and 79 percent for European learners.

It is expected that, in the future, proportionally more Māori and Pasifika will attain qualifications at level 4 and above, as the numbers of Māori and Pasifika learners enrolling in these qualifications has grown by 93 percent and 149 percent respectively since 2000, compared with 75 percent for European learners.

Modern Apprenticeships

The Modern Apprenticeships scheme complements and builds on industry training. Introduced in 2000, the Modern Apprenticeships scheme is a work-based training initiative designed to encourage young people (particularly those aged between 16 and 21 years) to undertake industry training, and to encourage employers to invest in industry training for their young employees.

Modern Apprenticeships are administered by the Tertiary Education Commission and:

- provide systematic, high-quality, workplace learning
- are based on a training agreement and an individual training plan that includes the range of specific and generic skills to be learnt
- lead to national qualifications in a wide range of industries mainly at levels 3 and 4 of the National Qualifications Framework
- cover both industry-specific and generic skills

- develop the apprenticeship concept beyond the traditional industries, and
- complement existing tertiary education and industry training options.

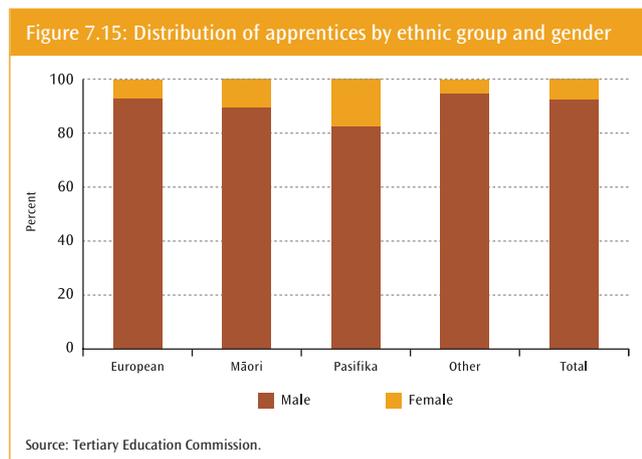
A key feature of the scheme is the use of co-ordinators who provide a mentoring and support function to apprentices and their employers. Co-ordinators facilitate apprenticeship training arrangements by designing individual training plans that set out the steps by which each apprentice will gain his or her qualification(s) and that are used to monitor progress. Co-ordinators also play a key role in promoting the scheme at a local level. Where a young person is interested in an apprenticeship but does not have an employment agreement, a co-ordinator may introduce the person to a potential employer. During the 2005 calendar year, Modern Apprentices and employers were receiving mentoring and support services from 47 co-ordinators.

Since its inception, the scheme has proved popular and successful. Demand for the programme has increased substantially across a range of industries. The government has significantly increased its investment in Modern Apprenticeships, and in the 2005/06 financial year, total government funding was over \$30 million (exclusive of goods and services tax). The government's target for the scheme is 14,000 apprentices in training by December 2008.

The popularity of Modern Apprenticeships with industry, young people, and parents is reflected in significant growth in participation. The figure of 8,390 apprentices as at 31 December 2005 represents an increase of approximately 1,200 apprentices (16 percent) over last year. The number of Modern Apprentices who have successfully completed their qualifications continues to increase in number, with a total of 1,679 modern apprentices having completed their qualifications as at 31 December 2005.

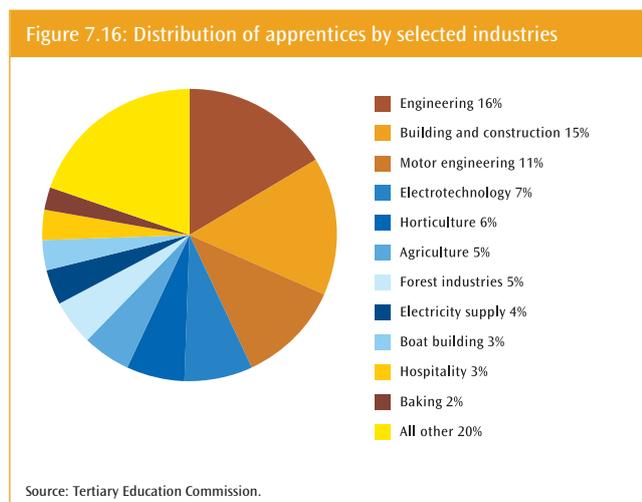
The profile of apprentices has not changed much in recent years. The great majority are European males aged 17 or 18 years in level 4 training programmes; 9 percent are in level 3 training programmes. About 8 percent of apprentices are women, 14 percent are Māori and 3 percent are Pasifika. The average age of apprentices is 18 years, with about half of all trainees aged 17 or 18 years. Although aimed at younger people, provision may be made for older people seeking a change in career. As a result of this, there were 183 apprentices aged over 21 years in 2005 – an increase of 50 from 2004.

The number of industries available for Modern Apprenticeships is 32, with an average of just over 280 apprentices in each industry.



Notes:

1. Data relates to the total number of apprentices at 31 December 2005.
2. Ethnic group is based on the single prioritised method of reporting.



Notes:

1. Data relates to the total number of Modern Apprentices at 31 December 2005.
2. Ethnic group is based on the single prioritised method of reporting.

In 2005, an independent evaluation of the Modern Apprenticeships scheme was commissioned by the Tertiary Education Commission. The evaluation report concluded that the scheme is a successful initiative that has achieved its goal of encouraging more young people to take up a career in the trades. The co-ordinator role has encouraged employers to employ and train more young people, and has had a significant impact on

re-establishing apprenticeships as an attractive career option for young people to consider. The majority of survey respondents agreed that the Modern Apprenticeships co-ordinator helps to ensure that the young person completes the apprenticeship.

SKILL ENHANCEMENT – RANGATAHI MĀIA/TUPULAGA LE LUMANA’I

The Skill Enhancement initiative comprises two strands, the Rangatahi Māia programme targeted at young Māori and the Tupulaga Le Lumana’i programme for young Pasifika peoples. The programmes are designed to meet the skills required for an identified industry and offer young Māori and Pasifika peoples relevant workplace learning that leads to recognised qualifications at level 3 or above on the National Qualifications Framework.

A feature of Skill Enhancement is the focus on cultural support to maximise the opportunity for young Māori and Pasifika peoples to achieve their learning and employment goals. In 2005, Rangatahi Māia offered young Māori diverse job training and education programmes throughout New Zealand, ranging from aquaculture to business management, film and television, and teacher education. Similarly, Tupulaga Le Lumana’i offered young Pasifika people job training and education programmes in such fields as business, management and computing, event management and sport prescription.

The programmes are delivered by tertiary education organisations and are fully funded by the Tertiary Education Commission. In 2005, a total of 48 providers offered Skill Enhancement programmes; of these 34 were private training establishments and 14 were polytechnics. As part of eligibility requirements, learners must demonstrate to the provider that they can achieve successfully in a qualification at level 3.

While Māori account for the majority of learners, their participation has decreased by nearly 50 percent over the last five years. This is possibly in part due to skill shortages in the labour market encouraging people directly into employment. Pasifika participation has increased by 10 percent over this period. In 2005, 769 learners participated in Skill Enhancement training, down from 1,247 in 2001. Māori accounted for 547 learners and Pasifika peoples accounted for 217 learners, while five learners were of European ethnicity.

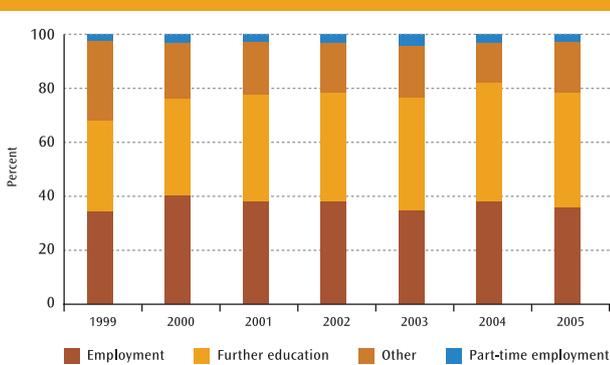


Learners in tertiary education

While there is no age-based targeting for learners enrolling in Rangatahi Māia and Tupulaga Le Lumana'i, the focus of the programme is on youth. In 2005, of the learners in Skill Enhancement, 51 percent were aged 18 years or younger and 30 percent were aged 21 years or older. In 2005, there was an even number of males and females.

Of all learners completing Skill Enhancement in 2005, 36 percent moved on to full-time employment and a further 42 percent moved on to further education or training (Figure 7.17).

Figure 7.17: Distribution of Skill Enhancement learners by outcome



Source: Tertiary Education Commission.

Notes:

1. Data relates to the total number of learners during the year.
2. Data is of known destination outcomes only and does not include missing and unknown results.

In 2005, Skill Enhancement was reviewed as part of the wider review of ethnically targeted policies and programmes. The government decided that the programme should be refocused so that it targets areas of significant labour market disadvantage, and that the quality and relevance should be strengthened through improved monitoring of provision.

INTERNATIONAL COMPARISONS

New Zealand's high level of participation in vocationally focused tertiary education at the sub-degree levels is evident in international studies. New Zealand ranks first in the Organisation for Economic Co-operation and Development's measure of net entry rate to International Standard Classification of Education (ISCED) 5B level of study, which is equivalent to New Zealand's level 5 to 7 sub-degree qualifications (for provider-based learning).

In 2004, New Zealand's net entry rate at this level – defined as the sum of new entrants by age divided by the total population at these ages – was 51 percent, compared with the OECD mean of 16 percent. Also, the graduation rate at these levels – defined as the sum of graduates divided by the population aged at the typical graduation age of these qualifications (20 years in New Zealand) – was 21 percent, compared with the OECD average of 9 percent, placing New Zealand second in the OECD. However, care should be used in interpreting this measure, as current high first-time participation, especially at older ages, will tend to artificially inflate the true rate at which New Zealanders will participate in tertiary education over their lifetime. For a fuller summary of international comparisons see chapter 5.

No entry rate is available for ISCED 4 level of study, which is equivalent to New Zealand's level 4 qualifications. The graduation rate for qualifications at this level was, however, 12 percent, compared to the OECD average of 8 percent.

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AN OVERVIEW

The number of domestic students enrolled in bachelors-level study decreased slightly from 2004 to 2005, for the second consecutive year, after many years of steady growth. The decrease was mainly driven by a decreased participation rate of older students studying at bachelors level.

The number of domestic students completing bachelors degrees decreased from 2004 to 2005 as a result of a drop in the completion rate rather than a decrease in domestic students studying at bachelors level. An estimated 41 percent of domestic students who started a bachelors degree in 2001 had completed after five years. Asian and European domestic students had the highest rates of five-year completion of bachelors degrees, while Pasifika students had the lowest rates.

While international students enrolled in bachelors study continue to make up a growing proportion of bachelors-level students, the growth in international students enrolled at bachelors-level study slowed during 2005. International students completed bachelors degrees within five years at a higher rate than domestic students, with 48 percent of international students who started a bachelors degree during 2001 having completed after five years.

LOOKING TO 2006

Early indications suggest that student numbers at bachelors level will level out in 2006. The 'baby blip' generation is currently at upper secondary level and will be entering the tertiary education system over the next few years. This is likely to increase the number of school leavers starting bachelors-level study over this period. Countering this trend, it is likely the number of older students entering bachelors-level study will continue to decline.

For the purposes of this chapter bachelors-level is made up of three types of qualifications at level 7 of the New Zealand Register of Quality Assured Qualifications. Bachelors degrees are theoretically-based qualifications that require three years or more of full-time study to complete. Graduate certificates and diplomas are designed as vehicles for graduates to pursue further study at an advanced undergraduate level. A certificate of proficiency is a programme of study consisting of assessed course(s) chosen by an individual student from an already approved qualification(s) but not credited to any qualification.

ANALYTICAL TABLES: An associated set of tables on the students in bachelor-level qualifications is available on the Education Counts website, Tables ENR1-38, EFT1-36, PPN1-13, PRG1-15, ARN1-18 and COM 1-35. Detailed technical information on the data presented here can be found in chapter 17.

PARTICIPATION AT BACHELORS LEVEL

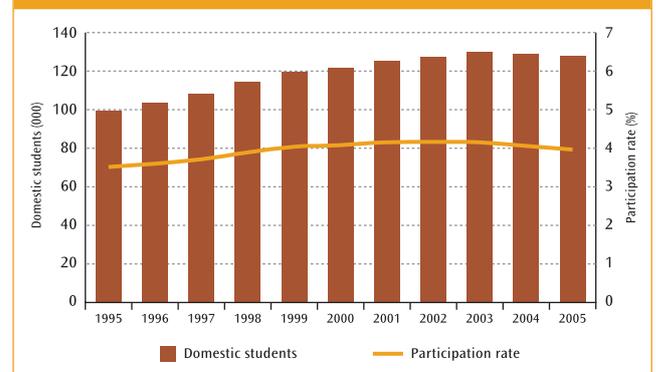
From 2004 to 2005, the number of students enrolled in bachelors-level study decreased for the first time in recent years. There were 153,280 students enrolled in bachelors-level study during 2005, a decrease of 550 students, or 0.4 percent, from 2004. The number of equivalent full-time students enrolled in bachelors-level study during 2005 also decreased, by 0.9 percent, from 119,410 to 118,280.

Domestic students

There were 127,630 domestic students enrolled in bachelors-level study during 2005, a decrease of 1,090 students, or 0.8 percent, from 2004. This is a similar decrease to that which occurred from 2003 to 2004, but followed many years of steady growth in domestic bachelors-level students. The percentage of New Zealanders aged 15 years and over enrolled in bachelors-level study during 2005 was 4 percent, down slightly from 4.1 percent during 2004 and a peak of 4.2 percent during 2002.

During 2005, 28 percent of all domestic students were enrolled in bachelors-level study.

Figure 8.1: Participation in bachelors-level study



The largest number of domestic students enrolled at bachelors level were studying for a bachelors degree (89 percent of all domestic bachelors-level students, or 113,130 domestic students). There were 11,440 domestic students (9 percent) enrolled in graduate certificates and diplomas in 2005, and 4,520 (3.5 percent) enrolled in certificates of proficiency. While bachelors degrees have shown the most growth in domestic student numbers over the last 10 years, the proportion of domestic students in each qualification has stayed relatively unchanged over this period.

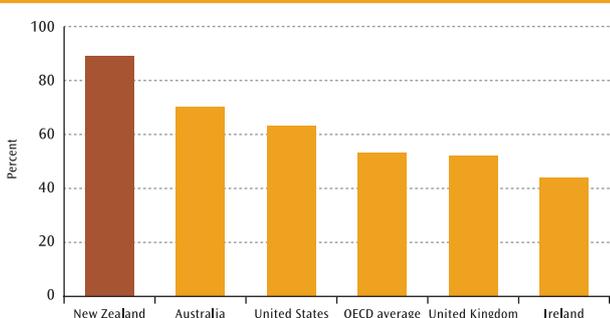


Learners in tertiary education

When converting the count of 2005 bachelors-level enrolments to equivalent full-time student units, these decreased by 1.5 percent over 2004, from 98,250 to 96,746. During 2005, 39 percent of domestic equivalent full-time students were enrolled in bachelors-level study.

The Organisation for Economic Co-operation and Development provides some international comparisons on participation in tertiary education. These comparisons are limited to tertiary-type A study, which includes bachelors-level study as well as honours, masters, and postgraduate certificates and diplomas. The net entry rate measure represents the proportion of the population that will enter tertiary education over their lifetime. New Zealand ranked first in terms of net entry rate into tertiary-type A study (OECD 2006). However, care should be used in interpreting this measure, as current high first-time participation, especially at older ages, will tend to artificially inflate the true rate at which New Zealanders will participate in tertiary education over their lifetime. For a fuller summary of international comparisons see chapter 5.

Figure 8.2: Net entry rates into tertiary-type A study in 2004 for selected OECD countries



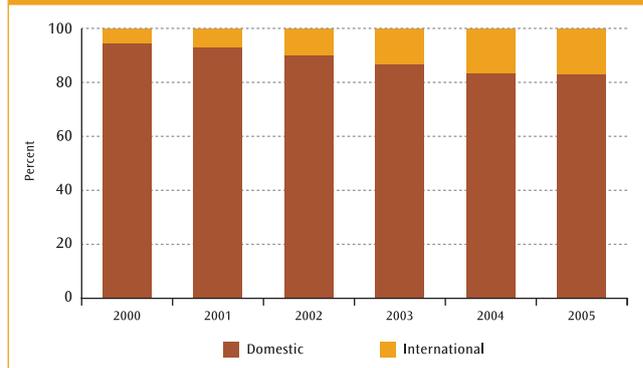
Source: OECD, *Education at a glance: OECD indicators 2006*, Table C2.1.

International students

International students enrolled in bachelors-level study continued in 2005 to make up a growing proportion of bachelors-level students, increasing from 5.3 percent of all bachelors-level students during 2000 to 17 percent during 2005. However, the growth in international students enrolled in bachelors-level study slowed during 2005. There were 25,650 international students enrolled in bachelors-level study during 2005, an increase of 2.2 percent over 2004, compared with an

increase of 26 percent from 2003 to 2004, and 43 percent from 2002 to 2003.

Figure 8.3: Distribution of domestic and international bachelors-level students



A higher percentage of international students than domestic students are enrolled in bachelors-level study. During 2005, 54 percent of international students were studying at bachelors level, compared with 28 percent of domestic students. International students made up a large percentage (42 percent) of all students enrolled in certificates of proficiency when compared with all bachelors-level students (17 percent).

The number of international equivalent full-time students enrolled in bachelors-level study during 2005 increased by 1.7 percent over 2004, from 21,170 to 21,530. International equivalent full-time students made up 18 percent of all bachelors-level equivalent full-time students during 2005, up from 5.5 percent during 2000.

ACHIEVEMENT

Throughout this section, and all following sections that discuss achievement at bachelors level, the first-year attrition, five-year retention and completion rates, and the number of qualifications completed refer to bachelors degree qualifications only. Students enrolled in graduate certificates and diplomas as well as certificates of proficiency have not been included in these rates, given the very different nature of these qualifications. Progression rates do, however, include students enrolled in graduate certificates and diplomas.

Domestic students

A total of 20,140 domestic students completed 21,250 bachelors degrees during 2005. This represented a 1.6 percent decrease from 2004 in the number of students who completed a bachelors qualification. This decrease in students completing bachelors degrees was a result of a drop in the completion rate rather than a decrease in domestic students studying at bachelors level. An estimated 41 percent of domestic students who started a bachelors degree in 2001 had completed after five years. This compared with 44 percent of domestic students who started a bachelors degree in 1998. While for bachelors degrees the five-year completion rate is 41 percent, for full-time students the rate climbs to around 70 percent. Around 50 percent of domestic students who started a bachelors degree in 2001 had left without completing it five years later, and 9 percent were still studying towards it five years later.

Overall, the first-year attrition rate for domestic students who started a bachelors degree in 2004, and who neither completed the degree nor enrolled for further study in 2005, was 22 percent. This rate was relatively unchanged from those students who started study in 2003. However, this figure includes students who later re-engage and gain qualifications at a higher or lower level than that at which they started.

Many students also successfully complete courses without necessarily having a qualification goal in mind. Course completion rates in New Zealand are over 80 percent for universities and around 70 percent for the sector as a whole (Scott 2006).

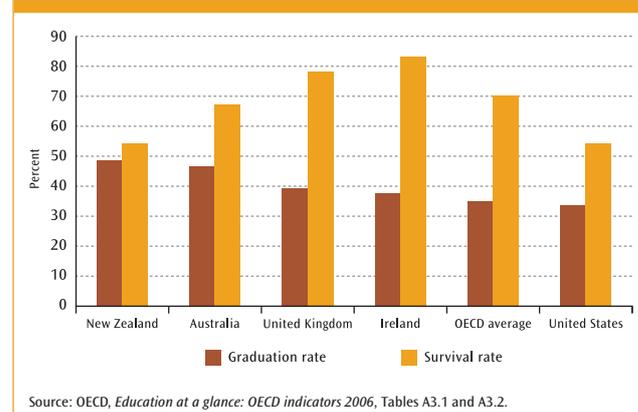
In the United States around 10 percent of students enrol in bachelors-level study without having a bachelors degree as a goal (Berkner, He and Cataldi 2002). It is possible to make some international comparisons of the completion rates of bachelors degree students. However, differences in country systems should be taken into account in these comparisons. For example, open systems such as New Zealand and the United States have fewer restrictions on entry than other countries and hence may not require the same level of academic entry requirements.

Australia has a published six-year completion rate of around 60 percent for all awards at universities. This increases to around 70 percent for full-time students (DEST 2001). While the overall rate of 60 percent is higher than New Zealand, when considering full-time students only the rates are similar. New Zealand has a very high proportion of tertiary students who are studying on

a part-time basis – the highest in the OECD. In the United States, the qualification rate for bachelors degrees is 55 percent (Berkner, He and Cataldi 2002). The rate for bachelors students *whose goal was to obtain a degree* increases to 63 percent. In this last group, those who study full-time in their first year have a completion rate of 66 percent, which is lower than the New Zealand rate. An estimated 77 percent of first-time, full-time students in the United Kingdom are projected to complete their degree.

OECD international comparisons on achievement at tertiary-type A study suggest a mixed performance for New Zealand. Tertiary-type A study includes bachelors-level study as well as honours, masters, and postgraduate certificates and diplomas. OECD indicators show our graduation rate¹ to be the second highest in the OECD, while our survival rate² is the third lowest. Neither of these indicators is very good at summing up the New Zealand situation. The graduation rate is being artificially inflated due to the large number of first-time, older students currently completing tertiary-type A qualifications. Also the survival rate is being artificially deflated due to the large number of part-time, mostly older, students currently starting tertiary-type A study. For a fuller summary of international comparisons see chapter 5.

Figure 8.4: Graduation and survival rates in bachelors study in 2004 for selected OECD countries



Domestic students enrolled in graduate certificates and diplomas have a lower five-year completion rate than domestic students enrolled in bachelors degrees. An estimated 37 percent of domestic students who started a graduate certificate/diploma in 2001 had completed after five years, while 59 percent had left without completing it five years later and 4 percent were still studying towards it five years later. The first-year attrition

1 The graduation rate represents the total number of first-time graduates at a particular level, divided by the population at the typical age of graduation for that level.

2 The total number of graduates at a particular level, divided by the number of new entrants to that level x years earlier, where x represents the typical time required to complete at that level.



Learners in tertiary education

rate for domestic students enrolled in graduate certificates and diplomas is 37 percent. There appear to be two main reasons for this difference. The first is that graduate certificate and diploma candidates are more likely to be studying on a part-time basis while in work – a factor associated with lower completion rates. The second reason is that the great majority of those undertaking these qualifications already hold a degree. Therefore, attainment of a qualification (as opposed to success in some courses) is less likely to be a goal of the study.

On average, a student who started a bachelors degree in 1998 took 3.1 EFTS years to complete, and was enrolled with or without breaks over four calendar years. Students who did not complete left, on average, after 1.3 EFTS years and, of those, half left in the first year (Scott 2005).

Of those domestic students completing a bachelors-level qualification during 2004, 15 percent went on to study at a higher level during 2005, and 17 percent went on to study at the same level or at a lower level, while 68 percent did not continue their studies. These progression rates have remained relatively unchanged since 2000.

Of those domestic students completing a bachelors-level qualification during 2000, 22 percent went on to study at a higher level some time between 2001 and 2005, and 26 percent went on to study at the same level or at a lower level, while 52 percent had not continued their studies.

International students

Approximately 4,670 international students completed 4,720 bachelors degrees during 2005. This was a 51 percent increase over 2004 in the number of students who completed bachelors degrees and an increase of 330 percent on the number of students completing in 2000. This reflects the large increase in international students starting their bachelors degree three to four years earlier. International students completing bachelors degrees made up 16 percent of all students who completed a bachelors degree during 2005.

International students complete bachelors degrees within five years at a higher rate than domestic students, with 48 percent of international students who started a bachelors degree in 2001 having completed after five years.

International students are more likely to be studying full-time and intramurally than their domestic counterparts, both of which are factors associated with higher rates of completion.

However, a Ministry of Education study has shown that even after adjusting for these study-related and other demographic differences, international students were still 1.3 times more likely than domestic students to complete a bachelors degree after six years (Scott and Smart 2005).

TYPE OF PROVIDER

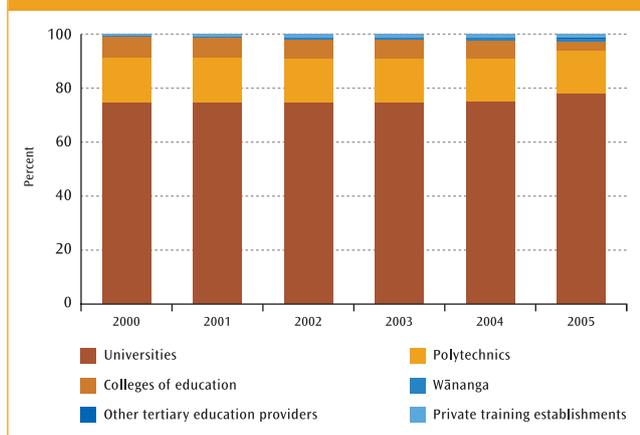
Participation

The proportion of domestic bachelors-level students by type of provider has remained relatively unchanged over the last six years. Universities continue to be the largest type of tertiary education provider in terms of domestic students enrolled in bachelors-level study, with 79 percent of all domestic bachelors-level students. There were 100,530 domestic bachelors-level students enrolled in universities during 2005, an increase of 2.9 percent over 2004. However, this increase was due to the inclusion of students from the Auckland College of Education and the Wellington College of Education following their respective mergers with the University of Auckland on 1 September 2004 and Victoria University of Wellington on 1 January 2005. If these students are excluded, there would have been a decrease of around 1.5 percent in university domestic bachelors-level students.

From 1995 to 1999, polytechnics attracted a growing number of domestic bachelors-level students. However, the majority of these students were enrolled at the Auckland Institute of Technology, which in January 2000 became a university and was renamed the Auckland University of Technology. The number of domestic students enrolling in bachelors-level study at polytechnics has remained relatively unchanged since 2000. There were 20,430 domestic bachelors-level students enrolled in polytechnics during 2005, a decrease of 2.3 percent over 2004, and they made up 16 percent of all domestic bachelors-level students.

While wānanga students make up a growing proportion of domestic bachelors-level students, during 2005 this proportion was just 1.1 percent, up from 0.3 percent during 2000. All three of the public wānanga offer bachelors-level qualifications across a range of programmes. During 2005, there were 1,780 domestic bachelors-level students enrolled in private training establishments, an increase of 112 percent over 2000, and making up 1.4 percent of all domestic bachelors-level students.

Figure 8.5: Distribution of domestic bachelors-level students by type of provider



A relatively high proportion of tertiary study at universities is undertaken at bachelors level. During 2005, 72 percent of domestic students enrolled at universities were studying at bachelors level. This compared with 10 percent of domestic students at polytechnics, 2.6 percent at private training establishments, 2.4 percent at wānanga and 0.9 percent at other tertiary education providers.

Achievement

Completion rates were highest at colleges of education, where 60 percent of domestic students starting a bachelors degree during 2001 had completed within five years. This compared with universities, where the five-year completion rate for 2001 starters was 41 percent, and polytechnics, where the completion rate was 31 percent. A number of students study at a polytechnic for the first year of their degree and then transfer to a university to complete the qualification. These completions are not reflected in the rates for polytechnics. Part of the reason for the high completion rates at the colleges of education is that the majority of these students would have been taking structured, professional qualifications in teaching that were well-matched to the students' aspirations.

Completion rates were lowest at wānanga, where 27 percent of students starting a bachelors degree during 2001 had completed within five years. The five-year completion rate at universities and polytechnics, for domestic students starting a bachelors degree in 2001, remained relatively unchanged compared with those who started study in 2000, but at wānanga this rate dropped by six percentage points.

Domestic bachelors degree students first studying at private training establishments during 2004 were more likely neither to complete their qualification nor to re-enrol during 2005 (first-year attrition). Students first studying at universities during 2004 had the lowest rate of first-year attrition.

Table 8.1: First-year attrition and five-year retention and completion rates for domestic bachelors degree students by sub-sector

Sub-sector	First-year attrition	Five-year retention	Five-year completion
	Students starting in		
	2004	2001	2001
Universities	21	51	41
Polytechnics	34	36	31
Colleges of education	25	63	60
Wānanga	38	32	27
Private training establishments	43	44	36
All students	22	50	41

Of all domestic students completing a bachelors-level qualification at a university during 2004, 17 percent were studying at a higher level in 2005. This compared to 18 percent for wānanga, 8.1 percent for polytechnics and private training establishments and 5.1 percent for colleges of education. Students completing a bachelors-level qualification at wānanga are also more likely to progress to any level of further study, with 57 percent progressing to further study in 2005.

FIELD OF STUDY

Participation

The most common fields of study for domestic bachelors-level students during 2005 were society and culture, and management and commerce. Study in the broad field of society and culture includes, for example, law, economics, philosophy, sociology, history, language studies, human welfare support and services, and sport and recreation. The society and culture field of study had around 33,620 students (or 26 percent of domestic bachelors-level students during 2005), while the management and commerce field of study had 27,370 students (or 21 percent). Fields of study that were less common among domestic bachelors-level students were food, hospitality and personal services (0.2 percent of all domestic bachelors-level students

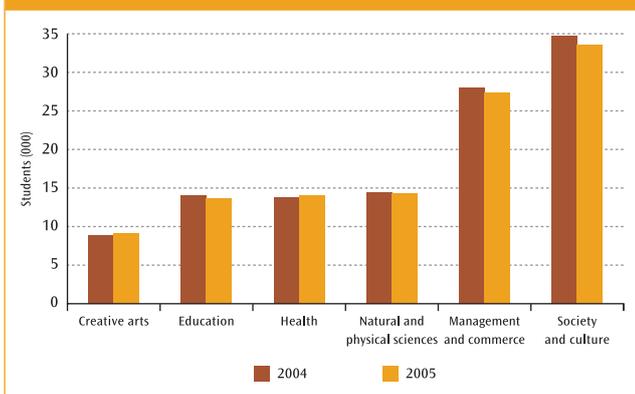


Learners in tertiary education

during 2005), and agriculture, environmental and related studies (1.3 percent).

From 2004 to 2005, domestic bachelors-level students enrolled in mixed field programmes increased by 10 percent and those studying agriculture, environmental and related studies increased by 9.3 percent. Study in 'mixed field' at bachelors level includes, for example, programmes for general education and may include qualifications that are not able to be categorised elsewhere. The number of domestic bachelors-level students enrolled in information technology fell by 12 percent between 2004 and 2005.

Figure 8.6: Top six fields of study for domestic, bachelors-level students



The fastest-growing field of study at bachelors level over the last five years has been creative arts. The number of domestic bachelors-level students enrolled in creative arts increased by 48 percent from 2000 to 2005, which is a similar rate to the growth in sub-degree and postgraduate domestic students enrolled in creative arts. The latest rise was attributable to increases in all sub-fields of creative arts, including visual arts and crafts (95 percent increase), communication and media studies (95 percent), performing arts (23 percent), and graphic and design studies (19 percent).

Information technology was the only field of study at bachelors level where the number of domestic students enrolled in polytechnics outnumbered those enrolled in universities. During 2005, 60 percent of all domestic bachelors-level students studying information technology were enrolled at polytechnics. During 2005, polytechnics were also popular for study in health (28 percent of all polytechnic domestic bachelors-level students), and management and commerce (19 percent).

The most popular fields of study for bachelors-level wānanga students were society and culture (35 percent of all wānanga bachelors-level students), education (25 percent), and creative arts (19 percent).

A relatively high proportion of study in natural and physical sciences was undertaken at bachelors level. During 2005, 75 percent of domestic students enrolled in natural and physical sciences were studying at bachelors level. This compared with 46 percent of domestic students enrolled in creative arts, 5.4 percent enrolled in agriculture, environmental and related studies and 1.9 percent enrolled in food, hospitality and personal services.

ETHNIC GROUP, AGE AND GENDER

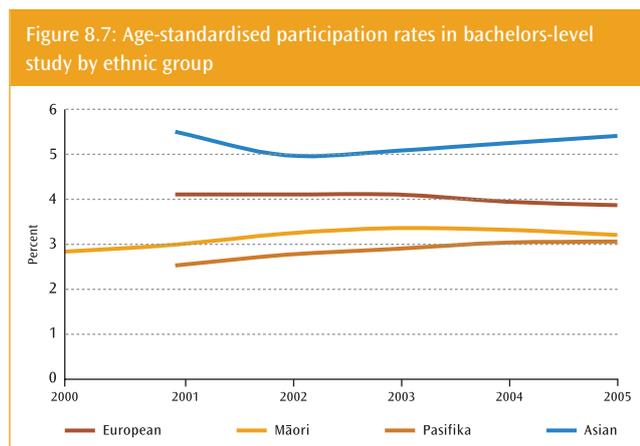
A gradually declining European ethnic group

The percentage of domestic bachelors-level students who were of European ethnicity has been gradually declining since 2000, while all other ethnic groups are making up a growing proportion of domestic bachelors-level students over this time. During 2005, 72 percent of domestic bachelors-level students were Europeans, compared with 15 percent of Asians, 12 percent of Māori students, and 5.4 percent of Pasifika students.

Between 2004 and 2005, there was a decrease in the number of European and Māori students enrolled in bachelors-level study. The decrease in Māori students, from 15,350 in 2004 to 15,010 in 2005 (down by 2.2 percent), was the first decrease in recent years, while the fall in the number of Europeans, from 91,130 in 2004 to 89,910 in 2005 (down by 1.3 percent), was the second consecutive decrease.

The decreases in European and Māori bachelors-level students have occurred as a result of a decrease in the tertiary education participation rate rather than a decrease in the population. Participation at bachelors level by Māori aged 15 years and over was 3.7 percent during 2005, down from 3.8 percent during 2004, while for Europeans it was 3.6 percent during 2005, down from 3.7 percent during 2004. Participation at bachelors level by domestic Asians aged 15 years and over was 6.2 percent during 2005, the highest of any ethnic group. In 2005, Pasifika peoples participated at bachelors level at a higher rate than Europeans and Māori for the first time. During 2005, participation at bachelors level by Pasifika peoples aged 15 years and over was 3.8 percent.

When the participation rates are adjusted for the different age structures of the ethnic groups, Europeans participate in bachelors-level study at a higher rate than Māori and Pasifika people. When adjusted for age differences, 3.9 percent of Europeans aged 15 years and over participated in bachelors-level study, compared with 3.2 percent of Māori, 3.1 percent of Pasifika peoples and 5.4 percent of domestic Asians.



Asian and European domestic students had the highest rates of bachelors degree completion after five years while Pasifika students had the lowest rates of five-year completion. This is a similar trend to sub-degree and postgraduate-level study. First-year attrition in bachelors degrees in 2005 was highest for Māori students and lowest for Asian students.

Table 8.2: First-year attrition and five-year retention and completion rates for domestic bachelors degree students by ethnic group

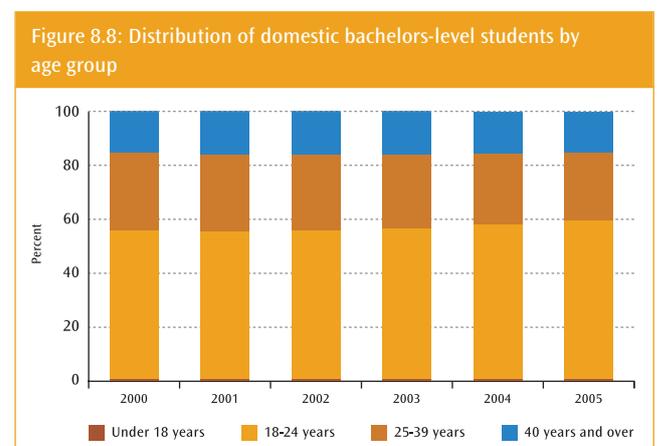
Ethnic group	First-year attrition	Five-year retention	Five-year completion
	Students starting in		
	2004	2001	2001
European	22	52	43
Māori	32	41	30
Pasifika	28	41	28
Asian	14	55	45
Other	21	48	36
All students	22	50	41

At bachelors level, as with sub-degree and postgraduate levels, Māori had the highest rate of progression to further study. Of those completing a bachelors-level qualification in 2004, 39 percent continued studying (to higher, the same or lower-level qualifications) in 2005.

Lower average age for bachelors students

While the average age of sub-degree and postgraduate domestic students continues to increase, the average age of bachelors-level domestic students has decreased over the last two years. From a peak of 27.4 years during 2003, the average age of domestic bachelors-level students dropped to 26.9 years in 2005. This decrease in the average age has been driven by a decrease in the enrolments of older students over the past two years. Between 2003 and 2005, the number of domestic students aged 25 years and over enrolled in bachelors-level study decreased by 8.4 percent, from 56,270 to 51,530. Between 1995 and 2005, there was a significant rise in the proportion of the population with bachelors or higher-level qualifications in the 25 to 39 years and 40 to 64 years age groups of the population (Smart 2006). In 2005, 25 percent of the New Zealand population aged 25 to 39 years had a bachelors or higher qualification.

Domestic students aged 18 to 24 years enrolled in bachelors-level study increased by 3.4 percent between 2003 and 2005, from 72,360 to 74,820. As a result of this, the percentage of domestic bachelors-level students aged 18 to 24 years has increased since 2000, to 59 percent in 2005. This compares with the percentage of domestic bachelors-level students aged 25 to 39 years, down from 29 percent in 2000 to 25 percent in 2005, while domestic students aged 40 years and over remained unchanged at 15 percent.





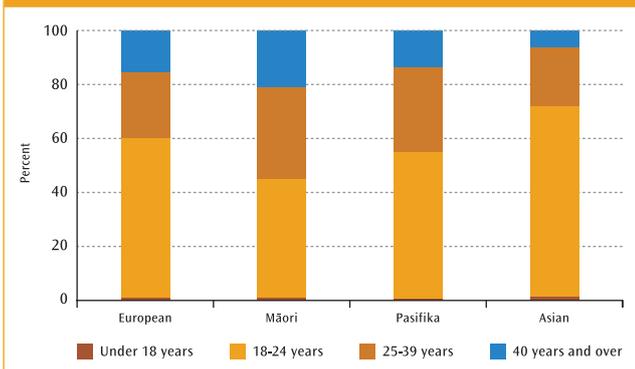
Learners in tertiary education

The increase in domestic students aged 18 to 24 years in bachelors-level study has occurred as a result of an increase in population rather than any increase in participation rates. The rate of participation in bachelors-level study for New Zealanders aged 18 to 24 years was 18.3 percent during 2005, relatively unchanged from 18.4 percent during 2000. The rate of participation for New Zealanders aged 25 to 39 years dropped from 4 percent in 2000 to 3.8 percent in 2005, while the participation rate of those aged 40 years and over dropped slightly from 1.2 percent in 2000 to 1.1 percent in 2005.

Domestic students enrolled in either graduate certificates and diplomas or certificates of proficiency are more likely to be older than domestic students enrolled in bachelors degrees. During 2005, 85 percent of domestic students enrolled in graduate certificates and diplomas were aged 25 years and over, compared with 68 percent of domestic students enrolled in certificates of proficiency and 35 percent of domestic students enrolled in bachelors degrees.

There are marked differences in the age structure of the ethnic groups. Māori students studying at bachelors level were more likely to be aged 25 years and over than other ethnic groups. Asian students were more likely to be aged under 25 years, with 72 percent of domestic Asian students aged under 25 years during 2005.

Figure 8.9: Distribution of domestic bachelors-level students by ethnic group and age group



Domestic students under the age of 25 years had higher five-year completion rates than older students enrolled in bachelors degrees. However, older students are more likely to be studying part-time or have external work or family commitments that limit their ability to commit as fully as younger students. These

factors are likely to explain why actual completion rates are higher for younger students and, once adjusted for these factors, older students do better than younger students (Scott and Smart 2005).

First-year attrition is also higher for domestic students aged 25 years and over studying bachelors degrees. The first-year attrition rate in 2005 was 40 percent for domestic students aged 40 years and over, and 38 percent for students aged 25 to 39 years, compared with 15 percent for students aged 25 years or under. However, not all students enter bachelors-degree study with the aim of completing a full qualification. Students aged 25 years and over are more likely than younger students to be focused on completing selected courses rather than the full qualification.

Table 8.3: First-year attrition and five-year retention and completion rates for domestic bachelors degree students by age group

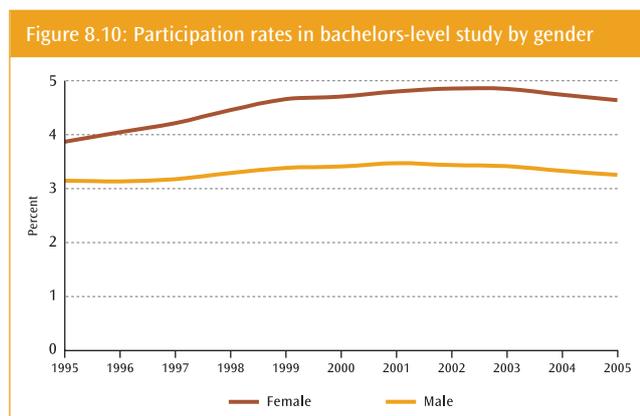
Age group	First-year attrition	Five-year retention	Five-year completion
	Students starting in		
	2004	2001	2001
Percentage of students			
Under 18 years	15	69	57
18-24 years	15	58	48
25-39 years	38	38	29
40 years and over	40	35	27
All students	22	50	41

Domestic students aged 18 to 24 years had higher rates of progression to further study than students aged 25 years and over. Of those domestic students aged 18 to 24 years who completed a bachelors-level qualification in 2004, 17 percent went on to study at a higher level during 2005, while 17 percent went on to study at the same level or a lower level.

Gender

The proportions of female and male domestic students enrolled at bachelors level has remained relatively unchanged since 2000, with women making up 60 percent of domestic bachelors-level students during 2005. This is a similar proportion to domestic students enrolled in postgraduate study, but men make up 46 percent of domestic students enrolled in sub-degree study.

There was a decrease in the number of both female and male domestic bachelors-level students between 2004 and 2005, with female students decreasing by 0.8 percent, from 77,340 to 76,730, and male students decreasing by 0.9 percent, from 51,380 to 50,900. These are similar decreases to those that occurred during 2004. Participation at bachelors level by females aged 15 years and over was 4.6 percent during 2005, compared with 3.3 percent of males.



There continues to be a marked difference in the gender split in some fields of study at bachelors level. Fields of study with a high proportion of women during 2005 were education (83 percent of all domestic bachelors-level students), food, hospitality and personal services (81 percent), and health (80 percent). Fields of study with a high proportion of men during 2005 were engineering and related technologies (80 percent of all domestic bachelors-level students), and information technology (76 percent).

There is a greater gender difference for Māori and Pasifika students than for other ethnic groups. Māori women make up 67 percent of all Māori bachelors-level students and Pasifika women make up 63 percent of all Pasifika students.

Women were more likely to complete a bachelors degree than men. An estimated 43 percent of female domestic students who started a bachelors degree in 2001 had completed after five years, compared with 37 percent of male domestic students. For all ethnic groups, the rate at which males completed a bachelors degree within five years was between one and seven percentage points lower than the rate for females. First-year attrition rates for women and men remained similar at around 22 percent.

Men and women progress to further study at roughly the same rate. Of those males completing a bachelors-level qualification in 2004, 16 percent progressed to higher-level study during 2005 (compared with 15 percent of females) and 18 percent progressed to the same level or lower-level study (compared with 17 percent of females).

TYPE OF STUDENTS AND PRIOR ACTIVITY

First-time students

There were 19,480 domestic students enrolled at bachelors level for the first time during 2005. This represented around 15 percent of all domestic bachelors-level students. First-time students enrolled at bachelors level decreased by 1 percent from 2004.

Over 87 percent of first-time, bachelors-level students were studying at universities during 2005. Around 17 percent of domestic bachelors-level students at universities were enrolled for the first time during 2005, compared with 9.6 percent at polytechnics, 7.2 percent at private training establishments and 5.9 percent at wānanga.

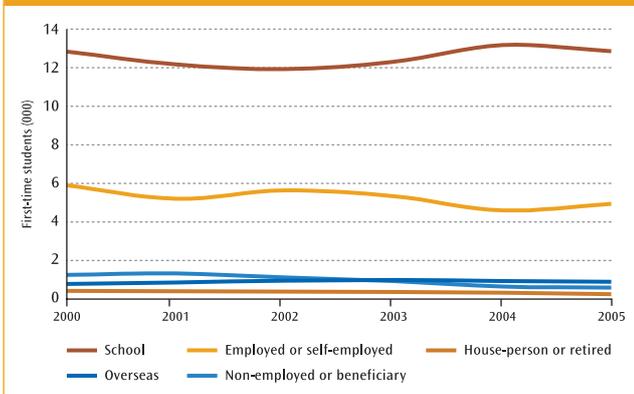
There were fewer first-time, domestic bachelors-level students in the age groups of 25 to 39 years and 40 years and over. Between 2000 and 2005, the number of first-time students aged 25 to 39 years has decreased by 47 percent and first-time students aged 40 years and over have decreased by 33 percent.

Of all first-time bachelors-level students enrolled during 2005, 66 percent came directly from school, compared with 25 percent who were employed, 4.5 percent who were overseas, 3 percent who were non-employed or a beneficiary and 1.3 percent who were a house-person or retired. The distribution of first-time, domestic bachelors-level students has remained relatively constant over the last six years.



Learners in tertiary education

Figure 8.11: First-time, domestic bachelors-level students by prior activity

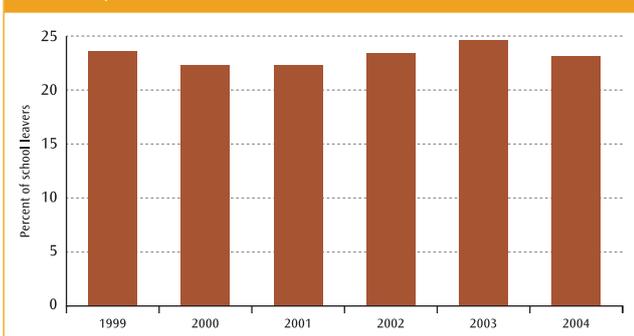


Note: Prior activity refers to a student's main activity at 1 October in the previous year. Care is needed in interpreting these trends as many students' predominant activity in the previous year may be different from what they were doing at 1 October. In addition, data on whether a student is new to tertiary education or not is generally less reliable than other fields.

Domestic first-time, bachelors-level students whose prior activity was school were more than twice as likely to complete a bachelors-level qualification within seven years as first-time students who were employed in the previous year (Ussher 2006).

The proportion of school leavers going directly to bachelors-level study in the following year decreased in 2004. Of the 55,630 school leavers in 2004, 23 percent went on to bachelors-level study in 2005, down from 25 percent for 2003 school leavers. Of all 2004 school leavers going directly to tertiary education in 2005, 42 percent enrolled at bachelors level.

Figure 8.12: Percentage of school leavers directly entering bachelors-level study

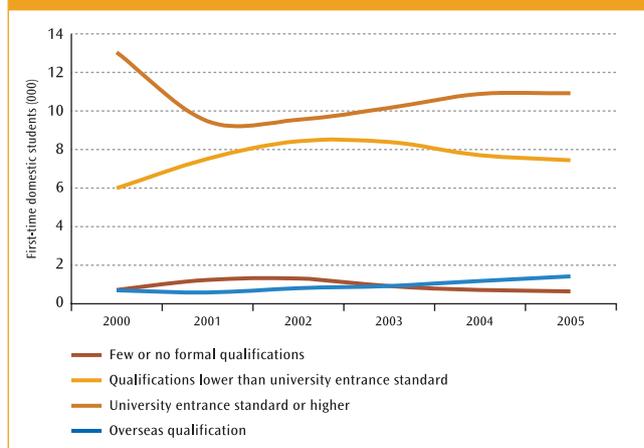


Highest school qualification

In 2005, there were 10,920 first-time domestic students enrolled in bachelors-level study with a highest school qualification of university entrance standard³ or higher. They accounted for 50 percent of all first-time domestic students enrolled in bachelors-level study. Since 2002, the proportion of first-time domestic students entering bachelors-level study with university entrance standard or higher has been increasing. From 2004 to 2005, their number increased by 0.5 percent.

The number of first-time domestic students entering with overseas qualifications more than doubled between 2000 and 2005, from 680 to 1,410. Overseas qualifications include the International Baccalaureate and Cambridge International Examinations and this increase is a result of the increased number of students coming out of the New Zealand secondary school system with overseas qualifications rather than qualifications gained at overseas secondary schools.

Figure 8.13: First-time, domestic bachelors-level students by highest school qualification

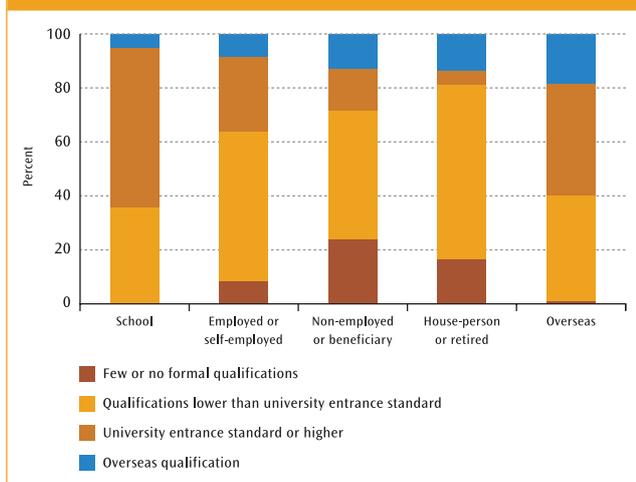


First-time domestic students enrolled at wānanga are more likely to enter bachelors-level study with few or no formal qualifications, with 51 percent of first-time wānanga students having few or no school qualifications during 2005. 'Few or no formal qualifications' is defined as no formal secondary school qualification or 0 to 13 credits at level 1 of the National Qualifications Framework. Older students are also more likely to enter bachelors-level study with few or no formal qualifications. During 2005, 19 percent of first-time domestic students aged 40 years and over and 13 percent aged 25 to 39 had few or no formal school qualifications.

³ From 2004, to be qualified for entrance to university a student must have obtained: a minimum of 42 credits at level 3 or higher on the National Qualifications Framework, including a minimum of 14 credits at level 3 or higher in each of two approved subjects, with a further 14 credits at level 3 or higher in no more than two additional approved subjects. In addition to this, a student must have a minimum of 14 credits at level 1 or higher in mathematics and a minimum of eight credits at level 2 or higher in English or te reo Māori.

There are marked differences in distribution of highest school qualification according to where domestic students have come from prior to study. First-time domestic students who have come directly from school to bachelors-level study are more likely to have a highest school qualification of university entrance standard or higher, while first-time domestic students who were non-employed or a beneficiary are more likely to have few or no school qualifications.

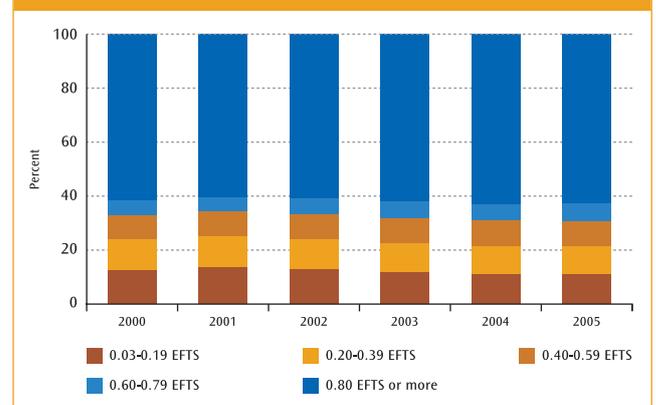
Figure 8.14: Distribution of first-time, domestic bachelors-level students by prior activity and highest school qualification



Study load

During 2005, 63 percent of domestic bachelors-level students were enrolled with an equivalent full-time student value of 0.8 or more. A higher proportion of bachelors-level students were enrolled with an equivalent full-time student value of 0.8 or more than at either the sub-degree or postgraduate levels. The study load distribution of domestic bachelors-level students has remained relatively unchanged over the last six years.

Figure 8.15: Distribution of domestic bachelors-level students by study load



Study load was found to be a major factor influencing six-year completion rates (Scott and Smart 2005). The actual six-year completion rate for bachelors-level students studying at 1 equivalent full-time student unit was 69 percent, compared with 48 percent for all students. As in other countries, those who spend more time in study on average do better than those who do not. This holds after demographic and other study-related factors are adjusted for.

Mode of study

During 2005, 17,230 domestic bachelors-level students (14 percent) studied extramurally, a decrease of 6.5 percent over 2004. In terms of equivalent full-time student units, extramural students make up 5.4 percent of all domestic bachelors-level equivalent full-time students. Around 14 percent of domestic, extramural bachelors-level students were enrolled with an equivalent full-time student value of 0.8 or more, compared with 71 percent of intramural students.

Domestic bachelors-level students who study extramurally are more likely to be aged 25 years and over, enrolled at a polytechnic, and in the European or Māori ethnic groups. During 2005, 30 percent of domestic bachelors-level students aged 40 years and over and 25 percent aged 25 to 39 years were studying extramurally.



Learners in tertiary education

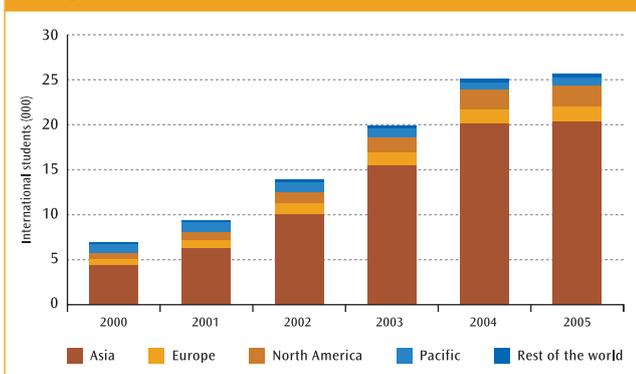
Students with disabilities

Since information on disability was first collected in 1998, the number of students with disabilities in bachelors-level study has grown from 3,370 (excluding private training establishments) in 1998 to over 5,000 during 2005. In that year, students who self-reported a disability represented 3.9 percent of all domestic bachelors-level students, up from 3 percent during 1998. Students with disabilities are over-represented at wānanga, where 16 percent of bachelors-level students reported a disability.

INTERNATIONAL STUDENTS

The majority of international students studying at bachelors level in New Zealand are from Asia (80 percent during 2005). The next largest groups are from North America (9.1 percent), Europe (6.5 percent) and the Pacific (3 percent). There was a notable slowdown in the growth of bachelors-level students from Asia during 2005. Between 2004 and 2005, international bachelors-level students from Asia increased by 1.7 percent; this compares with annual increases of between 30 and 60 percent between 2000 and 2004. The number of bachelors-level students from the Pacific has been declining since 2002.

Figure 8.16: International students in bachelors-level study by region of origin

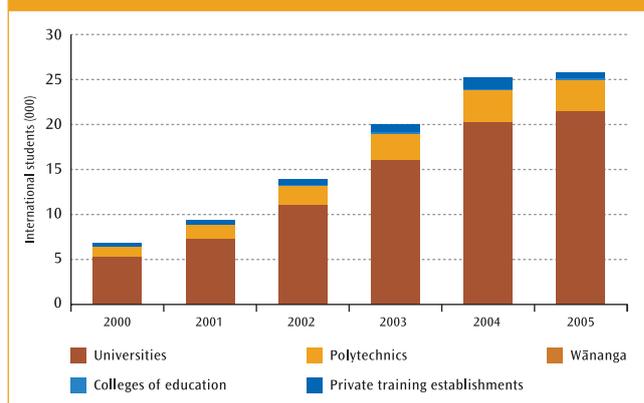


The largest number of international students studying at bachelors level continues to be from China (60 percent of international students during 2005). However, the number of bachelors-level students from China increased by only 0.7 percent from 2004 to 2005, following on from very large increases in the previous years. The second largest number of international bachelors-level students during 2005 was from the United States. Student numbers from the United States increased

by 5.6 percent between 2004 and 2005. The next largest number of bachelors-level students came from Malaysia, South Korea and India.

During 2004, 84 percent of international bachelors-level students were studying at universities, while a further 13 percent studied at polytechnics and 2.4 percent at private training establishments. The number of international bachelors-level students studying at private training establishments halved between 2004 and 2005, from 1,219 to 626. International bachelors-level students studied at wānanga for the first time in 2004 when there were just four students. During 2005, this number doubled to eight international students. All of these students were studying towards a Bachelor of Business Administration at Te Wānanga o Aotearoa.

Figure 8.17: International students in bachelors-level study by type of provider



The most popular field of study for international bachelors-level students during 2005 was management and commerce, with 49 percent of international students studying in this field. Between 2004 and 2005, international bachelors-level students studying management and commerce decreased by 2.5 percent. Other popular fields of study were mixed field programmes (14 percent of international bachelors-level students), society and culture (8.8 percent), and natural and physical sciences (8.6 percent). Between 2004 and 2005, the largest increase in international bachelors-level students was in the field of health studies, with an increase of 280 students, or 32 percent.

International bachelors-level students, as a group, are younger than their domestic counterparts. During 2005, 82 percent of international bachelors-level students were aged 18 to 24 years,

compared with 59 percent of domestic bachelors-level students. By contrast, 17 percent of international bachelors-level students are aged 25 to 39 years and just 1.1 percent are aged 40 years and over.

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Learners in tertiary education

AN OVERVIEW

The number of domestic students enrolled in postgraduate study increased between 2004 and 2005, continuing the steady growth in the number of postgraduate students over the last 10 years. The increase was driven by increased participation in postgraduate certificate and doctorate study.

The number of domestic students completing postgraduate qualifications also increased between 2004 and 2005. There was a marked difference in the five-year completion rates of domestic students in the different postgraduate qualifications, largely reflecting the duration and the nature of the study for each of these qualifications. Domestic students starting a postgraduate certificate or a bachelors degree with honours in 2001 had the highest five-year completion rates.

After 10 years of strong growth, the number of international students enrolled in postgraduate study declined from 2004 to 2005. The largest drop was in students studying for postgraduate diplomas. New Zealand has one of the highest proportions of foreign students enrolled at postgraduate level. International students generally have higher rates of qualification completion than their domestic counterparts.

LOOKING TO 2006

Early indications suggest that student numbers at postgraduate level will continue to increase at a similar rate in 2006, particularly at doctorate level. Increases in the Performance-Based Research Fund and the policy change to treat international doctorate students as domestic are likely to exert a positive influence on enrolments at this qualification level.

PARTICIPATION AT POSTGRADUATE LEVEL

The number of students enrolled in postgraduate study continued to increase between 2004 and 2005. There were 35,110 students enrolled in postgraduate study during 2005, an increase of 800 students, or 2.3 percent over 2004. The number of equivalent full-time students enrolled in postgraduate study during 2005 also increased, by 0.5 percent, from 21,510 to 21,620.

Postgraduate qualifications comprise qualifications at three levels of the New Zealand Register of Quality Assured Qualifications. Level 8 qualifications comprise postgraduate diplomas and certificates, and bachelors degrees with honours. Level 9 qualifications are masters degrees, and level 10 qualifications are doctoral degrees, including professional doctorates and higher doctorates.

Domestic students

There were 30,910 domestic students enrolled in postgraduate study during 2005, an increase of 950 students, or 3.2 percent over 2004. This continued the steady growth in postgraduate students over the last 10 years. The percentage of New Zealanders aged 15 years and over enrolled in postgraduate study during 2005 was 1 percent, up slightly from 0.9 percent during 2004 and 0.6 percent during 1995. During 2005, 6.8 percent of all domestic students were enrolled in postgraduate study.

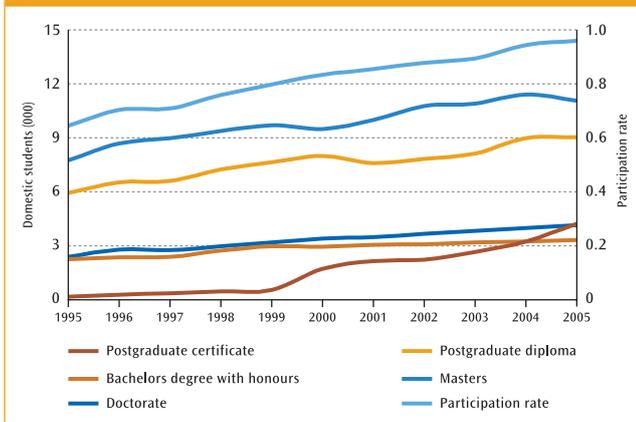
The largest number of domestic students enrolled at the postgraduate level were studying for a masters degree (36 percent of students during 2005), while 29 percent studied for a postgraduate diploma, 14 percent a postgraduate certificate, 13 percent a doctorate degree and 11 percent a bachelors degree with honours. There were 4,220 domestic students enrolled in postgraduate certificate study during 2005, up 31 percent over 2004, 9,030 students enrolled in postgraduate diploma study, up 0.6 percent, 3,310 students enrolled in bachelors with honours study, up 2.4 percent, 11,060 students enrolled in masters study, down 3 percent, and 4,140 students enrolled in doctorate study, up 4 percent.

The sharp increase in the numbers taking postgraduate certificates since 1999 is a reflection of the fact that there has been an expansion in the numbers of postgraduate certificates provided by tertiary education organisations over that time.



Learners in tertiary education

Figure 9.1: Participation in postgraduate study



The number of domestic equivalent full-time students enrolled in postgraduate study during 2005 increased by 1.6 percent over 2004, from 18,260 to 18,550. There were 1,210 domestic equivalent full-time students enrolled in postgraduate certificate study during 2005, up 5.8 percent over 2004, 4,140 enrolled in postgraduate diploma study, down 1.5 percent, 2,770 enrolled in bachelors with honours study, up 0.4 percent, 6,420 enrolled in masters study, down 4.4 percent, and 4,000 enrolled in doctorate study, up 17 percent.

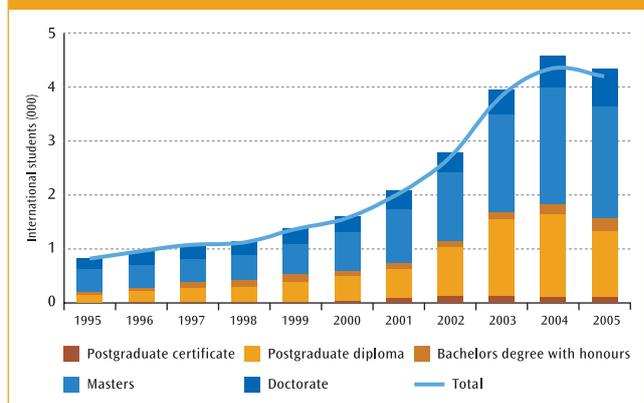
The Organisation for Economic Co-operation and Development provides some international comparisons on participation in postgraduate tertiary education. These comparisons include advanced research programmes, which, in the New Zealand tertiary system, focused on doctorates. The net entry rate measure represents the proportion of the population that will enter advanced research programmes over their lifetime. New Zealand ranked ninth, with a net entry rate into advanced research programmes of 1.9 percent, compared with the OECD average of 1.7 percent (OECD 2006). For a fuller summary of international comparisons see chapter 5.

International students

The number of international students enrolled in postgraduate study during 2005 declined by 3.4 percent over 2004, from 4,340 to 4,190. This is the first decline in the number of international postgraduate students in the last 10 years and comes after strong growth between 1999 and 2004.

While postgraduate diploma study has seen the most growth over the last 10 years, it also had the largest drop in international students during 2005. There were 1,210 international students (or 29 percent of all international postgraduate students) enrolled in postgraduate diploma study during 2005, down by 21 percent from 2004. This compared with 2,080 international students (50 percent) at masters level during 2005, down by 3.0 percent from 2004, and 690 international students (17 percent) at doctorate level, up by 20 percent on 2004. There were small numbers of international students studying for postgraduate certificates (110 students) or bachelors degrees with honours (260 students) during 2005.

Figure 9.2: International students enrolled in postgraduate study



The number of international equivalent full-time students enrolled in postgraduate study during 2005 fell by 5.3 percent over 2004, from 3,250 to 3,080. International equivalent full-time students made up 8.1 percent of all postgraduates during 2005, down from 9.8 percent during 2000.

OECD international comparisons show that during 2004, when permanent residents are also considered, non-citizens made up 37 percent of all students in doctorate study in New Zealand, which is the third highest proportion of the OECD countries.

ACHIEVEMENT

Domestic students

A total of 10,190 domestic students completed 10,430 postgraduate qualifications during 2005. This represented a 6.7 percent increase over 2004 in the number of domestic students who completed postgraduate qualifications.

This included 1,640 domestic students who completed a postgraduate certificate, 3,200 who completed a postgraduate diploma, 1,720 who completed a bachelors degree with honours, 3,250 who completed a masters degree and 580 who completed a doctorate degree.

There was a marked difference in the five-year completion rates of domestic students in the different postgraduate qualifications, largely reflecting the duration and the nature of study of each of the qualifications. Domestic students who started a bachelors degree with honours or a postgraduate certificate during 2001 were more likely to complete their qualification within five years and domestic students who started a doctorate degree during 2001 were the least likely to complete within five years. However, five-year retention rates for domestic doctorate students are similar to those of other domestic postgraduate students. This reflects the fact that doctorate students take longer to complete their qualification. Long-term completion rate estimates confirm that eventually doctorate students complete at a similar rate to students enrolled in other postgraduate qualifications. Between 55 and 60 percent of those who start are likely to complete the qualification eventually.

Five-year completion rates for domestic students enrolled in postgraduate qualifications, apart from doctorate degrees, are higher than for domestic students enrolled in lower-level qualifications.

First-year attrition was low for domestic students who started a doctorate qualification during 2004. Among domestic postgraduate students, first-year attrition was highest for students who started a postgraduate certificate or a postgraduate diploma during 2004. This perhaps reflects that students who enrol in these qualifications are more likely to be studying part-time while in work and may be more likely to be seeking to pass selected courses, rather than a whole qualification.

There are clear indications that retention has improved at doctorate level. This improvement coincides with the introduction of the Performance-Based Research Fund, in which some funding is tied to the successful completion of research degrees.

Table 9.1: First-year attrition and five-year retention and completion rates for domestic postgraduate students

	First-year attrition	Five-year retention	Five-year completion
Students starting in			
	2004	2001	2001
Qualification	Percentage of students		
Doctorate	4	61	27
Masters	25	53	48
Bachelors degree with honours	30	65	65
Postgraduate diploma	36	52	51
Postgraduate certificate	36	64	63
All students	28	62	57

OECD international comparisons of achievement in advanced research programmes show our graduation rate¹ to be the 12th highest in the OECD at 1.1 percent, slightly below the OECD average of 1.3 percent. Our survival rate² is 66 percent, which is about the same as the OECD average of 67 percent. For a fuller summary of international comparisons see chapter 5.

On average, a student who started doctorate study in 1998 took 3.9 equivalent full-time years to complete but, unlike other levels of study, doctoral students are more likely to persist beyond the first year before ceasing study. In fact, half of those leaving did so after two equivalent full-time years of doctoral study. Many doctoral students extend their study over a long period, greater than the six-year period analysed here. It is likely that a proportion of those who have left after one or two full-time years of study may return to complete in the future. In general, students studying at postgraduate level are more likely to persist longer than undergraduate students before withdrawing (Scott 2005).

Of those domestic students who completed a bachelors-level qualification in 2004, 15 percent went on to postgraduate study in 2005. This rate has remained relatively unchanged over the last five years. Of those domestic students who completed a bachelors degree in 2000, 22 percent went on to postgraduate study sometime between 2000 and 2005. These progression rates were higher for students aged 18 to 24 years than for any other age group.

1 Graduation rate represents the total number of first-time graduates at a particular level, divided by the population at the typical age of graduation for that level.

2 The total number of graduates at a particular level, divided by the number of new entrants to that level x years earlier, where x represents the typical time required to complete at that level.