



MINISTRY OF EDUCATION

Te Tāhuhu o te Mātauranga

Cross-strategy indicators

Tertiary Education Strategy monitoring 2009

Cross-strategy indicators: Tertiary Education Strategy monitoring 2009

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Cross-strategy indicators

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1. The Tertiary Education Strategy

Tertiary education is a key strategic investment in the country's cultural, social and economic well-being and future. Tertiary education is associated with improved economic and social outcomes. More than 630,000 New Zealanders participated in tertiary study in 2008, including industry training. The government spends over \$4 billion a year on tertiary education, including research funding and financial support for students.

The Minister for Tertiary Education is required under the Education Act to issue a tertiary education strategy setting out the government's long-term strategic direction for tertiary education, as well as its current and medium-term priorities. The Act requires the Tertiary Education Commission, the New Zealand Qualifications Authority and Career Services to have regard for the strategy in exercising their functions. In practice, the strategy sets out the framework for funding agreements with tertiary education organisations and provides a reference point for policy-making and relationships with the tertiary education sector.

The current strategy was issued in December 2006 and covers the period from 2007 to 2012. It includes the priorities for the 2008 to 2010 tertiary education organisation investment plans. It is the second strategy to be published. The first strategy took a broad and inclusive approach to cover the diversity of tertiary education. The second strategy continued that inclusive direction while sharpening the focus. The focus in the second strategy is much more explicitly on what the government expected of the tertiary education system and the priority outcomes for action.

Since the second strategy was issued, there has been a change of government. The government has announced it will issue a new tertiary education strategy by the end of 2009, which will guide the 2011-2013 funding period.

The 2007-12 strategy accompanied the progressive introduction of a new approach to planning, funding, quality assurance and monitoring in the tertiary education system. Funding of tertiary education was shifted from annual allocations based on student numbers to negotiated three-year investment plans. Quality assurance arrangements are being reviewed to

create a greater focus on learner outcomes. A key focus was on developing a differentiated and complementary network of provision, with better connections with businesses, industry and communities with an interest in the outcomes of tertiary education.

The second strategy set out three areas in which the tertiary education system was expected to contribute to our society, namely:

- Success for all New Zealanders through lifelong learning
- Creating and applying knowledge to drive innovation
- Strong connections between tertiary education organisations and the communities they serve.

These expected contributions were underpinned by attention to 'distinctive contributions', which recognised the key strengths and differences among different types of tertiary education organisations.

The strategy set out four priority outcomes where it was seen that there needed to be increased effort, and in some cases investment, in order to achieve a shift in the system. The priority outcomes were:

- Increasing educational success for young New Zealanders – more achieving qualifications at level four and above by age 25
- Increasing literacy, numeracy and language levels for the workforce
- Increasing the achievement of advanced trade, technical and professional qualifications to meet regional and national industry needs
- Improving research connections and linkages to create economic opportunities.

2. Monitoring the strategy

Informing progress

This report is part a set of three reports:

- **Summary:** provides a brief overview of the tertiary education sector as the strategy was being implemented
- **Cross-strategy indicators** (this report): provides a detailed view of the overall health of the tertiary education system, using a set of enduring indicators against which broader changes can be monitored
- **Expected contributions:** provides a detailed view of the state of the tertiary education system with regard to the three areas of expected contribution and related priorities.

The information in these reports is intended to:

- inform decisions about the priorities for future funding allocations across the tertiary education sector
- provide the tertiary education organisations with a fuller, overall picture to inform their planning for the next funding round
- provide information that will help groups such as business and industry, Māori, iwi and Pasifika communities, to enter into discussions with tertiary education organisations on their needs and priorities.

These monitoring reports focus on the tertiary education system as the current strategy unfolded. The reports provide trend data to 2008 and include comment on the direction taken by tertiary education organisations in their 2008 to 2010 investment plans.

Purpose of monitoring

The purpose of monitoring the strategy is to provide ongoing timely information on the progress of the tertiary education system against the strategy. Monitoring can help make sense of the extent to which the intended changes are happening and to what degree. The monitoring information provides a broad picture that enables understanding of:

- the contribution of tertiary education to wider economic and social outcomes

- the general direction and trends in tertiary education in relation to the focus areas of the strategy

- overall progress towards the priority outcomes.

The results of the monitoring project will:

- inform Ministers of the overall progress being made against the strategy
- provide system-level, contextual information to inform ongoing planning and decisions by tertiary education organisations and the Tertiary Education Commission
- provide context for the monitoring of the Crown entities (Tertiary Education Commission, New Zealand Qualifications Authority and Career Services)
- provide alerts to any possible need to reconsider the policy mix
- feed into further developments of the strategy and associated priorities.

Roles and relationships

The Ministry of Education leads the work on monitoring the strategy and is responsible for the publication of reports. The project draws on and synthesises a wide range of monitoring information that is already being collected and developed across a number of departments, ministries and agencies. It complements these activities by bringing together a broad overview of change and achievement.

The Tertiary Education Commission is responsible for monitoring the performance of tertiary education organisations against their agreed performance measures, while ensuring there is a coherent network of tertiary education provision.

The New Zealand Qualifications Authority is responsible for quality assurance of tertiary education (with the exception of the universities), including developing self-evaluation standards for providers to assess their own performance and identify areas for improvement.

The Ministry works in close collaboration with the Tertiary Education Commission and the New

Zealand Qualifications Authority to ensure that the overall monitoring of the tertiary education system is connected and aligned, and to avoid duplication of effort.

Similarly, the Ministry works with the Department of Labour with regard to monitoring skills and labour market outcomes, with the Ministry of Economic Development with regard to monitoring economic transformation and with the Ministry of Research, Science and Technology with regard to monitoring knowledge development and transfer.

Approach to monitoring

Monitoring of the strategy uses a mix of quantitative indicators that can provide measures of change over time, balanced with qualitative information that can provide information on areas that are harder to measure meaningfully through quantitative data. There is also a mix of lead indicators, which provide information on change

underway, and lag indicators, which provide information on achievements.

A narrow focus on indicators could easily miss the 'real' story. The system may be 'scoring' well on a whole range of indicators but not making the substantive shifts as indicated by the strategy – or the other way around. The challenge of monitoring, therefore, is to highlight the overall messages, not just report on indicators.

Monitoring can only provide a partial and selective view of change across a system that is as complex and dynamic as tertiary education. Therefore, the results need to be considered alongside other information, such as research and expert advice.

The current strategy sets out new areas of challenge for the tertiary education system. In a number of these areas there is a lack of current, robust data to assess progress. In many cases, this data will become available over time.

3. Tertiary education in New Zealand – cross-strategy indicators

Cross-strategy indicators provide enduring measures of the overall health of the tertiary education system. These indicators cover the outcomes against which the broader changes resulting from the tertiary education strategy and government policy can be monitored. Changes in these indicators also provide an alert to possible unintended consequences (positive and negative) of the changes made relating to strategy and policy.

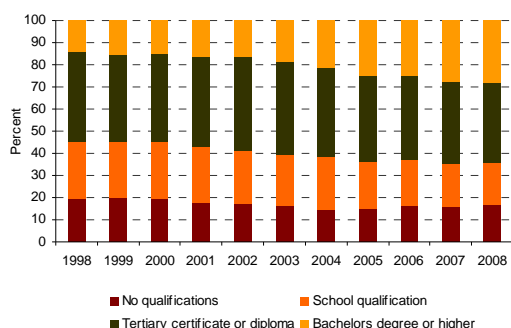
Knowledge and skills in the adult population

English-based literacy skills for 25 to 34 year olds have increased over the last 10 years. This age group rated lower on their numeracy skills than on their literacy skills. European New Zealanders and New Zealand-born Asians generally have higher English-based literacy skills than New Zealanders in other ethnic groups.

From 2001 to 2006, there were significant gains in the te reo Māori proficiency of Māori aged 25 to 34, with fewer people having little or no knowledge of the language.

The proportion of the population aged 25 to 39 with a tertiary qualification has been steadily increasing. In 2008, 28 percent held a bachelors degree or higher. This proportion is above the OECD mean, and similar to Canada, Australia and the United Kingdom.

Figure 3.1: Highest educational qualification of the population aged 25 to 39



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

People aged 25 to 29 in both the Māori and Pasifika populations are much more likely to

have their highest qualification at below-degree level than at degree level and above. While there has been an increase in the proportion in both ethnic groups with degree-level qualifications, the proportion is still substantially lower than that of the total population.

Outcomes of tertiary education

People with bachelors degrees have had significantly higher income than people with lower-level qualifications. Pasifika with bachelors degrees have made considerable gains in income over the last six years.

Māori and Pasifika with qualifications below degree level still had higher unemployment rates than other ethnic groups.

During the period of economic growth to 2007, unemployment rates dropped to similar levels for all people with school or tertiary qualifications. Rates remained higher for those with no educational qualifications. Recent data shows that as overall unemployment increases, the unemployment rate for those with no qualifications is increasing faster than the rate for those with school or tertiary qualifications.

For individuals, there is a greater economic return from undertaking tertiary study direct from school than later in life. However, the returns for adult students with no school qualifications are also significant. The economic returns to government of tertiary education follow a similar pattern and are greater for diploma and above qualifications.

Tertiary education is associated with improved health outcomes. This effect is particularly clear for Māori women.

Research within the tertiary education sector

New Zealand universities account for around 30 percent of the expenditure on research in New Zealand. Their most significant contribution is in the area of developing and applying new knowledge.

Humanities and law, biological sciences and social sciences have the largest number of

research staff recognised as of international or national standing.

New Zealand's tertiary education research output has been increasing relative to world output, as has the recognition of New Zealand tertiary education research. New Zealand universities have an academic impact¹ above the world average in health and medicine.

Research in the tertiary education sector is not restricted to universities. Institutes of technology and polytechnics, wānanga and private training establishments also have research staff. Much of the contribution of these sub-sectors is in the area of applied research and transfer of knowledge.

Success in tertiary education

Seventy-eight percent of 2005 school leavers entered tertiary education within two years of leaving school. A third of school leavers went into level 1 to 3 certificates and the next largest group into bachelors-level study.

New Zealand has a higher proportion of students who leave school from 16 and do not go on to tertiary study, compared with the OECD average. This is due to a combination of a historically strong youth labour market and lower expectations in New Zealand for all young people to 'complete' secondary and undertake some tertiary-level education.

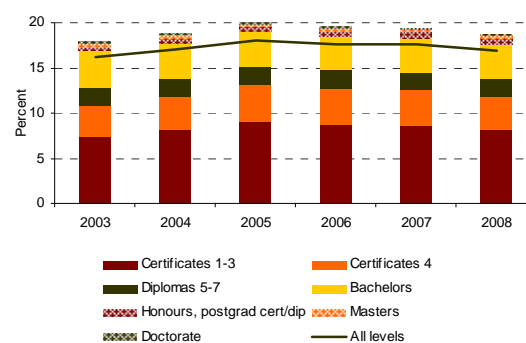
After a period of substantial growth, total participation rates in tertiary education have decreased, the decrease being mostly below degree level.

Among 18 to 19 year olds, Europeans and Asians have the highest rates of participation in diplomas and bachelors degrees. There has been little increase in the participation rates at bachelors level for Māori and Pasifika, which remain substantially lower.

In the 25 to 39 year old age group, Europeans and Māori have the highest participation rates in diplomas and participation rates at bachelors level are similar across all ethnic groups. At both levels, participation rates have been decreasing for all ethnic groups.

¹ Academic impact is measured by the number of citations per research publication.

Figure 3.2 Participation rates in tertiary education by qualification level

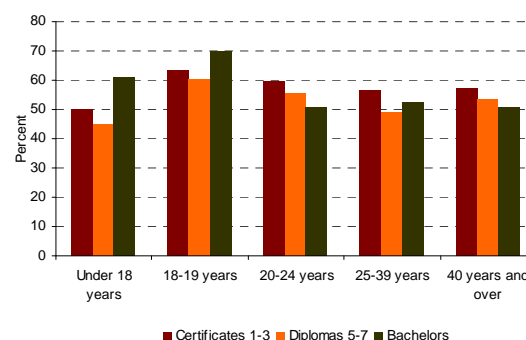


First-year retention rates for full-time students have remained steady for qualifications up to bachelors level. There has been increased retention of students in postgraduate qualifications.

For bachelors degrees, retention rates are higher in the younger age groups. Rates are similar across age groups for below-degree-level qualifications, with the exception of under-18 year olds who are less likely to continue in study.

Five-year completion rates for full-time students are higher at bachelors level and above. Completion rates follow a similar pattern to retention rates by age group, with under 18 year olds being less likely to complete certificates and diplomas. Pasifika and Māori students have the lowest completion rates at bachelors level in the 18 to 19 year old age group.

Figure 3.3: Five-year completion rates by age group, 2004 starters



Five-year progression rates have increased for students who started in level 1 to 3 certificates and remained steady for students starting at higher levels.

There has been an increase in five-year progression rates from level 1 to 3 certificates for Asian students. Asian and European students have the highest five-year progression rates from bachelors degrees.

The average number of credits attained by people exiting industry training has been fairly steady. The estimated five-year programme completion rate for industry training is around 30 percent, which is lower than the provider-based completion rate for level 1 to 4 certificates.

Affordability of tertiary education

Average tuition fees have remained stable relative to wages as a result of a policy to limit the maximum fees. New Zealand fees continue to be low by international comparison. There has been moderate growth in the real value of the average student loan balance.

Government expenditure on tertiary education has been growing in real terms. New Zealand's expenditure on tertiary education as a proportion of GDP is slightly above the OECD average.

Tertiary education organisations

The largest recent growth in student numbers has been in institutes of technology and polytechnics and industry training. These are now the two largest sub-sectors by student numbers.

After a period of considerable growth, the number of international tertiary students in New Zealand decreased: this is due to a range of factors. However, New Zealand still has the second largest proportion of international students, following Australia. New Zealand students studying abroad are most likely to study in Australia, the United States or the United Kingdom.

After a period of financial volatility, the financial performance of institutes of technology and polytechnics and wānanga appears to be improving. The financial performance of universities remains steady and reasonably healthy.

4. Knowledge and skills in the adult population

Literacy, language and numeracy skills

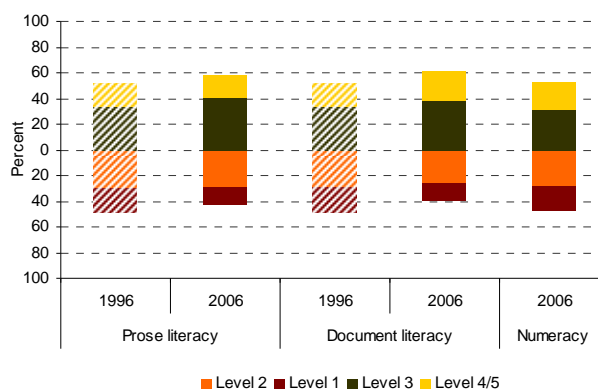
Literacy, language and numeracy skills provide a direct measure of the overall general skills of the adult population. This has been measured independently of educational attainment and provides information on the ability of adults to participate in a knowledge society and economy.

Between 1996 and 2006, the prose and document literacy skills of 25 to 34 year olds increased. In 2006, around 60 percent of 25 to 34 year olds had prose or document literacy skills at level 3 or above,² compared with 50 percent in 1996. This is the level considered as sufficient to participate fully in a knowledge society.

The proportion with high levels of numeracy in 2006 was only 53 percent.³

New Zealand's results are similar to those of Australia and Canada.

Figure 4.1: Distribution of 25 to 34 year olds by literacy and numeracy in 1996 and 2006

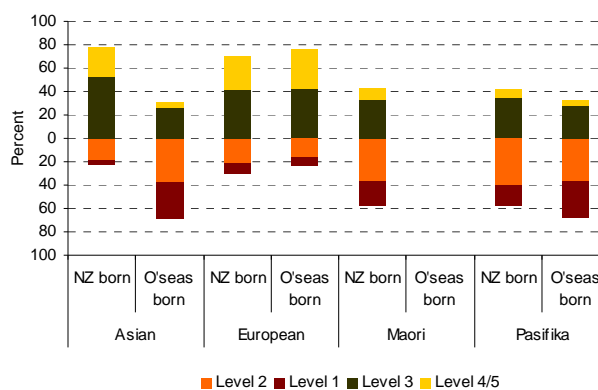


Sources: *International Adult Literacy Survey 1996* and *Adult Literacy and Life Skills Survey 2006*.

Literacy skills generally vary by ethnic group and place of birth. Europeans and New Zealand-born Asians had the highest levels of document literacy in 2006. Māori and New Zealand-born Pasifika had similar levels, but lower than Europeans and New Zealand-born Asians.

Overseas-born Asians and Pasifika had the lowest levels of English-based document literacy. A high proportion of these groups had English as an additional language (93 and 79 percent respectively).

Figure 4.2: Distribution of document literacy for 25 to 34 year olds by ethnic group and place of birth



Source: *Adult Literacy and Life Skills Survey, 2006*.

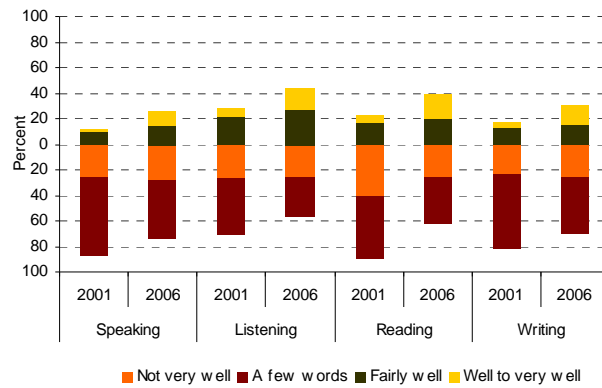
² See notes on data sources (on p 33) for definitions of domains and levels.

³ Numeracy was not measured in a comparable way in the International Adult Literacy Survey 1996.

From 2001 to 2006 there were significant gains in te reo Māori proficiency for Māori aged 25 to 34, as measured by the Surveys of the Health of the Māori Language.

The gains have been larger in listening, reading and writing than in speaking. These gains result from a decrease in the proportion of the population with little or no knowledge of Māori and from an increase in the proportion who have good proficiency.

Figure 4.3: Proportion of Māori 25 to 34 year olds with medium to high proficiency in te reo Māori



Sources: Statistics New Zealand and Te Puni Kōkiri, *Surveys of the Health of the Māori Language*, 2001 and 2006.

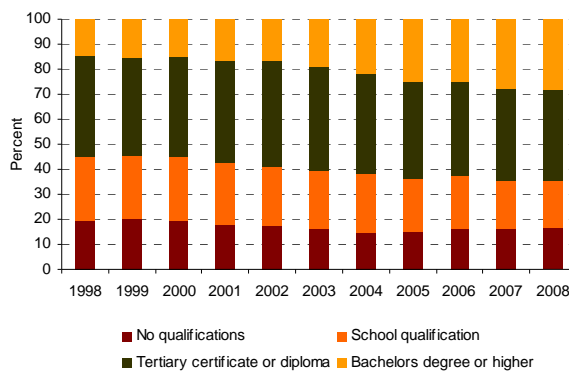
Education attainment of the population

The following indicators look at the highest educational qualifications attained across the population. These indicators provides a measure of overall human capital. The data includes qualifications attained overseas as well as in New Zealand.

The proportion of 25 to 39 year olds with a tertiary education qualification has been steadily increasing.

From 1998 to 2008, the proportion with a bachelors degree or higher almost doubled from 15 percent to 28 percent.

Figure 4.4: Highest educational qualification of the population aged 25 to 39

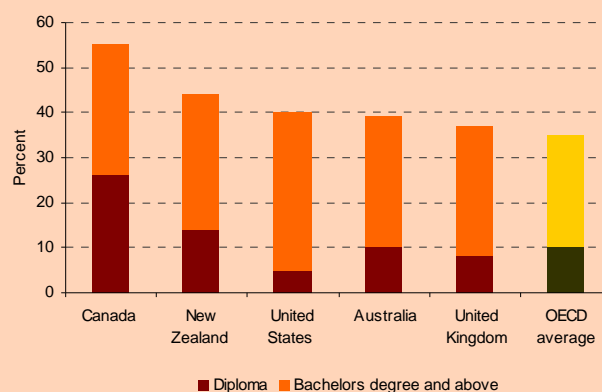


Source: Statistics New Zealand, *Household Labour Force Survey*, June quarters.

The proportion of New Zealand 25 to 34 year olds with qualifications at diploma level and above is higher than for the United States, Australia and the United Kingdom and the OECD average.

The proportion of this age group in New Zealand with a bachelors degree or higher is similar to Canada, Australia and the United Kingdom, and higher than the OECD average.

Figure 4.5: International comparison of the proportion of the 25 to 34 year old population with diploma and above tertiary qualifications 2006



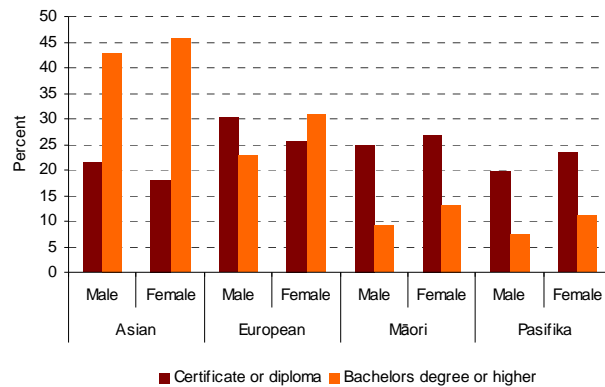
Source: Organisation for Economic Cooperation and Development, *Education at a glance 2008*

In both the Māori and Pasifika populations, 25 to 39 year olds are more likely to hold a certificate or diploma than a bachelors degree or above as their highest tertiary qualification.

For this age group in the European population there are fairly equal proportions with below-degree-level qualifications and bachelors degree and above.

In the Asian population, 25 to 39 year olds are much more likely to hold a bachelors degree or higher than a lower-level qualification.

Figure 4.6: Proportion of population aged 25 to 39 with tertiary qualifications by gender and ethnic group 2006

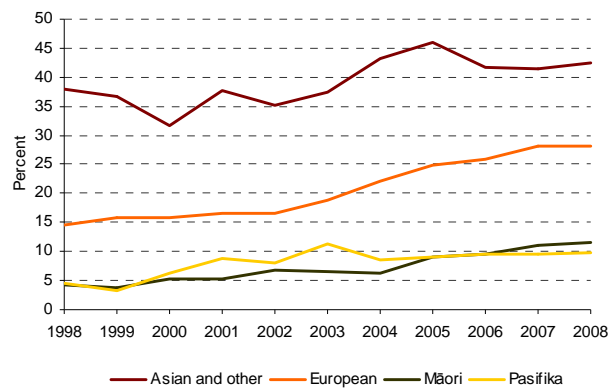


Source: Statistics New Zealand, *New Zealand Census of Population and Dwellings 2006*.

Since 1998, in both the Māori and Pasifika populations, there has been a doubling, from 5 to over 10 percent, of the proportion of the population aged 25 to 39 with bachelors degrees or higher.

The proportion for 25 to 39 year olds in the Asian population has remained fairly constant at around 40 percent and the proportion in this age group in the European population has doubled from 15 to almost 30 percent.

Figure 4.7: Proportion of the population aged 25 to 39 with bachelors degree or above by ethnic group

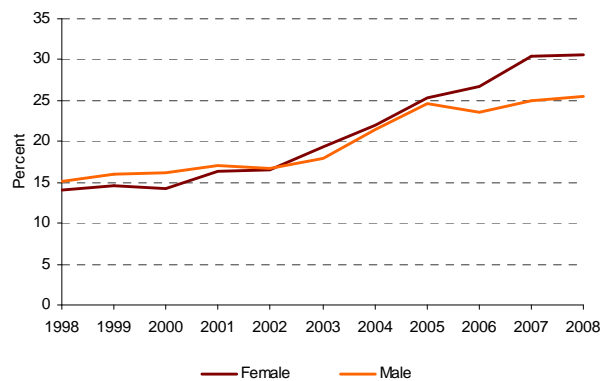


Source: Statistics New Zealand, *Household Labour Force Survey*.

Until 2005, the proportions of men and women aged 25 to 39 with a bachelors degree or higher increased in a similar way.

In 2006 and 2007, the proportion of women with a bachelors degree or higher continued to increase, while the proportion of men has levelled off.

Figure 4.8: Proportion of the population aged 25 to 39 with bachelors degree or above by gender



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

5. Outcomes of tertiary education

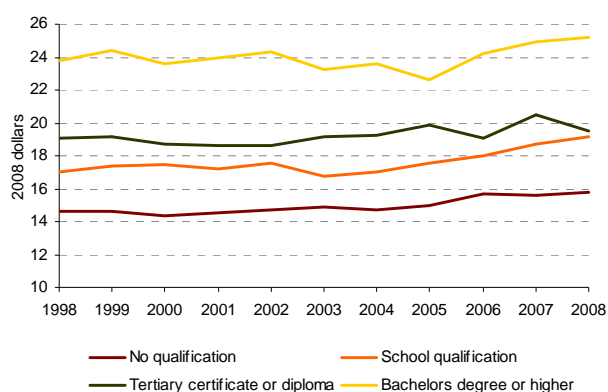
Tertiary education and income

Income provides a measure of the economic benefits of attaining qualifications. It also indicates the relative value placed on qualifications within the labour market. The income figures presented below are hourly earnings from each person's main job.

People aged 25 to 39 with a bachelors degree or higher have maintained their real earnings over the last decade, with earnings increasing over the last two years.

As demand for labour increased from 2000 to 2007, real earnings increased for 25 to 39 year olds with lower-level tertiary qualifications and school qualifications only.

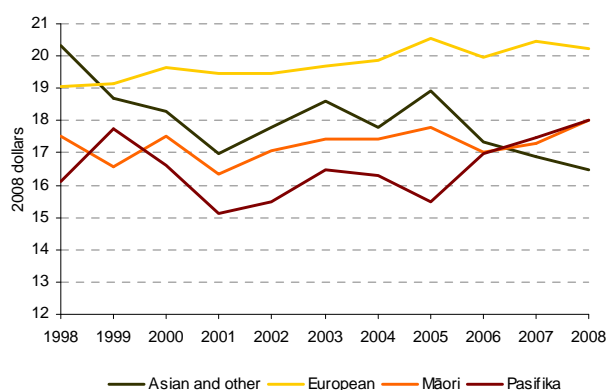
Figure 5.1: Real median hourly wages for 25 to 39 year olds by level of qualification



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

In the 25 to 39 year old age group, European New Zealanders with tertiary certificates or diplomas as their highest qualification continued to have higher median wages than people from the other ethnic groups.

Figure 5.2: Real median hourly wages for 25 to 39 year olds with tertiary certificates or diplomas by ethnicity



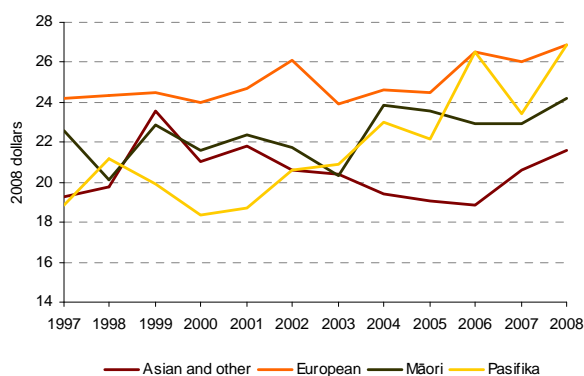
Source: Statistics New Zealand, *New Zealand Income Survey*.

Pasifika aged 25 to 39 with bachelors degrees have made considerable gains in earnings over the last six years and now have earnings equivalent to Europeans in the same age group.

There has also been an overall increase in earnings for Māori aged 25 to 39 with bachelors degrees.

Earnings for Asians and others aged 25 to 39 with bachelors degrees have remained lower.

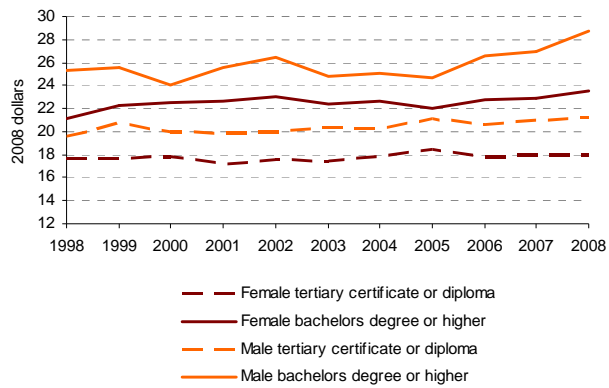
Figure 5.3: Real median hourly wages for 25 to 39 year olds with bachelors degree or higher by ethnicity



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

Males aged 25 to 39 with tertiary qualifications earn more on average than females. Males with bachelors degrees or higher have benefited more from recent wage increases than females with bachelors degrees or higher.

Figure 5.4: Real median hourly wages for 25 to 39 year olds by highest tertiary qualification and gender



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

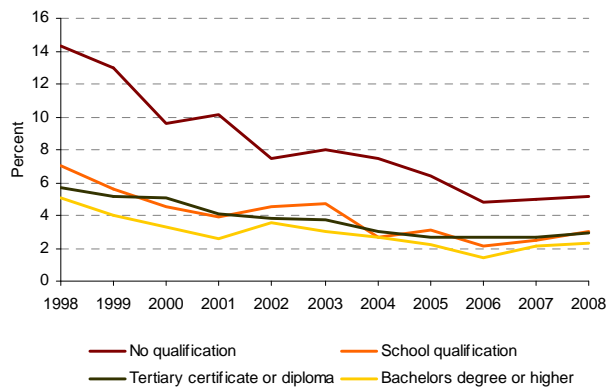
Tertiary education and employment

Unemployment rates provide a measure of the benefits of tertiary education in terms of obtaining work. They indicate the relative supply and demand in the labour market by qualification level.

As the economy improved in the period to 2007, unemployment rates dropped to similar levels for 25 to 39 year olds with school and tertiary qualifications.

Unemployment rates remained relatively high for 25 to 39 year olds with no formal qualifications and the latest data shows that rates are picking up for this group as the economy goes into recession.

Figure 5.5: Unemployment rate for people aged 25 to 39 by highest qualification

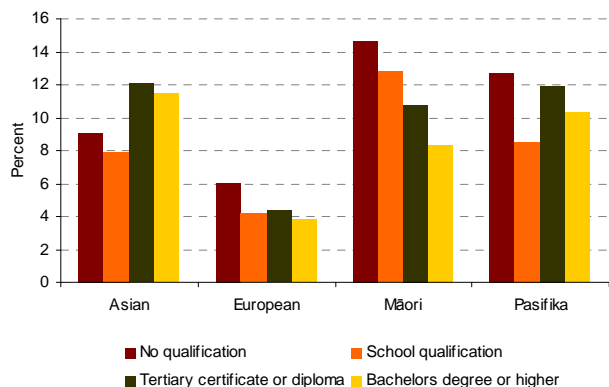


Source: Statistics New Zealand, *Household Labour Force Survey*.

In 2006, Europeans aged 15 and over with bachelors degrees had the lowest unemployment rates, followed by Māori, Pasifika and then Asian groups.

Europeans who had a tertiary certificate or diploma also had lower unemployment rates than other groups.⁴

Figure 5.6: Unemployment rate for people aged 15 and over by ethnic group and highest qualification



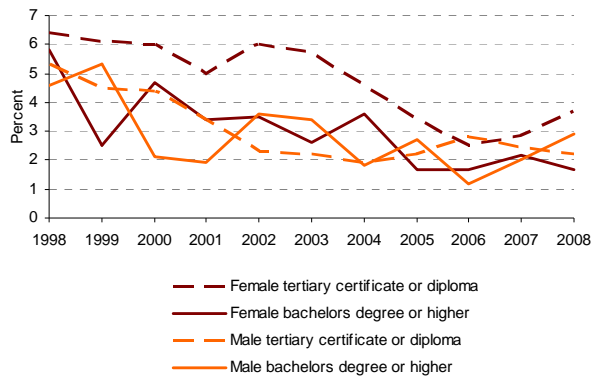
Source: Statistics New Zealand, *New Zealand Census of Population and Dwellings 2006*.

⁴ Data on unemployment by labour force status by highest qualification level and ethnic group is not available from the Household Labour Force Survey due to sample size limits.

In the past, women aged 25 to 39 with qualifications below degree level have had higher unemployment rates than men in the same age group with similar qualifications, and than both men and women in the same age group with bachelors degrees or higher.

Those differences largely disappeared as overall unemployment decreased in the period to 2007.

Figure 5.7: Unemployment rates for 25 to 39 year olds by gender and level of highest tertiary qualifications



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

Private and public rates of return⁵

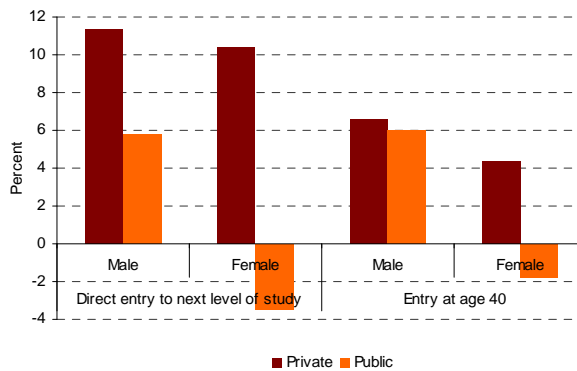
Private internal rates of return represent the economic benefit from greater lifetime earnings for an individual of attaining a qualification, measured against the cost in terms of fees and foregone income.

Public rates of return represent the economic benefit in the form of additional tax receipts over the lifetime of each individual, measured against the cost of tertiary education to the government.

Obtaining a qualification at school level or tertiary certificate level has quite high private rates of return, compared with no qualification. Public rates of return are lower, reflecting the lower impact of additional taxes, particularly for females.

The rates of return for older students studying at this level are lower than for school leavers, but still substantial.

Figure 5.8: Private and public rates of return for an individual obtaining a school or certificate qualification (2004)



Source: Organisation for Economic Cooperation and Development, *Education at a glance 2008*.

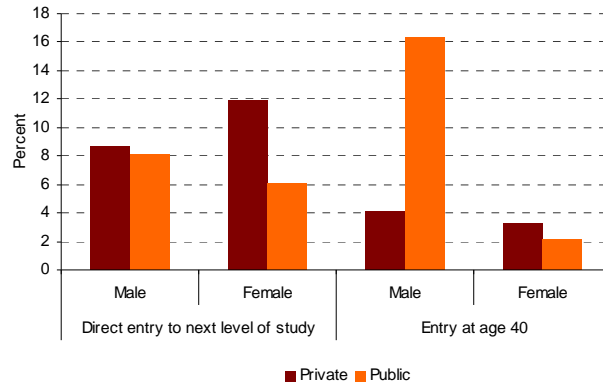
⁵ The data shown here uses an actuarial method to calculate returns. It is not an economic analysis of return on investment nor does it include any social dimensions of returns or flow-on benefits of a more educated population.

Obtaining diploma- and degree-level qualifications provides additional returns privately and publicly.

Private rates of return are higher for younger students, reflecting a longer period of increased lifetime earnings.

The OECD figures show an exceptionally high public rate of return for males studying at age 40 in New Zealand.

Figure 5.9: Private and public rates of return for an individual obtaining a diploma or degree qualification (2004)



Source: Organisation for Economic Cooperation and Development, Education at a glance 2008

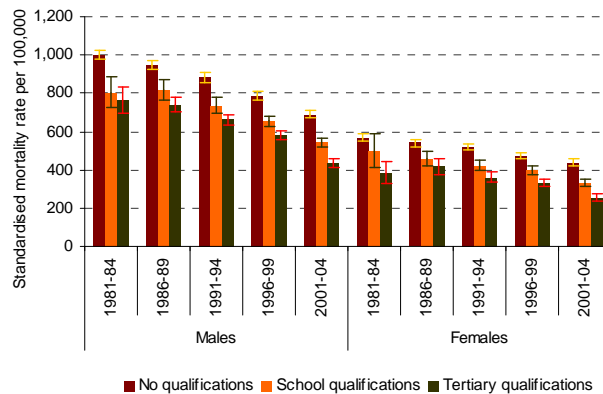
Health and well-being

Very little time-series data is available on the relationship between education and health and well-being. One indicator that is available is the association of education with mortality rates. Mortality rates provide an overall indicator of the general health of the population.

Mortality rates show an association between higher levels of education and improved health.

Mortality rates for adults have been improving over the last 20 years. Improvements have been proportionally greater for people with school and tertiary qualifications than for those with no qualifications.

Figure 5.10: Standardised mortality rates (from all causes) for the population aged 25 to 74 by gender



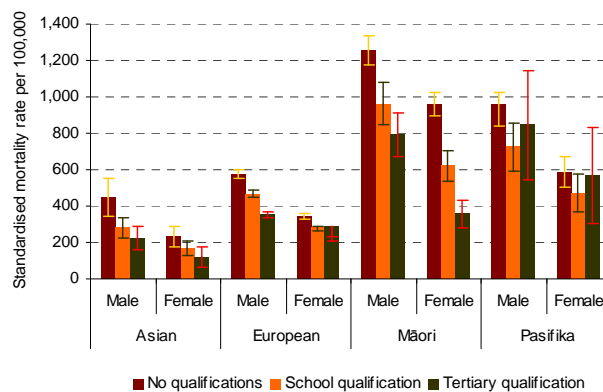
Source: University of Otago, New Zealand Census-Mortality Study.
Note: Error bars show the 95% confidence interval for the mean.

Māori and Pasifika continue to have higher mortality rates than Asian and European New Zealanders.

For Māori women there is a particularly strong association between tertiary education and improved health.

The association is less clear for Pasifika, mainly due to sample size issues in the data.

Figure 5.11: Standardised mortality rates (from all causes) for the population aged 25 to 74 years by gender and ethnic group, 2001-2004



Source: University of Otago, New Zealand Census-Mortality Study.
Note: Error bars show the 95% confidence interval for the mean.

6. Research within the tertiary education sector

The research indicators in this report focus mainly on universities, due to issues of data availability. However, other subsectors do have significant research efforts. Around 20 percent of all staff assessed in the 2006 Performance-Based Research Fund quality evaluations were from institutes of technology, wānanga and private training establishments. The focus of these sub-sectors tends to be more on applied research and knowledge transfer, which is poorly covered by established research metrics.

Nature of research undertaken by tertiary education organisations

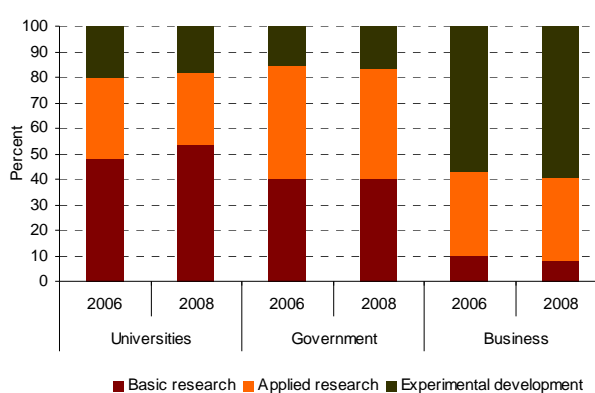
This section looks at the types of research undertaken by tertiary education organisations and areas in which it is undertaken.

Around 30 percent of total expenditure on research in New Zealand is made by universities, with an estimated \$640 million spent by universities in 2008.

A significant contribution of universities is in the area of 'basic research'.⁶ Around half of university research expenditure is in this area.

Universities contributed 53 percent of national expenditure on basic research in 2008 and 25 percent of national expenditure on applied research.

Figure 6.1: Research expenditure by type of research and sector



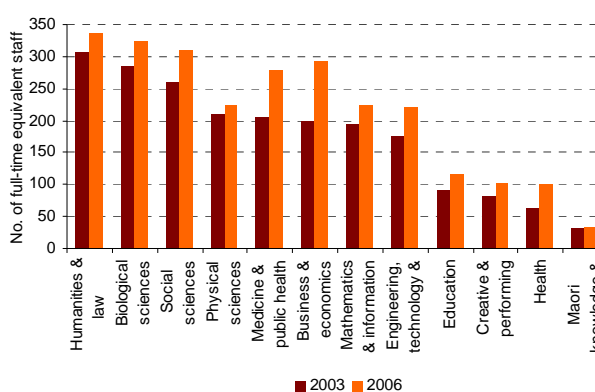
Source: Statistics New Zealand and Ministry of Research, Science and Technology, *Research and development survey, 2006 and 2008*.

The largest areas of nationally and internationally recognised research activity in New Zealand universities are humanities and law, biological sciences and social sciences.

The Performance-Based Research Fund gives a rating of A or B to staff assessed to have produced research of international or national standing respectively.⁷

The areas with the largest growth in the numbers of top-rated staff from 2003 to 2006 have been health and medicine and business and economics.

Figure 6.2: Full-time equivalent staff rated A or B by PBRF panel in universities



Source: Tertiary Education Commission.

Note: Figures have been restricted to universities to provide comparability across the two evaluation rounds.

⁶ Refer to page 34 for definitions of type of research.

⁷ The 2006 Performance-Based Research Fund evaluations were a partial round, where people assessed in 2003 could elect to carry over their scores without reassessment. Some of these staff might have been assessed downwards if they had resubmitted. This makes it difficult to judge how much of the increase from 2003 to 2006 reflects a true increase in the number of high-quality researchers.

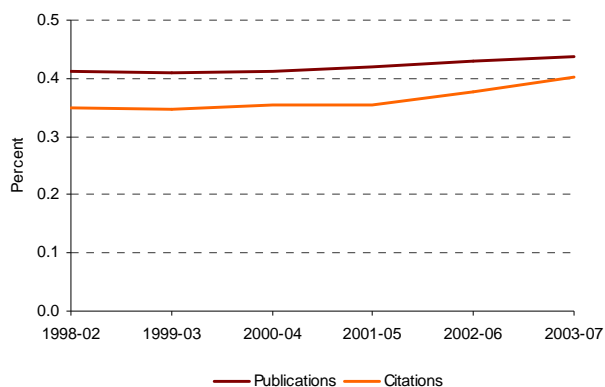
Research output and impact

This section looks at trends in the amount of research produced and its take-up by other academics. The indicators are restricted to established metrics which focus on publications and citations. As such, they do not capture other aspects such as application of research findings and dissemination beyond the academic community.

The share of world-indexed publications provides a measure of the overall research output of New Zealand tertiary institutions. This indicator shows an increasing share since 2000 to 2004.

The share of citations provides a measure of recognition of research. This indicator also shows an increasing share since 2001 to 2005.

Figure 6.3: New Zealand tertiary education institution's share of world-indexed publications and citations

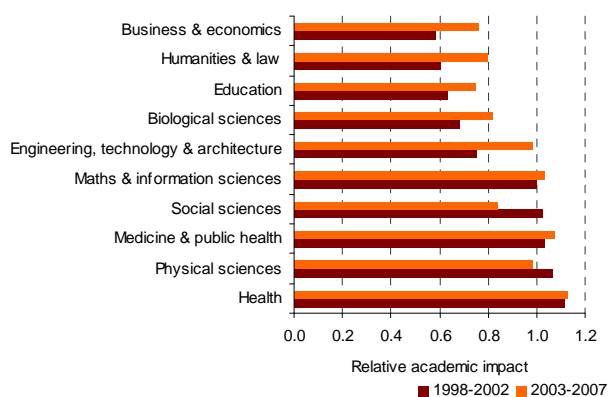


Source: Thomson Reuters.

Academic research impact takes the rate of citations per publication in New Zealand and compares it with the world average within each subject area. An impact of 1.0 is equal to the world average.

New Zealand universities have an impact above the world average in health and medicine. In most subjects the impact has increased, with the exception of social sciences, where there has been a decrease.

Figure 6.4: Academic impact of university research



Source: Thomson Reuters.

7. Success in tertiary education

This section looks at student success within tertiary education. It starts with moving from school to tertiary education and then covers participation, retention, completion and progression. Moving from school and participation in tertiary education covers both provider-based and work-based education. For retention, completion and progression, separate information is provided for provider-based and for work-based learning.

From school to tertiary education

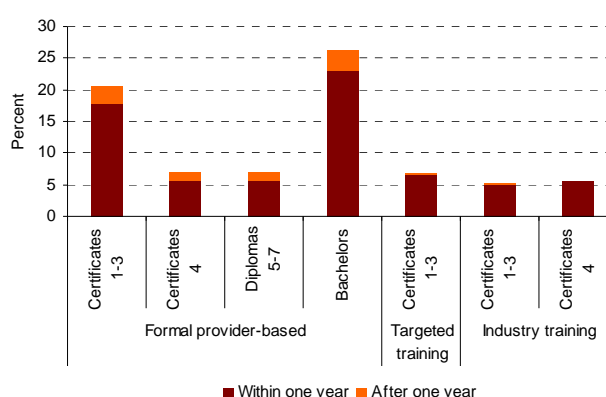
The following indicators look at the patterns of movement of students from school to tertiary education.

Seventy-eight percent of 2005 school leavers entered tertiary education by the end of 2007.

A third of these leavers studied in level 1 to 3 certificates, with the next largest group studying at bachelors level.

Thirteen percent of school leavers went into industry training within two years. Included in this figure are 4 percent of school leavers who went into modern apprenticeships.

Figure 7.1: Proportion of 2005 school leavers entering tertiary education within one or two years by level of qualification

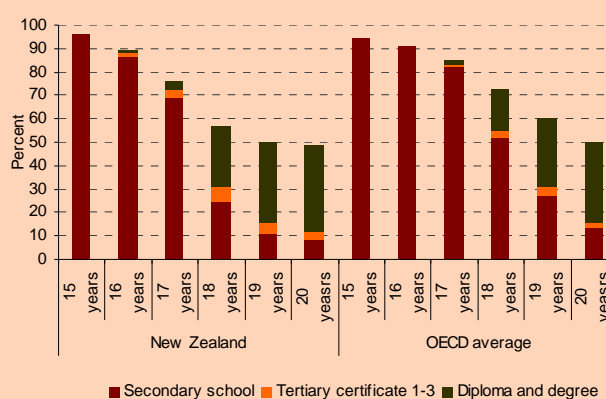


Note: Includes only students who have attained National Certificate of Educational Achievement or National Qualifications Framework credits at school.

The proportion of New Zealand young people who are in tertiary study is higher than the OECD average. However, New Zealand has a higher proportion of students who leave school from 16 onwards and do not go on to tertiary study.

This situation is partly due to a strong youth labour market, which has allowed more young people to go straight to employment. It also reflects lower expectations in New Zealand for all young people to 'complete' secondary and undertake some tertiary-level education.

Figure 7.2: School and tertiary participation rates, 2006



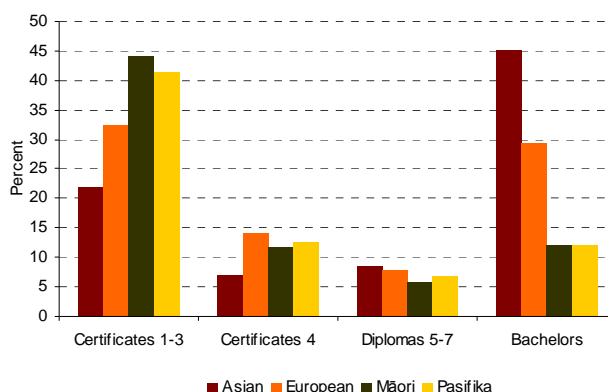
Source: Organisation for Economic Cooperation and Development, Education at a glance 2008.

Asian school leavers were much more likely to enter degree studies than students from other ethnic groups.

European school leavers were equally likely to enter either degree studies or level 1 to 3 certificates.

Māori and Pasifika school leavers were more likely to enter level 1 to 3 certificates. They have low participation in degree studies.

Figure 7.3: Proportion of 2005 school leavers entering tertiary education within one or two years by ethnic group and level of qualification



Note: Includes only students who have attained National Certificate of Educational Achievement or National Qualifications Framework credits at school.

Participation in tertiary education

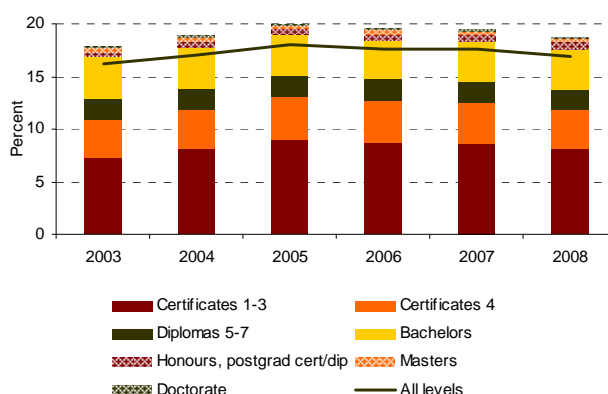
This section looks at the proportion of the population participating in tertiary education. It includes participation rates for 18 to 19 year olds and 25 to 39 year olds, who represent two key age groups – school leavers and people entering tertiary education as adults.

Growth in participation in tertiary education has levelled off since 2005. Most of the growth had previously been at levels 1 to 4, which has been constrained by tighter funding rules.

Participation in industry training has increased steadily since 2003.

At postgraduate level, participation has remained constant for masters degrees and increased for doctorates.

Figure 7.4: Participation rates in tertiary education by qualification level



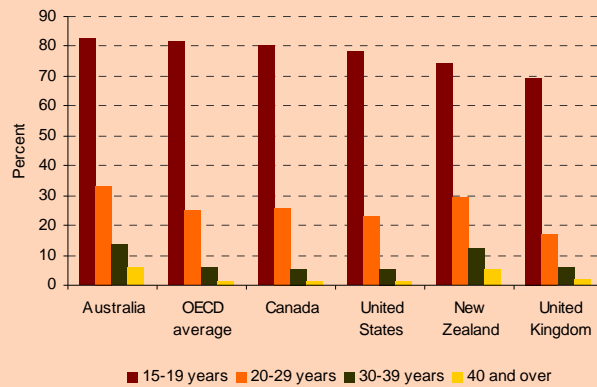
Note: Includes both provider-based students and industry trainees.

Enrolment rates measure the proportion of the population enrolled in education, including school and tertiary study.

New Zealand has a lower enrolment rate for 15 to 19 year olds than the OECD average and most other countries with a similar education system.

New Zealand's enrolment rates in older age groups are higher than the OECD average, and the other countries shown, with the exception of Australia.

Figure 7.5: International comparison of education enrolment rates by age 2006

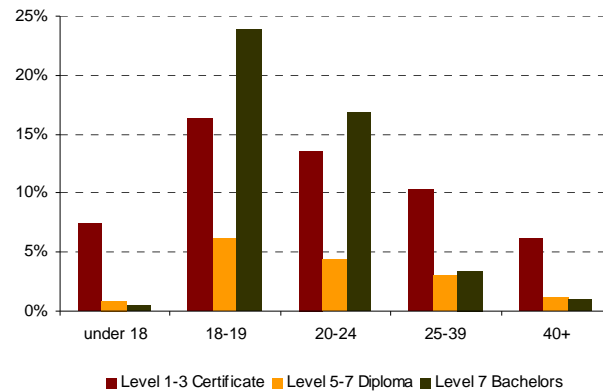


Source: Organisation for Economic Cooperation and Development, Education at a glance 2008.

The highest rates of tertiary participation in 2008 were by people aged 18 to 19.

People aged 25 and over were more likely to participate in level 1 to 4 certificates than in higher-level qualifications.

Figure 7.6: Participation rates by age group and level of qualification 2007

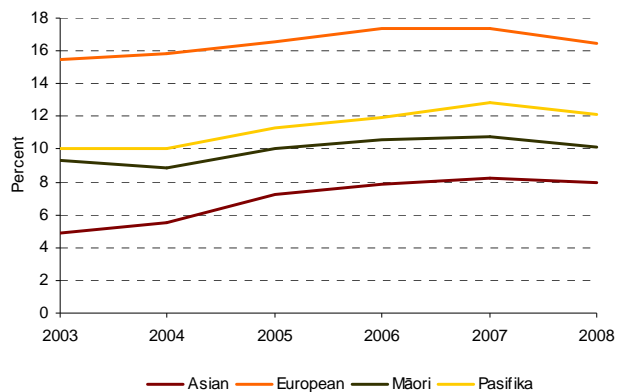


Note: Includes both provider-based students and industry trainees.

For all ethnic groups, participation rates of 18 to 19 year olds in level 4 to 7 certificates and diplomas decreased in 2008.

European 18 to 19 year olds had the highest level of participation. Asian 18 to 19 year olds had the lowest level of participation.

Figure 7.7: Participation rates for 18 to 19 year olds in level 4 to 7 certificates and diplomas by ethnic group

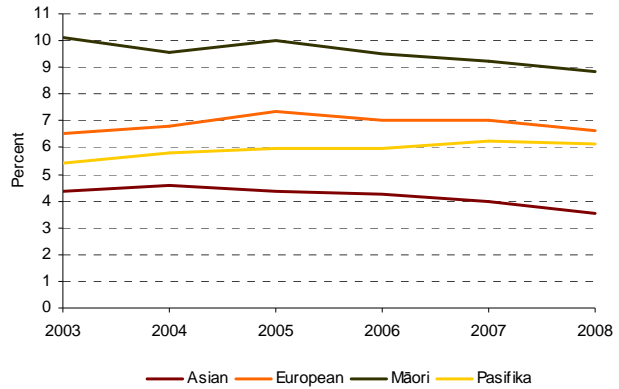


Note: Includes both provider-based students and industry trainees.

Participation rates of 25 to 39 year olds in level 4 to 7 certificates and diplomas have been decreasing for all ethnic groups, except for Pasifika.

Māori 25 to 39 year olds had the highest rates of participation. Asian 25 to 39 years olds had the lowest rates of participation.

Figure 7.8: Participation rates for 25 to 39 year olds in level 4 to 7 certificates and diplomas by ethnic group

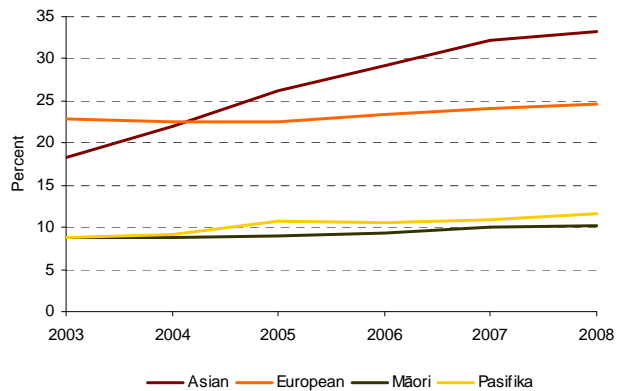


Note: Includes both provider-based students and industry trainees.

The proportion of the Asian population aged 18 to 19 enrolled as domestic students in bachelors degrees has been steadily increasing.

The proportions for other ethnic groups have remained fairly steady, with Māori and Pasifika having the lowest participation rates.

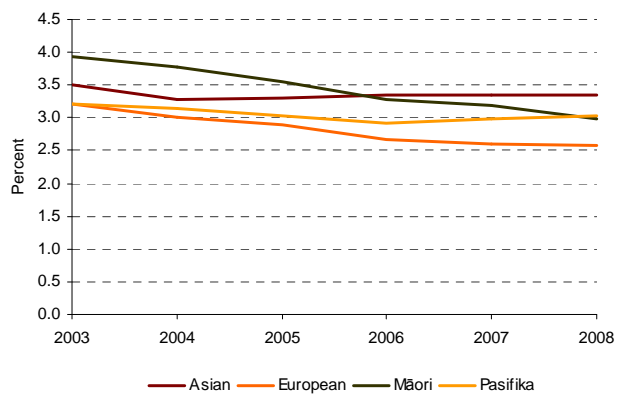
Figure 7.9: Participation rates for 18 to 19 year olds in bachelors degrees by ethnic group



Participation rates for 25 to 39 year olds at bachelors level have been fairly close across ethnic groups.

Overall, participation at this level has decreased, as labour market opportunities improved in the period to 2007.

Figure 7.10: Participation rates for 25 to 39 year olds in bachelors degrees by ethnic group



First-year retention at providers

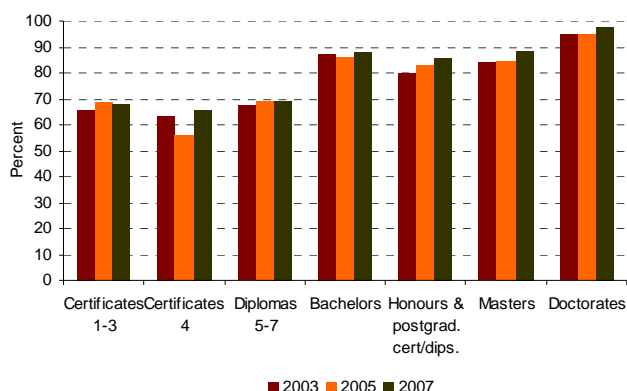
First-year retention rates show the proportion of students who continued in study after their first year, or had completed a qualification within one year. Rates presented below are for full-time students and cover completion or further study at the same or a higher level.

First-year retention rates of full-time students have been higher at bachelors level and above.

Rates have remained fairly steady from 2001 to 2007 for students studying up to bachelors level.

There has been an increase in retention rates for students studying at postgraduate levels.

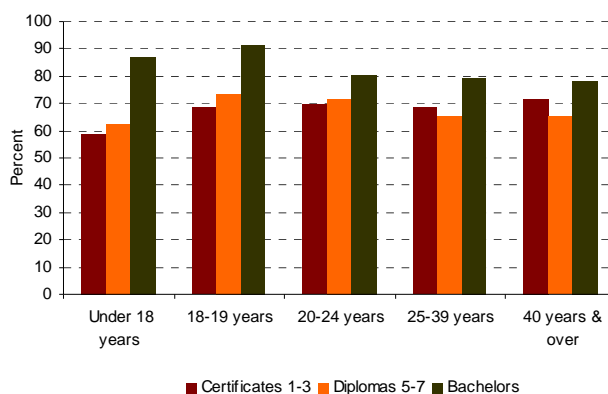
Figure 7.11: First-year retention rates by level of qualification



For certificates and diplomas, first-year retention rates for full-time students have been similar across age groups, with the exception of under 18 year olds.

For bachelors degrees, retention rates have been higher for students aged under 20.

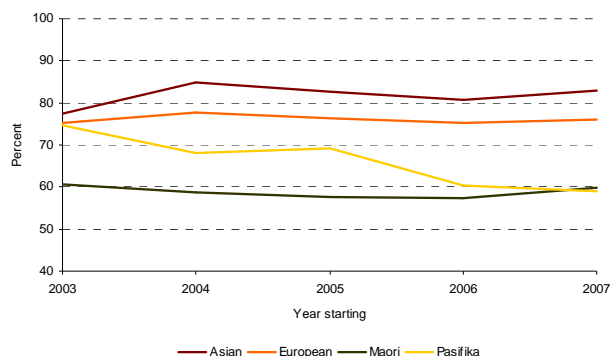
Figure 7.12: First-year retention rates by age group 2007



European and Asian 18 to 19 year olds had the highest first-year retention rates in level 5 to 7 diplomas.

Retention rates for Māori students have been much lower. The rates for Pasifika students have decreased, as participation has increased (refer Figure 7.7).

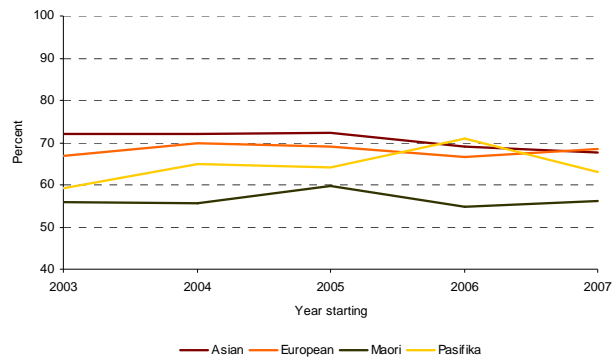
Figure 7.13: First-year retention rates for 18 to 19 year olds in level 5 to 7 diplomas by ethnic group



European and Asian 25 to 39 year olds had the highest first-year retention rates in level 5 to 7 diplomas.

Māori students had the lowest retention rates in this age group and level. Rates for Pasifika students have fluctuated.

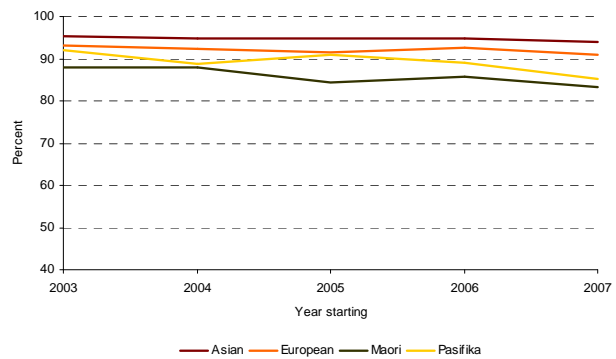
Figure 7.14: First-year retention rates for 25 to 39 year olds in level 5 to 7 diplomas by ethnic group



Asian 18 to 19 year olds had the highest first-year retention rates in bachelors degrees, followed by Europeans.

Māori and Pasifika 18 to 19 year olds had the lowest first-year retention rates. Their rates have been decreasing.

Figure 7.15: First-year retention rates for 18 to 19 year olds in bachelors degrees by ethnic group

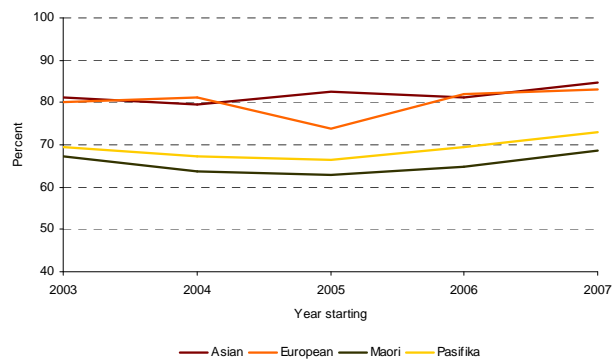


Asian and European 25 to 39 years olds had the highest first-year retention rates in bachelors degrees.

Māori and Pasifika 25 to 39 year olds had the lowest rates.

Across all ethnic groups, first-year retention rates have been increasing slightly, at the same time as participation rates have decreased (refer Figure 7.10).

Figure 7.16: First-year retention rates for 25 to 39 year olds in bachelors degrees by ethnic group



Five-year completion at providers

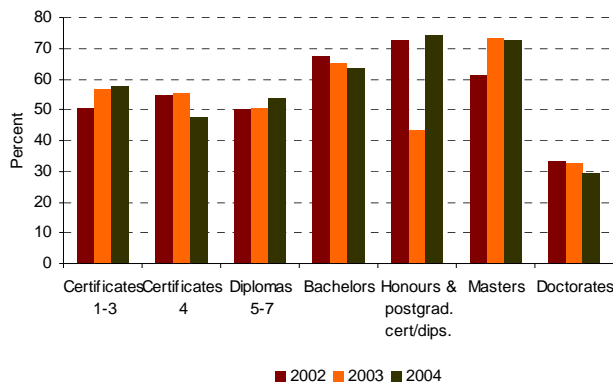
Five-year completion rates show the proportion of students who completed a qualification at the same or a higher level within five years of starting study. Rates presented below are for full-time students.

For below-degree-level qualifications, just over half of full-time students completed a qualification within five years.

The rate of completion for masters degrees has increased.

The low five-year completion rate for doctorates reflects the longer duration of these qualifications. More than half of doctoral students complete within eight years.

Figure 7.17: Five-year completion rates by level by starting year

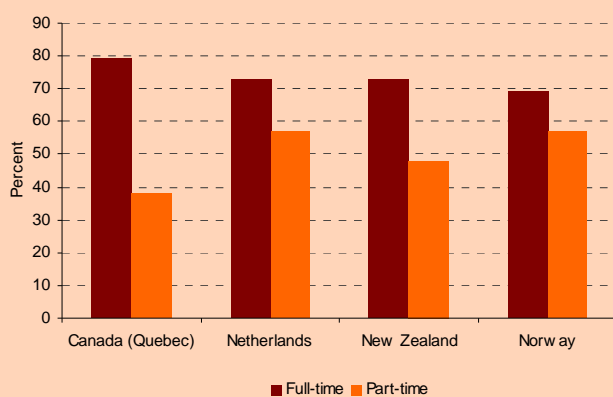


The OECD has just started to compile information on completion rates across countries.

Compared with similar countries that provide data for this indicator, New Zealand's full-time completion rate at bachelors level is comparable with that of the Netherlands and Norway.

The part-time completion rate is slightly lower. This, in part, reflects greater access to part-time study in New Zealand. In the Netherlands and Norway, 10 to 15 percent of bachelors students are part-time, compared with almost 60 percent in New Zealand.

Figure 7.18: International comparison of bachelors degree completion rates 2005

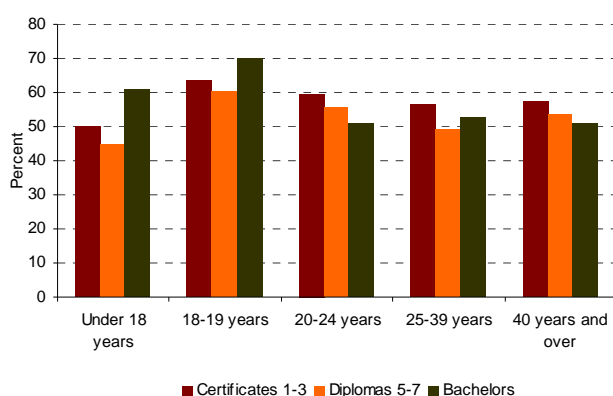


Source: Organisation for Economic Cooperation and Development, Education at a glance 2008.

For certificates and diplomas, five-year completion rates of full-time students have not varied greatly by age, with the exception of under 18 year olds

For bachelors degrees, completion rates were much higher for learners who started study under 20 years of age.

Figure 7.19: Five-year completion rates by age group, 2004 starters

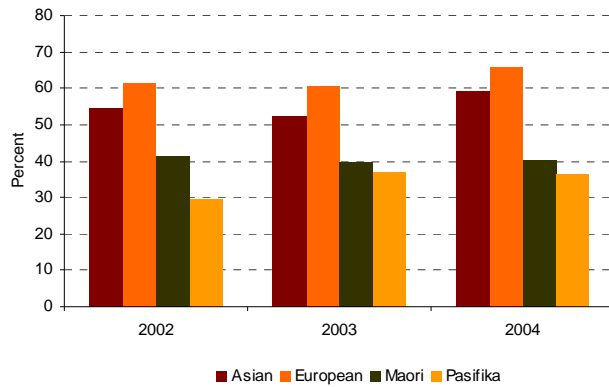


European 18 to 19 year olds had the highest five-year completion rates in level 5 to 7 diplomas.

Completion rates for Pasifika students were lowest.

Rates have been increasing for all ethnic groups except for Māori.

Figure 7.20: Five-year completion rates for 18 to 19 year olds in level 5 to 7 diplomas by ethnic group

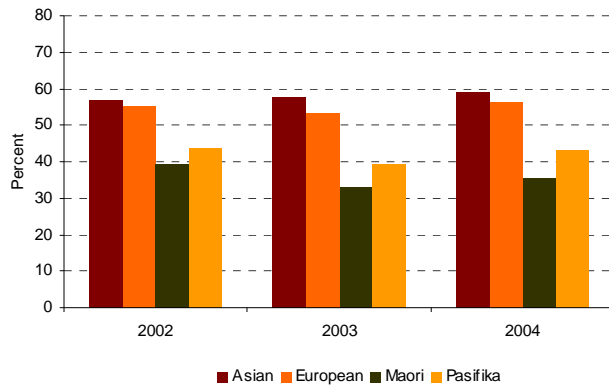


Asian 25 to 39 year olds had the highest five-year completion rates in level 5 to 7 diplomas.

Māori students had the lowest completion rates in this age group and level.

Rates have been fairly steady for all ethnic groups.

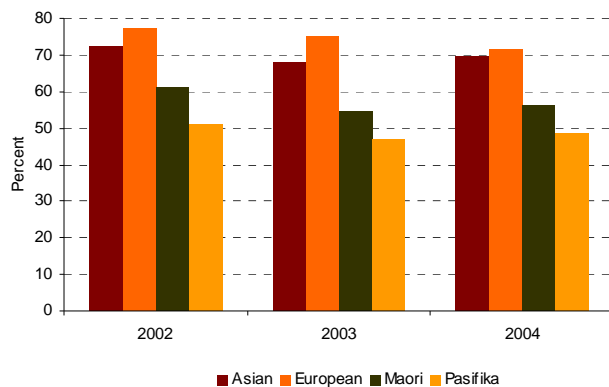
Figure 7.21: Five-year completion rates for 25 to 39 year olds in level 5 to 7 diplomas by ethnic group



European 18 to 19 year olds had the highest five-year completion rates in bachelors degrees, followed by Asians.

Māori and Pasifika 18 to 19 year olds had the lowest five-year completion rates.

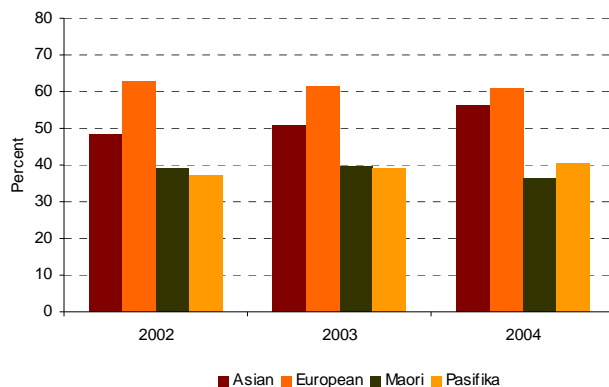
Figure 7.22: Five-year completion rates for 18 to 19 year olds in bachelors degrees by ethnic group



European 25 to 39 years olds had the highest five-year completion rates in bachelors degrees. Rates for Asian students in this age group have been increasing.

Māori and Pasifika 25 to 39 year olds had the lowest rates.

Figure 7.23: Five-year completion rates for 25 to 39 year olds in bachelors degrees by ethnic group



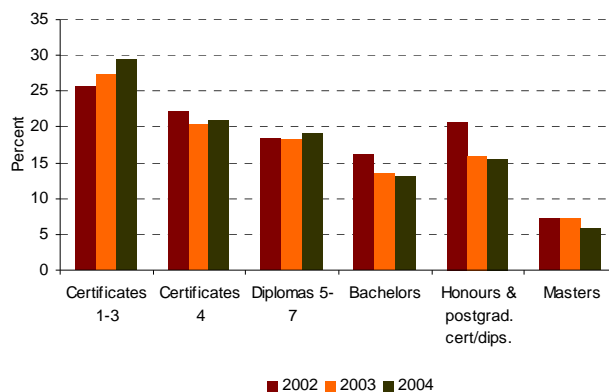
Progression to higher-level study at providers

Five-year progression rates show the proportion of students who started a qualification in a particular year and went on to study a higher-level qualification within five years. These rates include students who progressed to higher levels without completing a qualification first and those who took a break between completion and re-enrolment.

Five-year progression rates have increased for students starting level 1 to 3 certificates.

At higher levels, rates have been more or less steady.

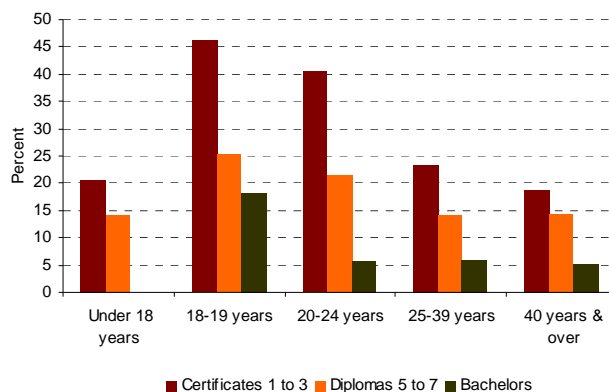
Figure 7.24: Five-year progression to a higher level of study by level of starting qualification



At all levels, students aged 18 to 19 when they started study were more likely than other students to progress higher-level study. This pattern is more apparent in level 1 to 3 certificates and bachelors degrees.

Students entering study under the age of 18 were less likely to progress than older students.

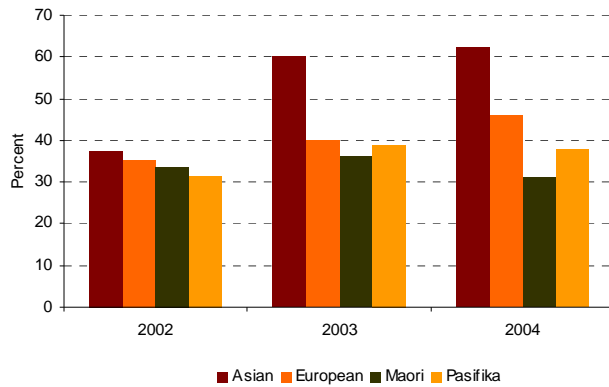
Figure 7.25: Five-year progression to a higher level by age group for students starting in 2006



Asian 18 to 19 year olds had the highest five-year progression rates from level 1 to 3 certificates. This rate has increased significantly.

Progression rates have been fairly even across other ethnic groups.

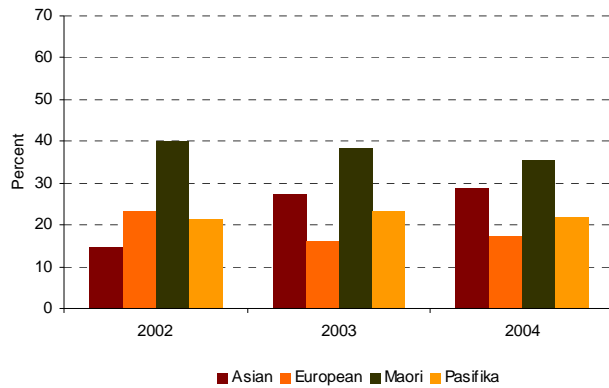
Figure 7.26: Five-year progression to a higher level for 18 to 19 year olds in level 1 to 3 certificates by ethnic group



Māori 25 to 39 year olds had the highest five-year progression rate from level 1 to 3 certificates.

Asian students had the lowest rate in 2002 and have since improved to be almost level with Māori.

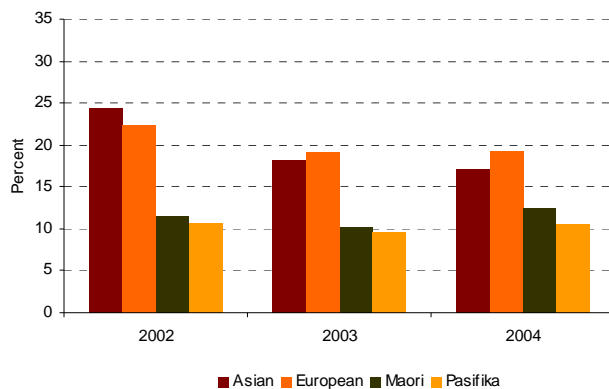
Figure 7.27: Five-year progression to a higher level for 25 to 39 year olds in level 1 to 3 certificates by ethnic group



Asian and European 18 to 19 year olds had the highest five-year progression rates from bachelors degrees. Their rates have been decreasing.

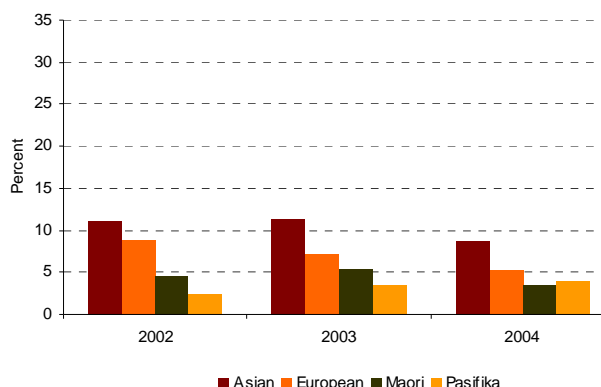
Māori and Pasifika 18 to 19 year olds had the lowest five-year progression rates. Their rates have stayed fairly even.

Figure 7.28: Five-year progression to a higher level for 18 to 19 year olds in bachelors degrees by ethnic group



Asian 25 to 39 year olds had the highest five-year progression rates from bachelors degrees. Māori and Pasifika 25 to 39 year olds had the lowest rates.

Figure 7.29: Five-year progression to a higher level for 25 to 39 year olds in bachelors degrees by ethnic group



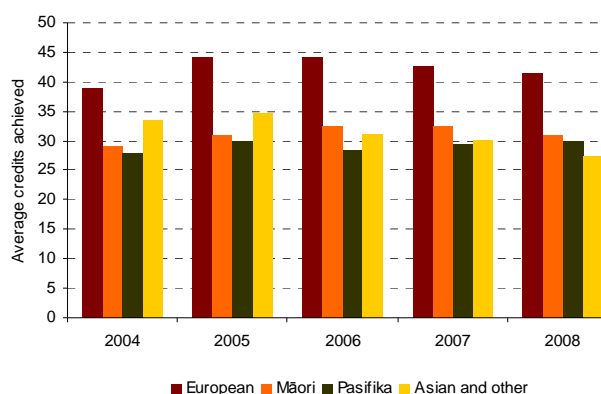
Success in industry training

This section looks at attainment and completion measures for industry training

In 2008, people exiting industry training attained around 40 credits on average. This equates to the minimum size of a National Certificate.

European trainees were likely to exit with a larger number of credits, on average, than learners in other ethnic groups.

Figure 7.30: Average number of credits achieved per final programme exit

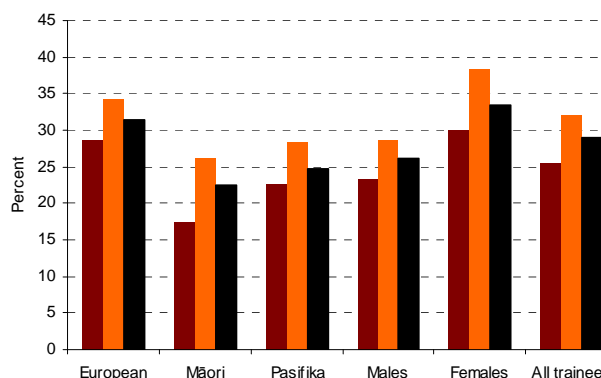


Source: Tertiary Education Commission.

The estimated five-year programme completion rate for industry trainees has been under 30 percent. This is lower than the provider-based completion rate for level 1 to 4 certificates of 44 percent

Māori and Pasifika trainees were less likely to complete than European trainees, and women were more likely than men to complete their programmes within five years.

Figure 7.31: Five-year programme completion rate for industry trainees

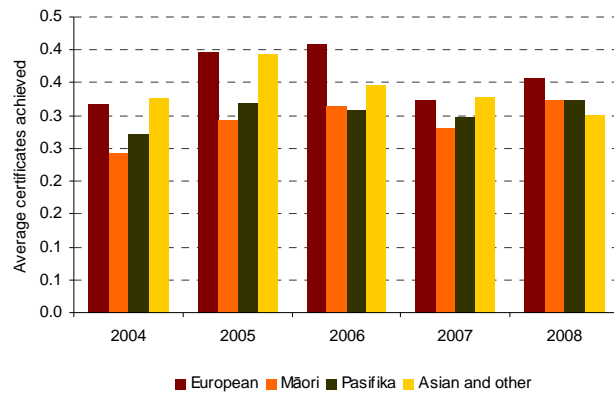


Source: Tertiary Education Commission.

On average, around 35 percent of learners achieved a national certificate by the time they exit industry training.

Rates of attainment were higher for Europeans and Asians until 2006. In 2007 and 2008, the differences between ethnic groups were minimal.

Figure 7.32: Average number of certificates per final programme exit 2008



Source: Tertiary Education Commission.

8. Affordability of tertiary education

Affordability to students and families

This section looks at measures of the cost of tertiary education for students – both directly through fees and over time through loans. Information is not available on the costs of industry training to individual trainees.

Average tuition fees at public providers have remained stable relative to wages over the last four years. This is a result of the policy to limit the maximum fee that can be charged for courses.

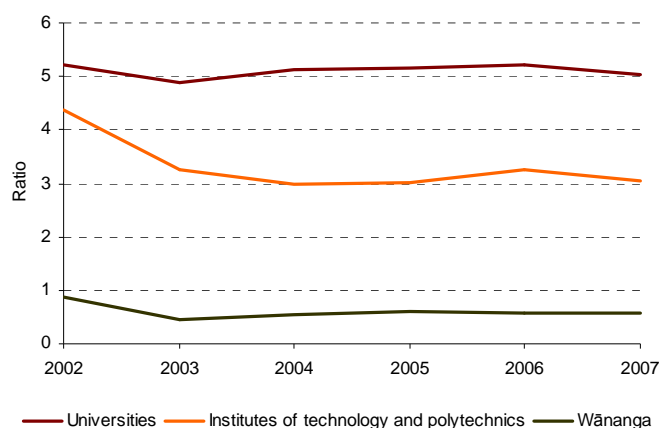
The highest fees are at universities, followed by institutes of technology and polytechnics.

The low average fees at wānanga reflect the high proportion of courses offered with zero or low fees.

The average annual tuition fee for bachelors degrees and above in New Zealand in 2004/05 was US\$2,671. This compares with US\$3,855 in Australia, US\$3,464 in Canada and US\$5,027 in the United States.

Source: Organisation for Economic Cooperation and Development, *Education at a glance 2008*

Figure 8.1: Average tuition fee per EFTS expressed as a ratio of average weekly income in public providers

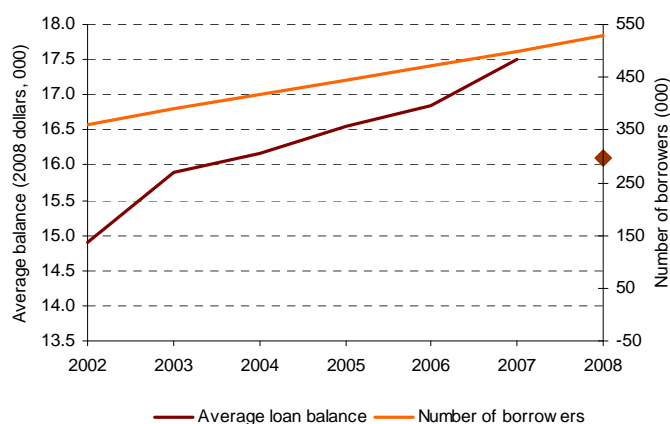


Source: Ministry of Education, Tertiary Education Commission and Statistics New Zealand, *New Zealand Income Survey*.

Over the last five years there has been moderate growth in the real value of the average student loan balance.

The number of people with student loan balances continues to increase as more people participate in tertiary education.

Figure 8.2: Average student loan balance and number of borrowers



Source: Inland Revenue.
Note: Loan balances for 2008 exclude accrued interest.

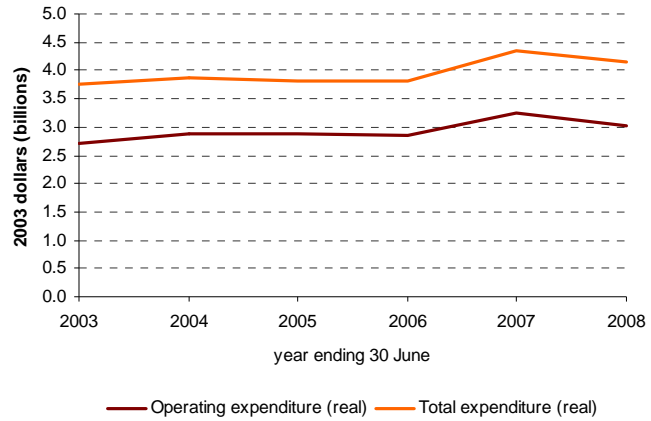
Affordability to the country

This section looks at the cost of tertiary education to the country in terms of government expenditure.

Real government expenditure on tertiary education has grown steadily since 2003.

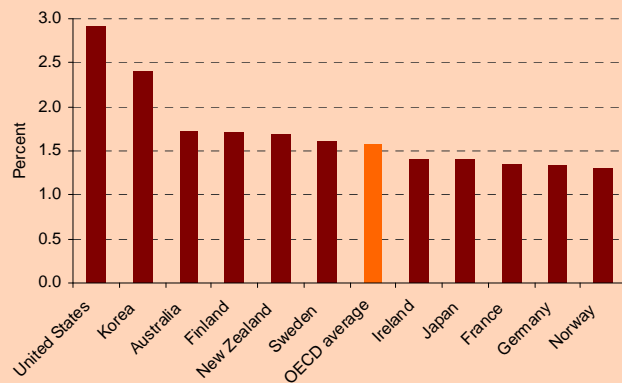
The peak in 2006/07 relates to one-off costs associated with the introduction of interest-free student loans.

Figure 8.3: Real government expenditure on tertiary education



New Zealand's expenditure on tertiary education provision as a proportion of GDP is slightly above the OECD average and similar to that of Australia, Sweden and Finland.

Figure 8.4: Expenditure on post-school educational institutions as a percentage of GDP for selected countries 2004



Source: Organisation for Economic Cooperation and Development, Education at a glance 2008

Note: Includes both public and private sources of expenditure.

9. Tertiary education organisations

Size and contribution of sub-sectors

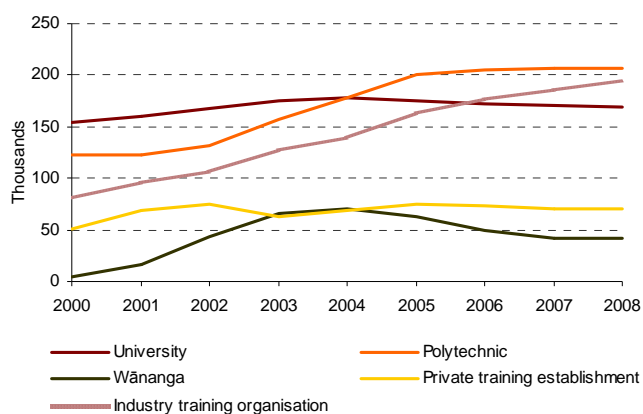
This section provides information on the relative size and contribution of sub-sectors. Student numbers have been used in the first indicator to provide a comparable measure across provider-based and work-based training.

The largest sub-sectors by learner numbers are institutes of technology and polytechnics and the industry training sector.

Numbers at universities have remained steady for the last eight years, as have numbers at private training establishments. Funding for private training establishments was capped in 2003.

However, when students are looked at in equivalent full-time terms, the largest amount of provision is at universities.

Figure 9.1: Number of students enrolled by sub-sector



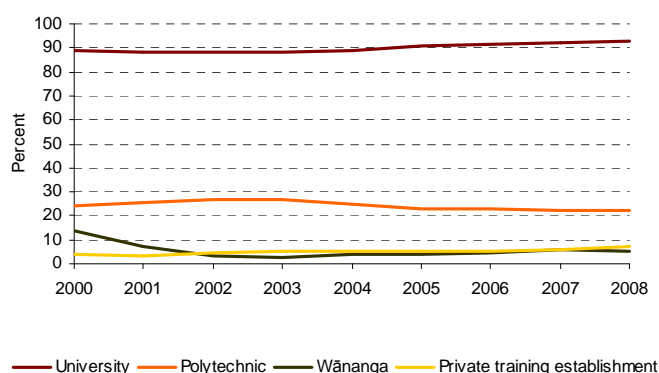
Note: Colleges of education are included with universities

The proportion of provision at bachelors-degree level and above provides a rough indicator of the different focus areas of each sub-sector.

Nearly all provision in universities is at degree level and above. At institutes of technology and polytechnics, the proportion at degree level and above decreased in the period to 2004 and has remained stable since.

The proportions at degree level and above in private training establishments and wānanga have been fairly stable.

Figure 9.2: Percent of EFTS at bachelors degree level and above by sub-sector



Internationalisation

This section provides information on internationalisation in tertiary education. It looks at both international students in New Zealand and New Zealanders studying overseas.

The number of international students enrolled in New Zealand tertiary education providers grew rapidly until 2004.

Numbers decreased from 2004 to 2007, as a result of a number of factors relating to international developments. However, New Zealand retains the second highest proportion worldwide of international students, after Australia.

The number of doctorate students has increased over the last two years due to funding changes aimed at encouraging participation at this level.

Figure 9.3: Number of international students enrolled in New Zealand tertiary education providers

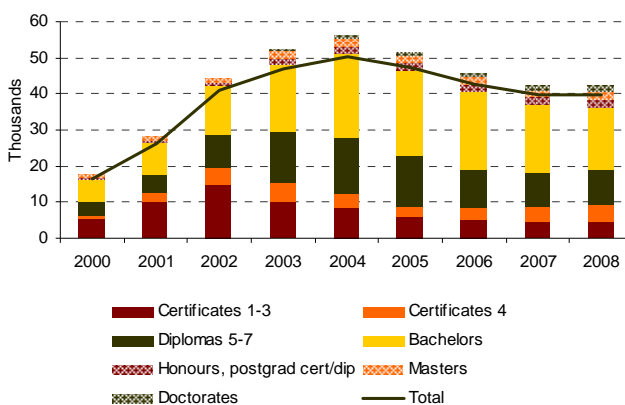
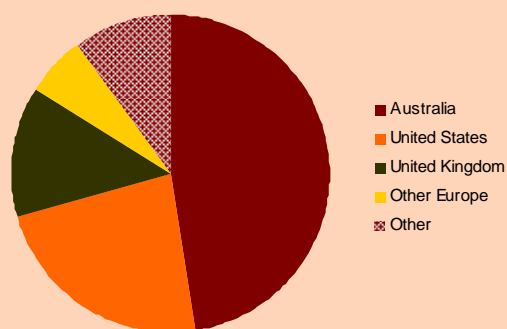


Figure 9.4: Distribution of New Zealand students studying abroad 2006

Nearly half of New Zealand students studying abroad study in Australia. Around a quarter study in the United States and about one in eight in the United Kingdom. The remainder are mostly spread across Europe, Japan and Korea.



Source: Organisation for Economic Cooperation and Development, Education at a glance 2008

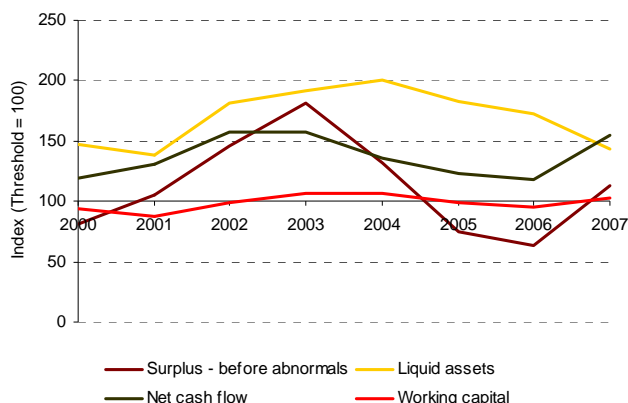
Sustainability and viability of providers

This section looks at the financial performance of public providers. Systematic and reliable information is not available for the financial performance of private providers and industry training organisations.

From 2000 to 2003, financial surpluses across public providers were increasing. Financial surpluses decreased in the period to 2006 as funding policies were tightened.

There was some recovery in 2007 as the government reinvested in quality provision. Some of this may also have been funded by reducing liquid assets.

Figure 9.5: Key financial performance indicators for TEIs



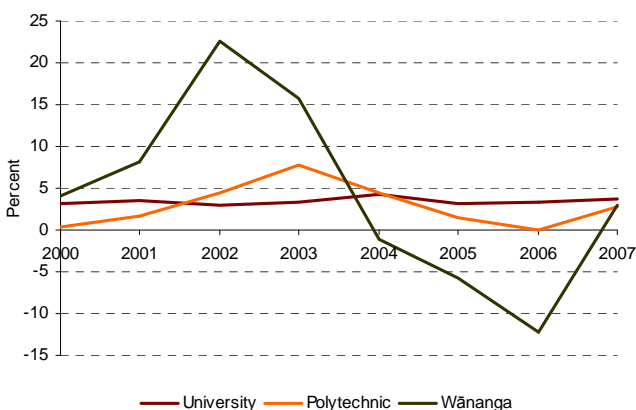
Source: Ministry of Education and Tertiary Education Commission.

Note: In order to compare indicators on differing scales, the percentage for each indicator has been transformed into an index, where 100 represents the Tertiary Education Commission's recommended threshold for the indicator.

The volatility in financial surpluses has been mainly influenced by the wānanga and polytechnic sub-sectors. These sub-sectors had strong financial performance up to 2003 and then went into deficit overall. In 2006, eight out of the 20 polytechnics and two out of the three wānanga were in financial deficit. In 2007 this reduced to four and one respectively. Some of this has been achieved through a programme of reinvesting money to support quality provision.

The university sub-sector has maintained a steady level of surplus over this same period, with only one or two institutions running a deficit in any one year.

Figure 9.6: Surplus before abnormalities by sub-sector



Source: Ministry of Education and Tertiary Education Commission.

Notes on data and sources

Data sources

Where a data source is not given, the data has been sourced from the Ministry of Education. All other data sources are noted below the relevant graph and described in this section.

Knowledge and skills and outcomes

The 25 to 39 year age group has been used where possible as a reference group for knowledge and skills and outcomes. The age group represents people who have had a chance to complete their immediate post-school tertiary education and are in the early to middle years of their working lives.

Ethnic groups

Ethnicity is reported on a total response basis where possible. This means that each person is counted in each ethnic group they identify with and may be counted in more than one ethnic group.

Income

Real income refers to income after it has been adjusted for inflation. Income is presented in 2007 dollar values. The median income is the level of income at which half of the population earn below the level and half earn above it.

International Adult Literacy Survey 1996 and Adult Literacy and Life Skills Survey 2006

These surveys investigated the distribution of skills, such as literacy, numeracy and document interpretation, among the adult population. The surveys were conducted across a number of countries and provide both national and international comparisons.

Both surveys measure 'functional literacy', which is the ability to apply literacy skills to everyday situations.

The Adult Literacy and Life Skills Survey 2006 covered:

The ALL survey tested skills across four domains:

- **Prose literacy** – the ability to read continuous texts, such as news stories and instruction manuals

- **Document literacy** – the ability to read discontinuous texts, such as maps and timetables

- **Numeracy** – the ability to read and work with numeric information

- **Problem-solving** – the ability to reason in situations where no routine procedure exists.

The first two were also included in the International Adult Literacy Survey 1996.

Results are reported in five levels, where 1 is the lowest level. Level 3 and above is considered the level required to function adequately in a knowledge-based economy and society.

Surveys of the Health of the Māori Language, 2001 and 2006

These surveys were carried out following the 2001 and 2006 New Zealand Censuses and surveyed a sample of the Māori population with regard to the ability and use of the Māori language.

Respondents were asked to self-assess their ability in speaking, listening, reading and writing in the Māori language. A scale was used that ranged from no language ability to 'very well'.

Household Labour Force Survey

The Household Labour Force Survey, conducted by Statistics New Zealand, is a quarterly survey of 15,000 households and provides information on labour force status.

Ethnicity was reported on a prioritised basis up to 2007. From 2008 it is reported on a total response basis. Data in this report is taken from the June quarters.

Education at a glance

Education at a glance is published annually by the Organisation for Economic Cooperation and Development to provide comparative international indicators on education.

New Zealand Income Survey

The New Zealand Income Survey is a supplement to the Household Labour Force Survey, and is run every June quarter.

Ethnicity was reported on a prioritised basis up to 2007. From 2008 it is reported on a total response basis.

New Zealand Census-Mortality Study

The New Zealand Census-Mortality Study is run by the Wellington School of Medicine of Otago University. It aims to measure mortality differences by socio-economic status in New Zealand. It links census records and mortality (death) records, thereby creating cohort studies. The mortality rate refers to the proportion of the population who die each year.

Research and Development Surveys

The Research and Development Surveys 2006 and 2008 was run by Statistics New Zealand jointly with the Ministry of Research, Science and Technology. The surveys measured the level of research and development activity, employment and expenditure by business sector enterprises, government departments, government-owned trading entities, and universities.

The surveys defined the types of research as follows:

Basic research is carried out for the advancement of knowledge, without seeking long-term economic or social benefits or making any effort to apply the results to sectors responsible for their application.

Applied research is also investigation undertaken in order to acquire new knowledge. It is, however, directed primarily towards a specific practical aim or objective. Applied research also encompasses experimental development.

Experimental development is systematic work, drawing on knowledge gained from research and practical experience that is directed at producing new materials, products and devices; installing new processes, systems and services; or substantially improving those already produced or installed.

Performance-Based Research Fund

The Performance-Based Research Fund allocates research funding to tertiary providers

based on a systematic assessment of the research outputs and activities of staff. A quality score can be derived for each provider and each subject area based on these assessments.

Thomson Reuters

The Thomson Reuters database provides information on research published in selected academic journals, mostly based in Europe and North America. The database provides information on the authors, their institutional affiliations and citations of works.

The database excludes research published in books and book chapters, as well as research in the form of performances or exhibitions. Therefore, the research output in subject disciplines such as the social sciences, humanities and performing arts is not well represented compared with the biological and physical sciences. The database also excludes a large proportion of research published in New Zealand and Australian journals.

Nevertheless, despite these caveats, this data source still provides one of the few independent ways of monitoring the international impact of New Zealand tertiary education research.

Participation rates

The tertiary education participation rate is the total domestic student enrolment count expressed as a percentage of the population aged 15 and over.

In this report, participation rates include both provider-based and work-based tertiary education. Rates have not been age-standardised.

First-year retention rates

The first-year retention rate is the proportion of students that start a qualification and either complete it in the first year or continue in study in the following year.

Rates presented in this report are for full-time students and include completion or continuance at the same or a higher level.

Five-year completion rates

The five-year completion rate is the proportion of students who have started study towards a registered qualification and have completed the academic requirements for a qualification at the same or a higher level within five years.

Rates presented in this report are for full-time students.

Five-year progression rates

The five-year progression rate is the proportion of students who started study towards a registered qualification in a specified year and went on to study a higher-level qualification within five years. The rate includes students who progressed to higher-level study without completing a qualification first and those who took a break between completion and re-enrolment.

Industry training measures

Average credits achieved per final programme exit is the total sum of credits achieved by

people exiting their final programmes within a year divided by the total number of people exiting in that year.

The five-year programme completion rate is the proportion of trainees who started within a given year who had a successful programme completion within five years.

The proportion of learners with national certificate or diploma attainment is the total sum of national certificates and diplomas attained by learners exiting programmes within a year divided by the number of learners exiting in that year.