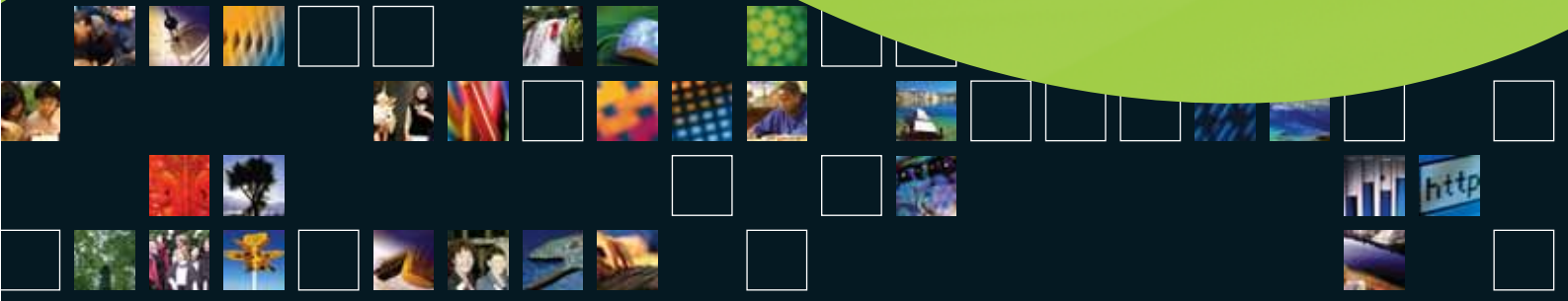
MINISTRY OF EDUCATION

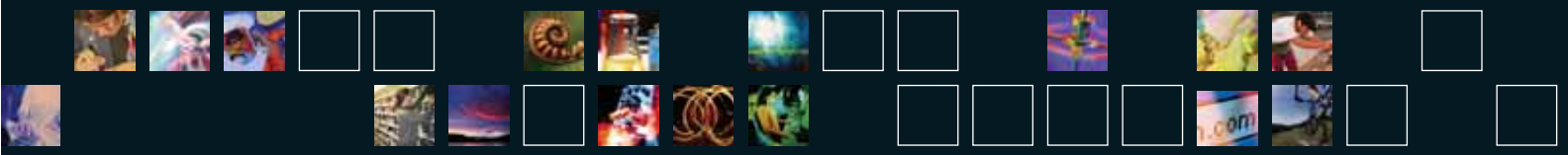
Te Tāhuhu o te Mātauranga

The System In Change

Tertiary Education Strategy | 2002/07

Monitoring Report 2005





Published by:
Tertiary Sector Performance Analysis and Reporting
Ministry of Education

Design and Production:
FitzBeck Creative

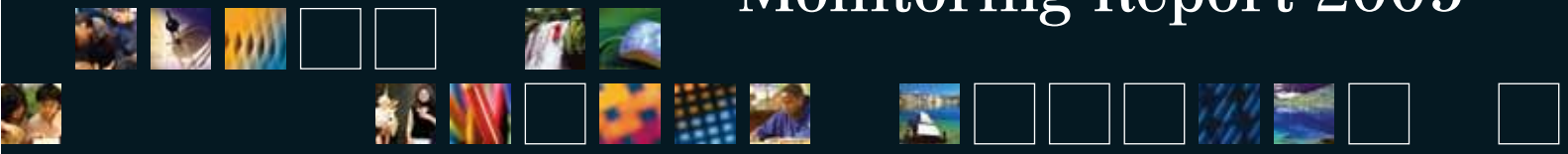
August 2006

ISSN: 1176-9238

The System In Change

Tertiary Education Strategy | 2002/07

Monitoring Report 2005



Foreword by the Minister for Tertiary Education 4
Foreword by the Secretary for Education 4

Introduction 5
The Tertiary Education Strategy 6
Monitoring the TES 7
Finding out more 8
List of abbreviations 8

The State of Play — The tertiary education system in 2005/06 9

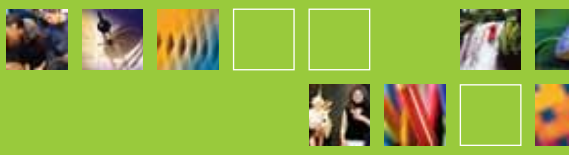
Overview 15

Implementation of the Reforms 16

Cross-strategy indicators 17
Educational Attainment in the Adult Population 17
Outcomes of Tertiary Education 18
Participation in Tertiary Education 19
Retention and Progression 20
Research within the Tertiary Education Sector 21
Affordability of Tertiary Education 22
Tertiary Education Organisations 23

The Six Strategies 25

Raise Foundation Skills so that all People can Participate in our Knowledge Society 26
Improving Quality in Foundation Education 27
Improving Access to Foundation Education 30
Moving from School to Tertiary Education 32
Improving Links Between School and Tertiary Education 32



Contents

Develop the Skills New Zealanders need for our Knowledge Society **34**

- Skills in the Labour Market — the Current Context 36
- Meeting Skill Needs in Industry 36
- Development of Specialist Skills 38
- Development of Key Competencies 40
- Equality of Access and Opportunity 41
- Support for Learning and Career Decisions 43

Strengthen Research, Knowledge Creation and Uptake for our Knowledge Society **44**

- Quality of Research 45
- Contribution of Research to National Goals 46
- Research Networks and Collaboration 47
- New and Emerging Researchers 48

Te Rautaki Mātauranga Māori — Contribute to the Achievement of Māori Development Aspirations **50**

- Māori Participation and Achievement at Higher Levels and across Disciplines 51
- Supporting te ao Māori and te reo Māori 53
- Provision of Kaupapa Māori Tertiary Education 55
- Contributing to Māori and Iwi Development 56
- Māori Staff in Tertiary Education 57

Educate for Pacific Peoples' Development and Success **58**

- Pasifika Participation and Achievement at Higher Levels and across Disciplines 59
- Contributing to Pasifika Development 61
- Pasifika for Pasifika Education Services 62
- Pasifika Staff in Tertiary Education 62

Strengthen System Capability and Quality **63**

- Quality in Tertiary Education 64
- TEO Capability 65
- System Capability 66
- Export Education 68

Technical and Data Definitions **70**

Foreword by the Minister for Tertiary Education

When I picked up the portfolio of Minister for Tertiary Education, I stated that a key part of my agenda – as it had been for ministers before me – would be to get a stronger focus on the quality and relevance of teaching, learning and research.

This second annual monitoring report on the Tertiary Education Strategy confirms that the tertiary education system by and large is working well and making shifts in the right direction. There is more attention being given to quality of teaching and learning within providers. The new funding arrangements for research are encouraging degree-granting institutions to give greater support to developing researchers and research programmes. The government is also investing in developing quality provision, particularly in the area of foundation education.

However, the report confirms my concern that the current funding system is an impediment to further development of quality and relevance. The system rewards quantity-driven, rather than quality-driven provision. It is difficult to establish longer-term dialogue with key stakeholders, while focusing on meeting financial targets through enrolments. A number of institutions face considerable short-term financial uncertainty, which makes longer-term planning problematic.

We are continuing to work towards implementing the new funding and quality systems in 2008. The new approach will enable the government to invest in organisations based on agreed plans that focus on quality provision in areas of priority.

At the same time as releasing this report, I have released the discussion document for the second Tertiary Education Strategy to take effect from 2008 to 2012. I intend that the second strategy provides a clearer focus on achieving the key outcomes of tertiary education, namely:

1 educational success for all New Zealanders through lifelong learning

2 creating and apply knowledge to drive innovation

3 strong connections between tertiary education organisations and communities they serve.

Over the next few months, there will be extensive consultation on how the strategy can lead to sector towards greater achievement of these outcomes. The information in this report provides a sound basis for considering where we are at and where we need to move to next.

Hon Dr Michael Cullen
MINISTER FOR TERTIARY EDUCATION

Foreword by the Secretary for Education

Last year's review by the State Services Commission of the education sector agencies highlighted the scale of change over the last 15 years across education, including tertiary education. The review noted that the character and extent of change must not be underestimated and that it impacts on students, teachers, parents, communities and employers, as well as education providers.

This large-scale change is not solely due to the government improving education policies. It is also driven by much larger changes in society, technology and the economy, both domestically and globally. These large-scale changes are unlikely to abate in the foreseeable future.

As the philosopher Alvin Toffler said: "Change is the process by which the future invades our lives." Change management no longer means moving from one state of affairs to another. It is about anticipating the next major wave of change and being adaptable and flexible in meeting it.

Therefore, the question we need to ask is not "How do we manage each change?" but rather "How can we remain ready to manage ongoing change?". To quote Alvin Toffler again: "The illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn."

Part of managing change is to develop and improve our knowledge and evidence about what we are achieving now and the direction that we are heading in. This monitoring report, I believe, provides a good base for understanding the current state of the tertiary education system and direction it is heading in.

We also need to build agreement as to where we would like to be. We need to consider, in light of the evidence, not only how to get to where we want to go, but also what directions other changes may push us in and how we can respond to them.

These issues will be a major part of the discussions we will be holding as we develop the next Tertiary Education Strategy and Statement of Tertiary Education Priorities.

As I have said many times, New Zealand is ready to move from having a good education system to creating a great education system. To do this, we need to meet future change head on — with openness to learning, unlearning and relearning.

I commend this report to you and look forward to the discussions that it will stimulate about how we step up to meet the challenges of change.

Howard Fancy
SECRETARY FOR EDUCATION

Introduction | 1

The Tertiary Education Strategy

The Tertiary Education Strategy (TES) sets out the government's medium- to long-term strategy for tertiary education. It:

- articulates the broad goals for the tertiary education system
- provides vision and direction on how the tertiary education system can meet the needs of students, research users and wider stakeholders
- sets a framework to guide planning and funding.

The TES covers all aspects of post-school education including:

- courses provided by universities, institutes of technology and polytechnics (ITPs), colleges of education, wānanga, private training establishments (PTEs) and other tertiary education providers
- foundation education through to doctorates
- industry and workplace training
- employment training and second chance education
- adult and community education.

In general, the TES focuses on improving the ability of tertiary education organisations (TEOs) to manage for improved outcomes, rather than setting specific outcome targets. This is to be achieved through a mix of shifting attitudes and culture and the implementation of new funding and accountability policies.

There is an expectation that the progress of the tertiary education system towards the goals of the TES will be monitored and evaluated.

The TES is made up of six inter-related strategies:

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

Across these strategies there are 35 objectives. While the objectives are presented as relating to one of the six strategies, many of them are interconnected and overlap with key concepts in other strategies.

In addition, there are nine key changes threaded through the objectives that relate to increasing the relevance, connectedness and quality of the tertiary education system, and provide a focus on the overall changes sought throughout the system. The key changes are:

- Greater alignment with national goals
- Stronger linkages with business and other external stakeholders
- Effective partnership arrangements with Māori communities
- Increased responsiveness to the needs of, and wider access for, learners
- More future-focussed strategies
- Improved global linkages
- Greater collaboration and rationalisation within the system
- Increased quality, performance, effectiveness, efficiency and transparency
- A culture of optimism and creativity.

The TES is supported by the Statements of Tertiary Education Priorities (STEPs), which are released every one to three years and set out the government's immediate priorities for the performance of the system.

The priority areas in the 2005 STEP are:

- investing in excellence in teaching, learning and research
- increasing the relevance of skills and knowledge to meet national goals
- enabling students and learners to access excellent and relevant tertiary education, and progress to higher levels of study and achievement
- enhancing capability and information quality in the tertiary system to support learning, teaching and research.

Monitoring the TES

Second annual monitoring report

In April 2004, the Baseline Monitoring Report for the TES was released. The report provided a view of what was known about the state of the tertiary education system at the start of the period of the strategy and before the implementation of the tertiary education reforms.

The following year, the first annual monitoring report was released. The 2004 Monitoring Report tracked the progress of the tertiary education system against the strategy during the initial period of implementation of the tertiary education reforms from 2002 to 2004.

This second annual monitoring report tracks further progress of the tertiary education system in the period following implementation of the key aspects of the tertiary education reforms up to the end of 2005.

New information from profiles and stakeholder research

A significant feature of this year's report is the inclusion of two new sources of information.

One is an analysis of the organisational objectives in TEO profiles in 2005/07 and 2006/08. This analysis looked at the profiles for all tertiary education institutions (TEIs) and a sample of 12 industry training organisations (ITOs). It focuses on the statements of objectives within the profiles and the extent to which these line up with areas of the TES. This analysis provides a view of governance and senior management perspectives of important changes in their organisation in relation to the TES.

The other is research on the engagement of key stakeholder groups with tertiary education providers. This research looked at the nature and extent of engagement of business, industry, Māori, Pasifika and other stakeholders with tertiary education providers. It included an analysis of profiles and focus groups with stakeholders.

The published reports can be found at: **http://educationcounts.edcentre.govt.nz/publications/homepages/tes/**

Further explanation of the methodologies is set out on page 70.

Structure of the report

The report begins with an overview of the state of the sector two to three years into the implementation of the TES. This section is structured around the four key themes of the reforms — excellence, relevance, access and capability — to draw together key themes from across the TES.

This is followed by a set of cross-strategy indicators which highlights the overall changes in the sector. These indicators provide contextual information against which broader changes resulting from the TES can be monitored.

The rest of the report is structured around the six strategies of the TES. These sections provide more detailed analysis of change within the important areas of each strategy and identify key challenges for moving forward in each area.

The purpose of monitoring

The purpose of monitoring the TES is to provide ongoing, timely information on the progress of the tertiary education system against the TES. Monitoring will help make sense of the extent to which the intended changes are happening, in which areas and to what degree.

There are three main audiences for this work:

- Ministers and government — providing information on progress and highlighting any areas that may require further attention
- the tertiary education sector and its agencies — providing information that can provide a broader context for policy development and sector planning processes
- key stakeholders — helping them understand the sector's contribution and progress towards meeting national goals.

Monitoring looks at the tertiary education system as a whole, rather than assessing the performance of individual organisations. It considers the overall patterns of change and response. It specifically examines the progress of the TES and is not intended to provide monitoring of all aspects of the tertiary education system. Monitoring and evaluation of specific policy and funding changes will be undertaken separately.

Information from monitoring has informed the development of the 2005 STEP. It will also inform the development of the next TES and the next STEP.






The challenge of monitoring

The TES sets a direction for the sector. It aims to improve the ability of the sector to achieve better outcomes. It does not set specific, measurable goals and targets. Much of the TES is aimed at shifting the attitudes, culture and focus of the sector. The key messages of the TES are summarised in the nine key changes[1]. These key changes are intrinsically difficult to measure.

A narrow focus on quantitative indicators could easily miss the 'real' story. The system may be 'scoring' well on a whole range of indicators but still missing the point of the TES as set out in the change messages — or the other way around.

The challenge of monitoring, therefore, is to highlight the overall messages, not just report on indicators. This requires using a mix of quantitative data that can provide measures of change over time, balanced with qualitative information that can provide explanation of how and why change is or isn't occurring. The monitoring needs to examine system-wide indicators, but these are likely to be slow to show change in many areas. Therefore, there also needs to be information on examples of innovation and successful change. Some areas will require longer-term research beyond the scope of the monitoring work.

Even so, monitoring can only provide a partial and selective view of change across a system that is as complex and dynamic as tertiary education.

Over the period of the TES, monitoring will shift from summarising what is happening in relation to the TES, to making sense of how changes are contributing to the larger goals of the TES and the well-being of the country. This will require greater attention to the change messages to understand how well the tertiary education system is performing in a national and international setting.

Finding out more

For detailed information and statistics on tertiary education please refer to the following sources:

Ministry of Education

New Zealand's Tertiary Education Sector: Profile and Trends 2004

This report, and other more specific analytical reports, can be downloaded from: **http://educationcounts.edcentre.govt.nz/publications/**

Tertiary Education Commission

Reports and information on specific policies, programmes and funding can be found on the Tertiary Education Commission (TEC) website: **http://www.tec.govt.nz/about_tec/publications.htm**

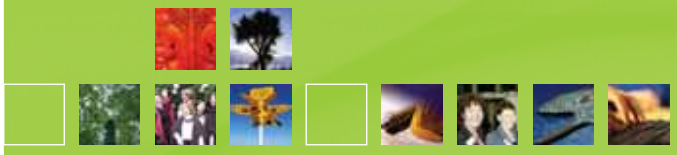
List of abbreviations

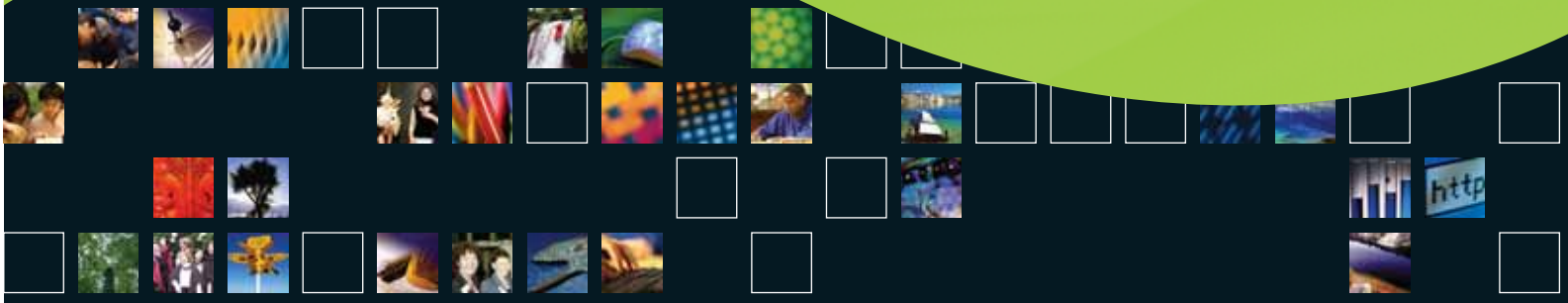
CoRE	Centre of research excellence
CRI	Crown research institute
EFTS	Equivalent full-time student
GDP	Gross domestic product
ITO	Industry training organisation
ITP	Institute of technology and polytechnic
MIT	Manukau Institute of Technology
NCEA	National Certificate of Educational Achievement
NZQA	New Zealand Qualifications Authority
OECD	Organisation for Economic Co-operation and Development
OTEP	Other tertiary education provider
PBRF	Performance-Based Research Fund
PTE	Private training establishment
STEP	Statement of Tertiary Education Priorities
TEC	Tertiary Education Commission
TEI	Tertiary education institution (a public provider of tertiary education)
TEO	Tertiary education organisation (any provider of tertiary education or an ITO)
TES	Tertiary Education Strategy

1 Refer to page 6.

The State of Play | 2

The tertiary education system in 2005/06





Last year's monitoring report covered the development of the tertiary education system during the initial period of the TES and tertiary education reforms. The focus at that time was on developing infrastructure and implementing new policy.

At the time of writing this report, the major infrastructural changes have been largely implemented. Charters have been approved for all government-funded providers. All providers have gone through at least two rounds of profiles. Plans are well underway for the second round of the Performance-Based Research Fund (PBRF).

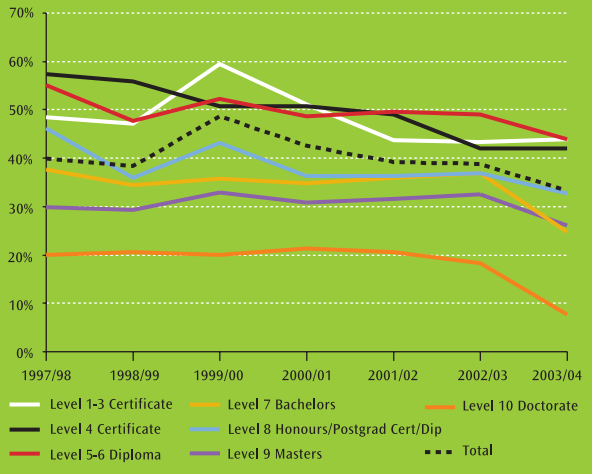
Since early 2005, a number of substantive issues have emerged. It has become evident that more substantive changes to funding for teaching and learning are required to ensure a stronger focus on quality and relevance. Some institutes of technology and polytechnics (ITPs) and wānanga had been building sub-degree provision in areas of low relevance, in some cases to subsidise financial shortfalls in areas of core provision. There is also a need to shift the quality arrangements from a focus on minimum standards to lifting quality and encouraging excellence. More coordinated management and leadership from the government agencies is required to provide integration across policy, funding and quality arrangements.

In response, the government has introduced and proposed a number of changes. A review of the education agencies has resulted in improved coordination across the agencies and clarification of agency roles. The government has established a fund to reinvest in high quality and high relevance provision in ITPs and wānanga, funded from the savings resulting from removing low-relevance provision. Government has proposed significant changes to the funding of teaching and learning to be in place in 2008. This includes plans to strengthen the profiles process by linking it to multi-year funding agreements and to reshape quality arrangements.

General trends affecting tertiary education

It appears that overall participation in tertiary education has peaked in 2005, with indications of falling enrolments in 2006. Participation remains heavily weighted towards sub-degree provision. Enrolments in short courses at certificate level have continued to grow. At the same time, retention and progression rates appear to be improving.

Figure 1: First-year attrition rates by level of study 1997/98–2003/04

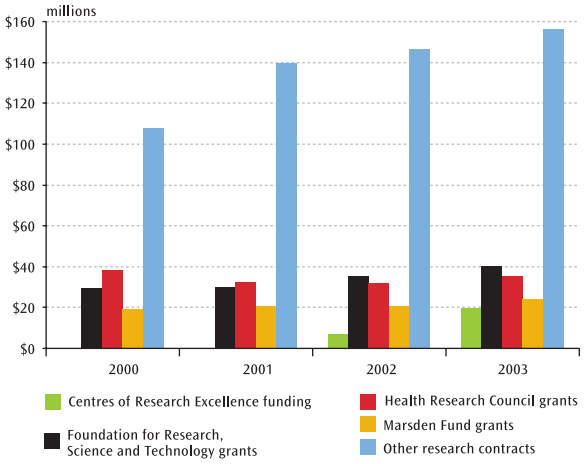


Historically high levels of employment continue to result in ongoing skill shortages, at all levels of skill. Even with the economy slowing down, skill shortages are forecast to continue. If New Zealand is to improve its standard of living, it needs to increase productivity. Increasing the quality and relevance of tertiary education is one of several factors that can contribute to increased productivity. Raising the skills of those with low levels of literacy and numeracy is also critical, both to raise productivity and ensure that more people are able to access work opportunities.

There is an ongoing challenge to ensure that New Zealand's research and development effort stays at the cutting edge of international developments. This requires attention to the research infrastructure to ensure that New Zealand researchers can access the latest facilities and techniques.

University research contract income continues to grow, with the increase mostly coming from contracts other than those funded through government research funds. The shift in the research policy environment towards supporting commercialisable knowledge has resulted in a step-change in the number of research-based spin-off companies formed by universities.

Figure 2: University research contract income by source 2000–2003



Source: Tertiary Education Commission, annual reports of universities, Royal Society of NZ, Foundation for Research, Science and Technology and Health Research Council

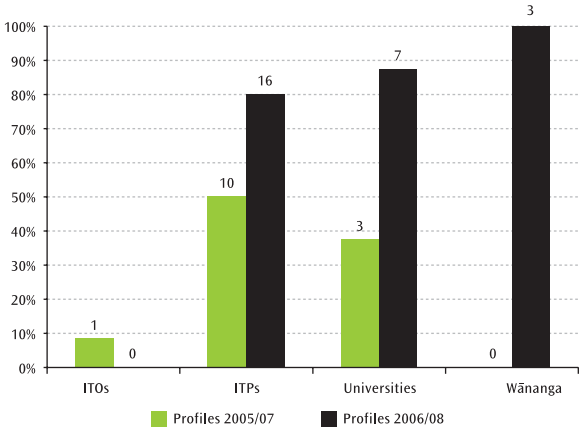
Investing in excellence in teaching, learning and research

Good progress is being made towards the establishment of a centre to promote excellence in tertiary teaching and learning - Ako Aotearoa: Tertiary Teaching for Learning Centre. There is an increased change-focus in TEO profiles on the quality of teaching and learning. This focus is shifting from infrastructural changes to supporting the professional development of teachers to provide quality teaching and learning.

There is increased investment in providing quality foundation learning opportunities. This investment continues to shift adult literacy, numeracy and language education from a semi-voluntary basis to properly recognised and supported professional provision. This includes new investment to raise foundation skills through the workplace.

The PBRF has provided a renewed focus in degree-granting institutions on developing quality research programmes. The majority of ITPs are now looking at how to develop their research programmes.

Figure 3: Percentage of TEOs with change-focused objectives relating to quality research in profiles 2005/07 – 2006/08

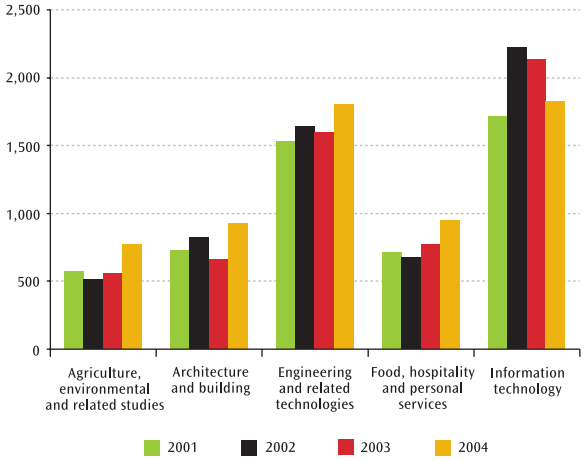


Increasing the relevance of skills and knowledge to meet national goals

ITOs continue to work with their industries to develop skill plans and to gain a better understanding of workplace needs. Several ITOs are starting to implement their plans. ITPs are also focusing on industry requirements in their qualifications development. However, industries report wide-ranging levels of engagement from ITPs and frustrations with the relative slowness of education providers to respond to immediate market needs. Disparate goals and scarce resources can also make engagement problematic. The government is providing funding through several schemes to build better linkages between industry and tertiary education.

It is not clear if there is any shift in the tertiary system towards greater focus on specialist skills, through either postgraduate study or trade and technical qualifications. The main growth in postgraduate qualifications completions has been in the area of health. Other subject areas, including those related to the government growth and innovation priorities, have been stable or growing slowly. There has been limited growth in trade and technical qualification completions, with declining completions in information technology.

Figure 4: Level 4 to 7 qualifications in trade- and technical-related fields completed by domestic students 2001–2004



Universities continue to contribute to new and future knowledge through basic research. However, it is difficult to trace the linkage between tertiary education research and specific national goals. In general, university and ITP profiles do not explicitly link their research programmes to national goals.

TEOs are continuing to strengthen their relationships with iwi and Māori. Objectives in TEO profiles in this area are focusing more on the outcomes to be achieved rather than just developing the processes of engagement. Māori and iwi groups view tertiary education as vital to achieving their economic and social goals, but continue to have mixed experience of engagement with providers.

Around a third of TEOs have a focus in their profiles on improving their relationships with Pasifika communities. Most of this engagement is focused on meeting the needs of Pasifika students. There is less mention of contributing to Pasifika development and almost no mention of an international perspective. Pasifika communities report varied experience of engagement with tertiary providers. Most report that the engagement is narrowly focused on student recruitment and support and not on contributing to their social goals.

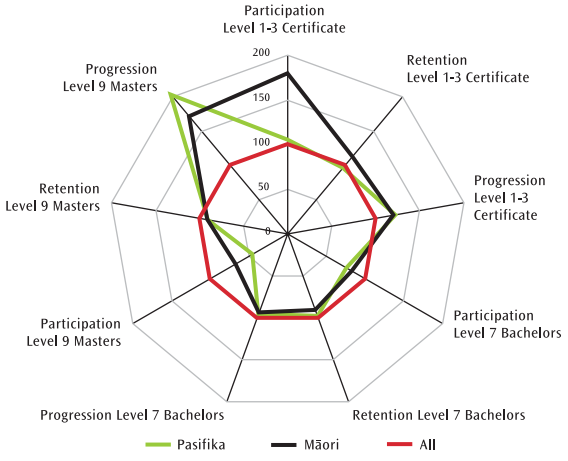
Enabling students and learners to access excellent and relevant tertiary education, and progress to higher levels of study and achievement

While more students are leaving school with qualifications, the proportion of school leavers going direct to tertiary study in the following year is declining. This trend probably reflects increased work opportunities. Many ITPs are now working with schools to improve the alignment of school and tertiary curricula and of pathways from school to tertiary study. However, there appears to be little emphasis in TEIs on students who leave school without completing qualifications and enter low-paid, low-skilled work.

The number of students taking Student Component-funded foundation education courses has declined, after peaking in 2003. Much of the decline relates to decreased participation in one or two large programmes. At the same time, additional investment is being made to extend literacy, language and numeracy provision to groups that had previously not had access. This includes community and workplace provision.

Māori participation rates in level 1 to 3 certificates have decreased, after historically large participation in 2002. However, this is not as a result of increased participation at higher levels. Māori numbers at degree level are falling faster than overall degree numbers. On the positive side, Māori retention rates at diploma and degree level are improving and progression from masters to doctorate has increased significantly.

Figure 5: Comparison of participation, first-year retention and direct higher-level progression rates for Māori, Pasifika and all domestic students 2004



Notes:

1. Rates are represented on an index for comparison, where the rate for all students is set to 100.
2. Participation rates are age-standardised.
3. First-year retention rates are the proportion of those who started a qualification in 2003 who either completed in 2003 or continued study in 2004.
4. Direct-higher level progression rates are the proportion of those who completed a qualification in 2003 who went on to study towards a higher-level qualification in 2004.

Pasifika participation and achievement has shown improvement at most levels. Pasifika participation at levels 1 to 3 has increased. Their retention rates at this level are now equal to those of all students and they have higher progression rates to higher-level study. At bachelors level, Pasifika student numbers are growing at a time when overall numbers are declining and their retention rates are now similar to those of all students. At postgraduate level, participation and retention remains lower for Pasifika students than for all students. However, there has been a significant increase in progression from masters to doctorates.

The number and proportion of students with disabilities has decreased slightly in 2005, following a period of sustained growth. This may, in part, reflect falling enrolments of older students in some lower-level qualifications, where the incidence of disability is higher.

The number of first-time students aged 25 and over continued to increase in 2005, but at a lower rate than in previous years.

Most TEOs have a focus on access for under-represented groups in their profile objectives. The specific groups mentioned are Māori, Pasifika, women (in the case of ITOs) and students with disabilities (in the case of TEIs). Some TEIs are also addressing access for students in remote areas. The most common way of improving access is through student support services, particularly in the first year of study.

Enhancing capability in the tertiary system to support learning, teaching and research

Financial viability of TEIs remains an issue, particularly for ITPs. The government has signalled its intent to address certainty and sustainability of funding in its new funding arrangements. There is an overall improvement in management of PTEs. Part of this is due to a shift towards larger providers and closure of smaller, less viable providers. TEO profiles show an ongoing emphasis on continuous improvement in leadership and management.

The evidence suggests collaboration between TEOs is strengthening. However, there is more to be done to improve the quality of collaboration between TEOs and other stakeholders. This requires the development of reciprocal relationships, commitment of time and resources from both sides and a common sense of purpose.

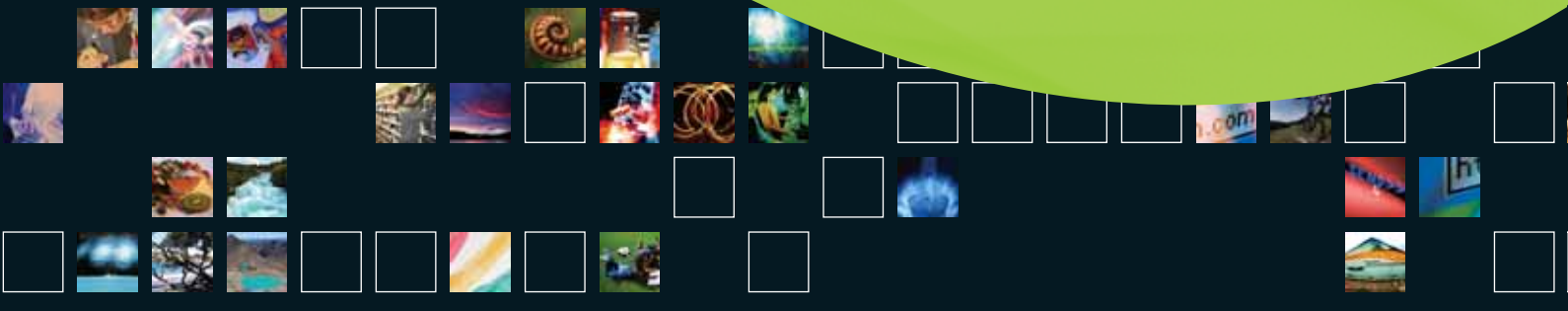
The government is working with ITPs and wānanga to reinvest money saved from changes in sub-degree provision into the development of a sustainable and capable network of provision, with a greater focus on quality and relevance.

Previous reports have noted the under-representation of Māori and Pasifika in tertiary teaching staff, particularly at degree level. Analysis of TEO profiles shows limited emphasis on recruitment and support of Māori and Pasifika staff.

The number of international students studying in New Zealand is declining, with fewer students coming here to study from Asia. The cost of recruitment is increasing, with the need to diversify markets and offer higher-quality options to maintain numbers. Providers are generally taking a more planned approach to export education and viewing it as part of an overall package of internationalisation of education.








.com
http

Implementation of the Reforms

The TES is part of the tertiary education reforms aimed at creating a more coherent and collaborative tertiary education system. The reforms are aimed at ensuring that the system is better aligned to the nation's goals and is actively identifying and meeting the needs of the communities it serves.

Shift in focus of reforms from new infrastructure to quality and relevance

The initial focus in the reforms was on developing new processes and infrastructure, and in particular, the establishment of the TEC. This was followed by the implementation of new planning and accountability arrangements, which are now in place for all government-funded TEOs.

Allied to these changes was the development and implementation of funding mechanisms to reward quality and excellence in research and education. A new funding mechanism for research is being implemented - the PBRF. The second round of PBRF quality evaluations will be conducted in 2006. In the area of funding for tuition, there has been considerable work put into design of a performance element in the Student Component funding framework. However, the Minister of Tertiary Education has asked for a more comprehensive review of funding for teaching and learning with a focus on rewarding quality and relevance.

The period 2002 to 2004 has been characterised by significant growth in areas where government considers provision could be of low quality and/or low relevance. This has included adult and community courses provided by TEIs, short courses (such as first-aid certificates) and qualifications at levels 1 and 2. A number of reviews have been conducted of provision in these areas. Funding rules have been tightened for provision of short courses and adult and community education through TEIs, with savings being reinvested to provide higher-quality and higher-relevance courses.

In 2005, the government issued a new STEP. This document signalled a greater shift in focus towards quality and relevance, with less emphasis on increasing participation.

Capability of government agencies reviewed

In 2005, the State Services Commission led a review of the Ministry of Education, the TEC and the New Zealand Qualifications Authority (NZQA). The reviewers were asked by government to "form a judgement and recommend further work on the machinery of government and governance arrangements for the three agencies for the years to come, in order to restore/build confidence in the sector"[2].

The review provided a number of recommendations covering strategic alignment of the agencies, development of a sector leadership group of Ministers, Chief Executive Officers and the TEC and NZQA Board Chairs, consistent and effective relationship management, capability assessment and development, role clarity and more effective monitoring and negotiation of profiles. The review recommended that at this time there be no major structural changes.

Since the review, the three agencies have been working together on a strategic work programme, led by the chief executives and chairs, to address the issues raised in the review.

Future direction set by Minister

In April 2006, the Minister for Tertiary Education announced significant changes proposed to the tertiary education system to better link tertiary education to economic transformation. The changes cover:

- further defining and applying the distinctive contributions of tertiary organisations and ensuring different parts of the sector work together in more complementary ways
- designing an alternative to the current demand-driven Student Component funding system. The new system will invest in organisations based on multi-year plans agreed with government. These plans will build on existing profiles, but will be more detailed so that government can be assured that its investment is channelled into the highest priority areas
- developing a better quality assurance and monitoring system that focuses on outcomes and assesses the quality of teaching and learning.

The new arrangements will be in place for 2008.

2 State Services Commission, *Education Sector Review*, June 2005, p 7.

Cross-strategy indicators

This section provides a set of cross-strategy indicators which provide information on the overall state of tertiary education in New Zealand to 2005.

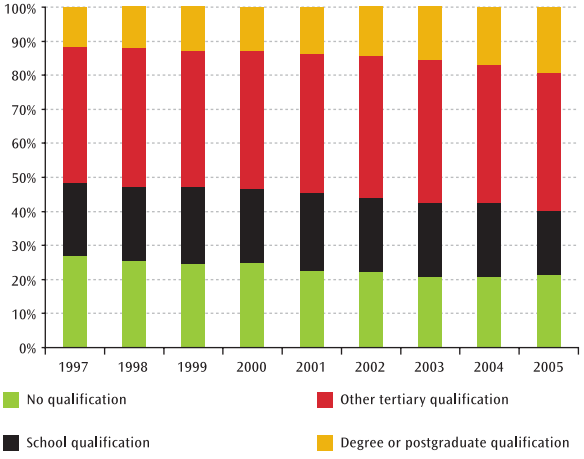
These indicators provide contextual information on the state of the tertiary education system, against which broader changes resulting from the TES can be monitored. Changes in these indicators also provide an alert to possible unintended consequences (positive and negative) of the changes implemented under the TES.

Educational Attainment in the Adult Population

Continued growth in proportion of adult population with tertiary qualifications

The proportion of the population aged 25 to 64[3] with a tertiary qualification has continued to increase, from 52 percent in 1997 to 56 percent in 2002, and to 60 percent in 2005.

Figure 6: Distribution of the population aged 25–64 years by highest qualification 1997–2005



Source: Statistics New Zealand, Household Labour Force Survey

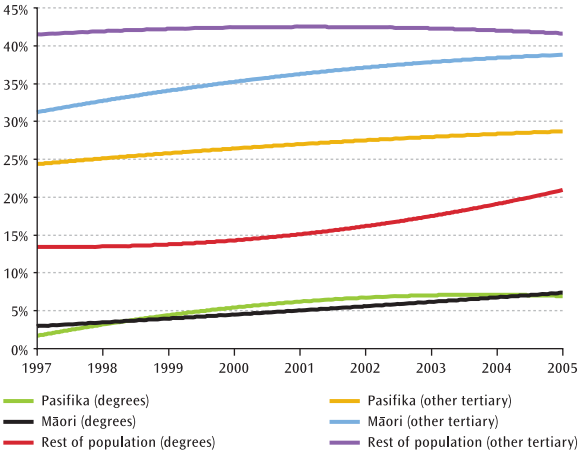
The main growth in highest qualifications in the last three years has been in degree and postgraduate qualifications[4]. The proportion of the population with degree and postgraduate qualifications as their highest qualification has increased from 12 percent in 1997 to 14 percent in 2002, and to 19 percent in 2005.

Persistent differences between ethnic groups

For Māori, the main growth in qualifications continues to be below degree level. This is consistent with their participation in tertiary education. In 2005, the proportion of the Māori population with a highest qualification below degree level was approaching the proportion for the rest of the population.

Growth in the proportion of Māori with a bachelors or higher degree as their highest qualification has levelled off, while the proportion of the rest of the population with these qualifications has continued to increase.

Figure 7: Estimated percentage of population aged 25–64 with a degree or other tertiary qualification as highest qualification 1997–2005



Source: Statistics New Zealand, Household Labour Force Survey

Notes:

1. Survey data has been used to estimate a regression line for each population.
2. Degree includes bachelors and postgraduate qualifications.
3. Other tertiary qualification refers to qualifications below bachelors level.
4. Rest of the population refers to those who are neither Māori nor Pasifika.

The growth in qualifications attained by Pasifika peoples has been much lower. This reflects the lower historical completion rates of Pasifika students, as well as lower participation rates. The proportion of Pasifika peoples with a highest qualification below degree level remains just over half of the proportion for the rest of the population. There has been steady growth in the proportion with degrees, but it is still substantially lower than that of the rest of the population.

3 This age group represents people who are likely to have finished their initial education and to be active in the labour force. It aligns with Organisation for Economic Co-operation and Development (OECD) indicators.

4 These figures are based on highest qualifications, so they do not count the number of other tertiary qualifications held in addition to degrees and postgraduate qualifications and, therefore, undercount the number of qualifications below degree level.

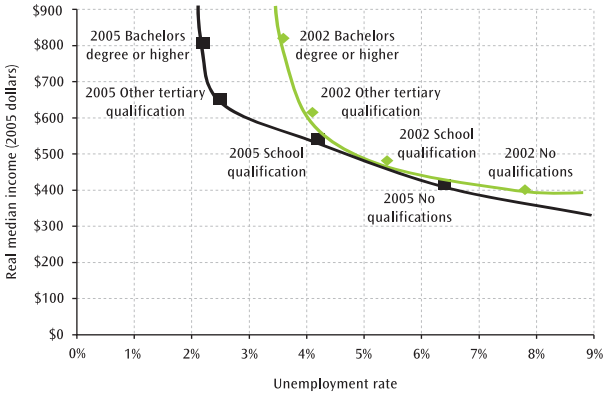
Outcomes of Tertiary Education

Improving labour market benefiting people with school and sub-degree qualifications

The recent improvements in the labour market have resulted in reduced unemployment levels for everyone. However, those who have had the greatest income increase are those with school qualifications only and tertiary qualifications below degree level. This reflects increased demand for low to middle skilled workers. It also reflects the resilience of people with higher qualifications as the economic cycles fluctuate.

The graph below shows the relationship between increasing levels of qualifications and income and unemployment. The general pattern shown is that gaining school or low-level tertiary qualifications results in significantly improved chances of employment and moderate gains in income. Gaining higher-level tertiary qualifications results in greater income, but not such high gains in terms of employment. The change from 2002 to 2005 has been in increased gains in both income and employment for those with qualifications below degree level, while those with degree-level qualifications or above have gained mostly in employment prospects.

Figure 8: Comparison of real median income (2005 dollars) with unemployment rate by level of highest qualification 2002 and 2005



Source: Statistics New Zealand, Household Labour Force Survey and New Zealand Income Survey

A completed qualification is worth more than a partial qualification, but in some cases a higher-level qualification can be better

Information from the Student Loans Integrated Dataset shows the distinct economic advantages to the completion of qualifications three years out from the end of study. These advantages are particularly marked for bachelors and masters degrees.

Figure 9: Comparison of average incomes in 2002 for those who last studied in 1999, by completed or non-completed qualifications

Source: Statistics New Zealand, Student Loans Integrated Dataset

This graph compares the average incomes of people with a completed qualification with the average incomes of people with an uncompleted qualification. The height of the point above the diagonal line represents the additional income gained by completing a qualification.

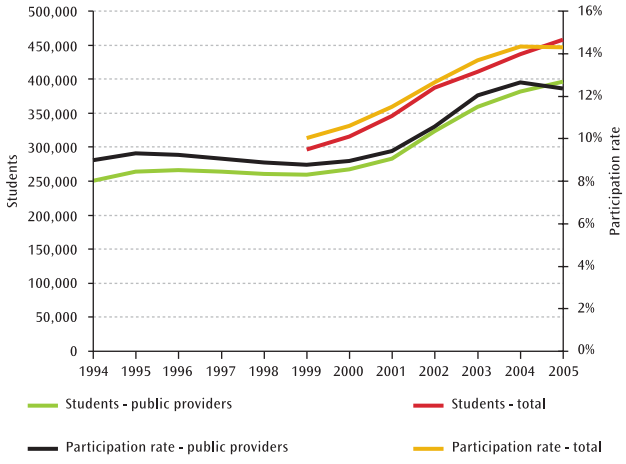
However, this analysis also shows that at certain levels, having an incomplete higher-level qualification has more economic advantage than a completed lower-level qualification. For example, the average income for people with incompleted diplomas is higher than that for people with completed certificates. There is a similar effect for an incompleted honours or masters degree compared with a completed bachelors degree.

Participation in Tertiary Education

Continuing increase in participation in tertiary education

From 2002 to 2005, the number of students in formal tertiary education increased from 386,000 to 457,000, an increase of 18 percent. The proportion of the population aged 15 and over participating in formal tertiary education reached 14 percent in 2004 and remained the same in 2005. Universities and ITPs have been informally reporting decreased enrolments in the early part of 2006.

Figure 10: Formal domestic students and participation rates 1994–2005

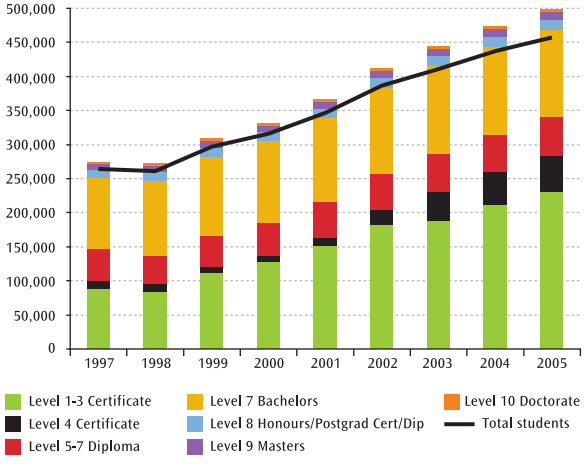


Note: Participation rates have not been adjusted for changes in age structure of the population over time.

Main growth still at certificate level

The main increase in enrolments to 2005 has been at certificate level, as it has been in previous years. The strongest growth was in level 4 certificates, followed by level 1 to 3 certificates. Numbers at degree level have declined in 2005, particularly in ITPs. Overall numbers at postgraduate level continue to increase.

Figure 11: Formal domestic students by qualification level 1997–2005



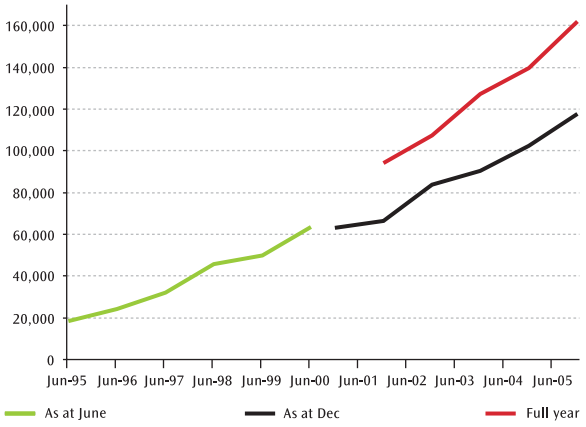
Continued growth in industry training

The number of people participating in industry training has continued to increase, with 161,000 people participating over the full year of 2005. This exceeded the government target of 150,000 by the end of 2005 and is an increase of 51 percent from 2002.

In 2005, there were:

- 31,528 employers participating in industry training, an increase of 28 percent from 2002
- 23,876 national certificates completed by trainees, an increase of 144 percent from 2002
- 8,388 Modern Apprentices as at 31 December 2005, an increase of 93 percent from 2002. They were employed across 5,586 employers.

Figure 12: Trainees in industry training 1995–2005



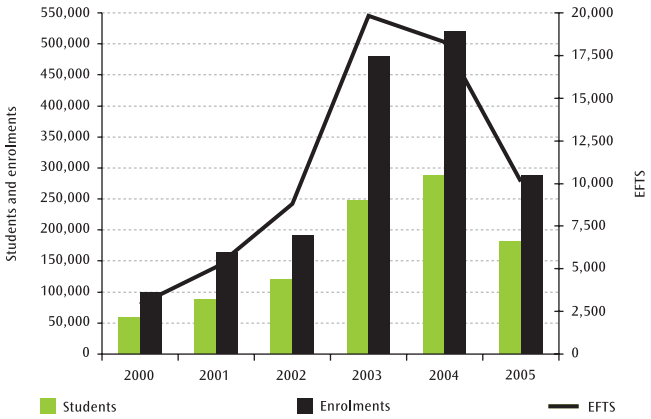
Source: Tertiary Education Commission

Growth of community education and short courses

One of the concerning trends for government has been the rapid growth of community education and short course provision, particularly in ITPs. This has come about partly as a move to innovative and new approaches to meeting demand for tertiary education and partly as an opportunistic approach to increasing funding and covering shortfalls in other areas of provision. Much of the provision is not well linked to national and regional educational priorities, and has also been of questionable quality.

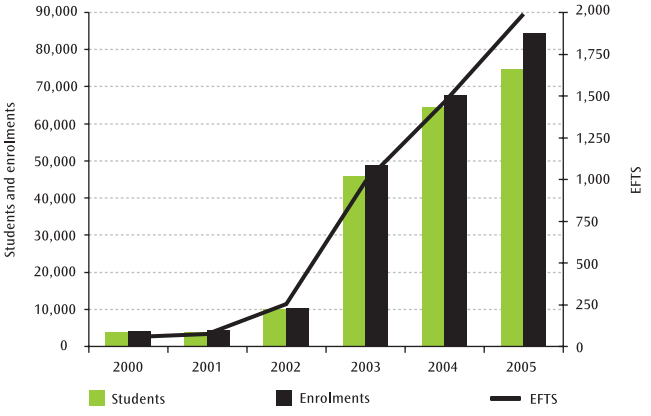
Student numbers and enrolments in community education grew rapidly in 2003 and peaked in 2004. In 2005, there was a signficant decline in terms of both numbers and equivalent full-time students (EFTS), as ITPs reviewed their provision.

Figure 13: Domestic students, enrolments and EFTS in community education in TEIs 2000–2005



There was also rapid growth in the number of students taking short courses through ITPs. Most of this provision has been in first-aid courses. Provision of this type continued to increase in 2005. A number of measures have been put in place to restrict TEI activity in these areas from 2006 onwards.

Figure 14: Domestic students, enrolments and EFTS in stand-alone courses of less than one week equivalent duration 2000–2005



Note: This includes all stand-alone courses with an EFTS value of less than 0.035 and excludes community education courses.

Retention and Progression

This year, we have introduced two specific indicators of retention and progression.

One is **first-year attrition rates**, which is the proportion of first-year students in a given year who did not complete a qualification during that year and did not return to study the following year. The largest proportion of students who study without completing a qualification drop out of study in their first year. This makes first-year attrition rates a good predictive indicator of future retention and completion rates. It can also reflect the success or otherwise of student support services.

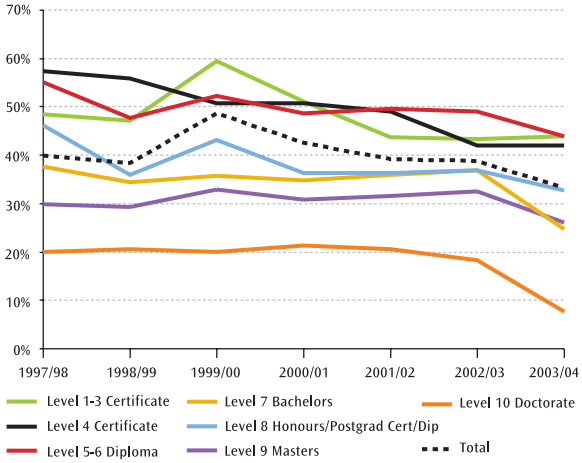
The other is **direct higher-level progression**, which is the proportion of students completing a qualification in a given year who went on to further study at a higher level in the following year. This provides an indicator of the success of qualifications in providing a pathway through the tertiary education system.

We have chosen to use these two indicators throughout the report as they are sensitive to year-to-year changes. However, they do not give the full picture over time. In particular, the patterns for progression are quite different when observed over four to five years following completion, that is, after taking into account gap periods. More complete information on retention, completion and progression is presented in the annual Profile and Trends and other reports produced by the Ministry of Education.

Improving retention following first year of study at degree level and above

Over the last three years there has been an overall reduction in first-year attrition rates. The reductions are particularly noticeable at degree and postgraduate levels. First-year attrition rates below degree level remain more static.

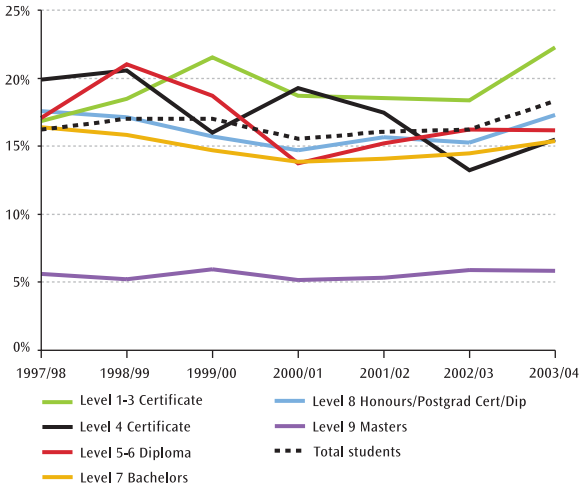
Figure 15: First-year attrition rates by qualification level 1997/98–2003/04



Progression to higher-level study increasing

Rates of direct higher progression have been fairly steady since 1997. Over the last two to three years, there has been some increase in progression from level 1 to 4 certificates and bachelors and honours degrees.

Figure 16: Direct higher-level progression rates by level of qualification completed 1997/98 – 2003/04



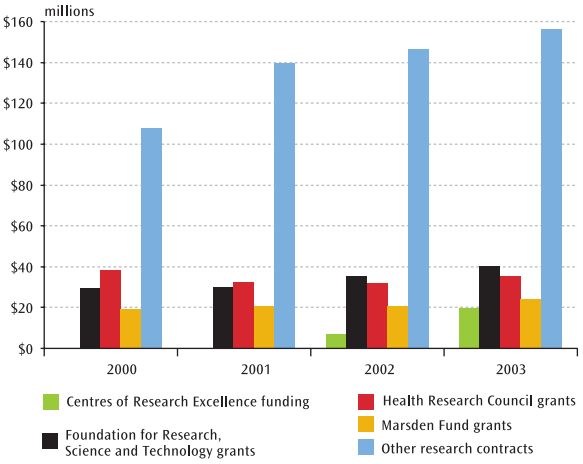
Research within the Tertiary Education Sector

Research contract income growing

An indicator of the overall relevance, quality and reputation of research in the tertiary sector is the amount of funding from research contracts. The total funding for university research contracts has continued to increase, with funding totalling $276 million in 2004, an increase of 15 percent on 2002.

The indicator below looks at research contract income by source. It shows that the main growth in contract income for universities has come from contracts other than those funded out of Centres for Research Excellence and the government's contestable research funds. This trend demonstrates that universities are producing research of recognised quality, which stands the test of competitive bidding and is relevant to a range of private and public funders.

Figure 17: University research contract income by source 2000 – 2003



Source: Tertiary Education Commission, annual reports of universities, Royal Society of NZ, Foundation for Research, Science and Technology and Health Research Council

Step increase in spin-out companies resulting from university R&D

Research commissioned by the Foundation for Research, Science and Technology[5] found that there has been a step change in the rate of spin-out company formation by universities, as well as Crown Research Institutes (CRIs), since 2000. A total of 29 university spin-out companies were formed in the period 2001 to 2005, compared with 10 in the period 1995 to 2000. These companies have been set up to realise the commercial benefits from research and development (R&D) projects. The report identifies a range of funding and policy shifts that has created a more favourable environment for commercialisation of R&D since 2000.

Building the research infrastructure

The government is supporting the development of a super-high-speed internet link between universities and research organisations in New Zealand and overseas. The link, which will be known as the Advanced Network for Research and Education, will enable much greater collaboration between researchers and the multiplication of computing power through the linking of computers across New Zealand and around the world. It will support participation in cutting edge research, development and education in areas such as biotechnology, eLearning, health and creative media, including film.

5 New Zealand Insitute of Economic Research, *Measurement of Spin-outs from Foundation-funded Research*, report to the Foundation for Research, Science and Technology, 2005.

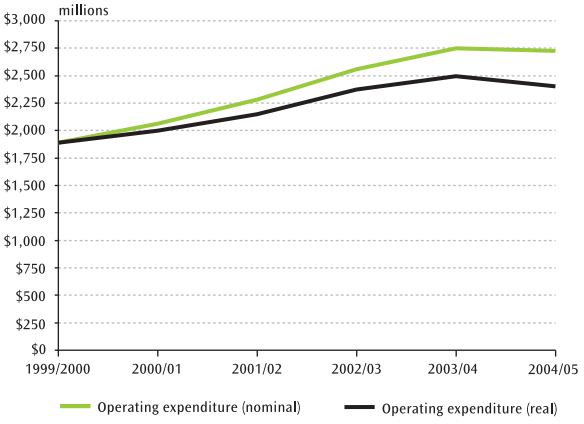
A consortium of seven New Zealand universities and three CRIs, with initial support from the government, are a funding partner in the Australian Synchrotron project. The synchrotron is a multi-functional, multi-user large science facility that uses very high-energy electrons to create very bright, pinpoint beams of light. These beams of synchrotron light have become essential tools for science and industry for investigating the molecular structure of things and are critical for cutting edge research in areas such as drug discovery, analysis of advanced materials and bio-medical imaging. Investing in the development of the project will ensure access to the facilities for New Zealand scientists.

Affordability of Tertiary Education

Affordability to government

In 2004/05, the government spent $2,721 million on tertiary education, down by 0.9 percent on the 2003/04 actual spending of $2,745 million. In addition, the government provided $979 million in capital contributions in 2004/05[6], bringing the total budget for that year to $3,700 million.

Figure 18: Total government operating spending on tertiary education in the year to 30 June 1999/00 – 2004/05



Note: Capital contributions are excluded.

The biggest share of total government expenditure continues to be on tuition subsidies, which accounted for 47 percent of the total budget in 2003/04.

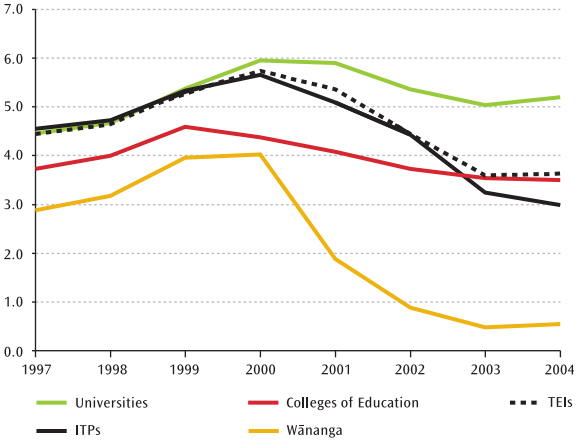
Employer contributions to industry training

Industries contributed at least $53.6 million in 2005 to the costs of industry training, up from $38.2 million in 2002. Industry contributions made up around 30 percent of accounted costs. Government invested an estimated $127.6 million in 2005, up from $90.6 million in 2002.

Affordability to students

The graph below shows the ratio of the average fee for a domestic student at a TEI to the average weekly wage over the period 1997 to 2004. In effect, this ratio calculates, for someone with average income, how many weeks of gross earnings it would take to cover the average fee charged by a TEI.

Figure 19: Ratio of average domestic student fees at public providers to average weekly income 1997 – 2004



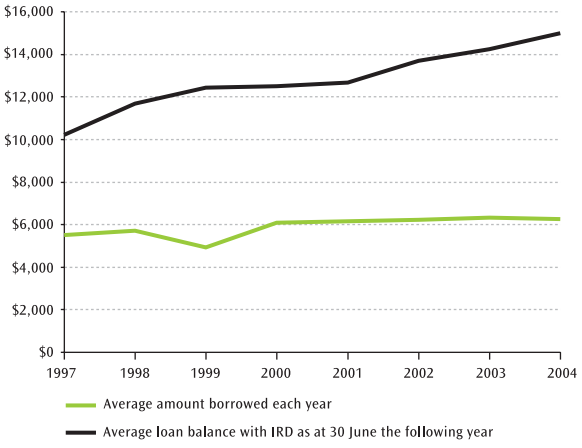
Sources: Ministry of Education and Statistics New Zealand, New Zealand Income Survey

Fees peaked in real terms in 2000, and have since declined significantly as a result of fee stabilisation policies. In 2004, universities had the highest average fees, followed by colleges of education. The average fee at wānanga remained very low. This is due to the large number of enrolments in zero-fee courses in this sub-sector.

The average amount borrowed under the Student Loan Scheme in 2004 was $6,258, down slightly on 2003. This figure includes borrowing for study in PTEs as well as in TEIs. Average loan balances have grown since 2002. This growth reflects the development of the loan scheme, with more people borrowing over a longer period of time, rather than increases in the cost of tertiary education.

6 The majority, but not all, of this allocation is for student loans.

Figure 20: Average amount of student loans borrowed each year and average loan balance as at 30 June the following year 1997 – 2004



Sources: Inland Revenue and Ministry of Social Development

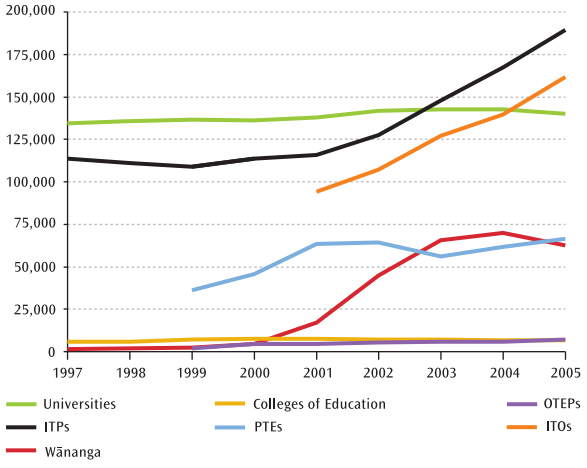
Tertiary Education Organisations

Growing provision in ITPs and ITOs

Since 2002 the major growth in student numbers (in formal education) has been in ITPs and ITOs.

In 2005, the ITP sub-sector had the largest number of students, followed by ITOs and then universities.

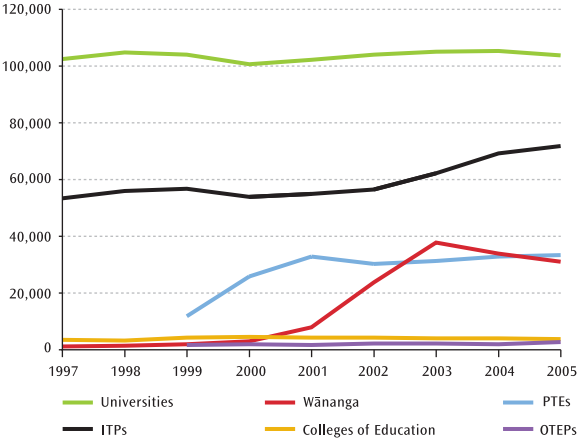
Figure 21: Formal students in tertiary education by sub-sector 1997 – 2005



Note: Includes international students. ITO off-job trainees have been excluded from the counts in the sub-sector providing those courses.

In terms of equivalent full-time students (EFTS), universities remain the largest sub-sector, reflecting the greater amount of full-time/full-year study. ITPs are the second largest, followed by PTEs and wānanga.

Figure 22: Equivalent full-time students by sub-sector 1997 – 2005



Note: International students and ITO off-job training are included in sub-sector totals.

Two other significant changes during the period of the strategy have been:

1. the proposed merging of the two remaining colleges of education, Dunedin and Christchurch, with universities. These mergers have been recommended by their respective councils and are subject to public consultation.
2. the reduction in the number of ITOs from 46 in 2002 to 41 in 2006 through mergers.












The Six Strategies | 4

Raise Foundation Skills so that all People can Participate in our Knowledge Society

Objectives

- Significantly improved adult foundation skill levels, achieved through increased access to foundation education in a range of learning contexts
- Clearer accountability for quality and outcomes within foundation education, including a greater focus on assessment
- A common understanding of the definition of foundation skills and of best practice teaching in this area
- Improved linkages between secondary and tertiary education, and improved staircasing for learners within tertiary education

What are foundation competencies and skills?

While this strategy refers to the need to *Raise Foundation Skills so that all People can Participate in our Knowledge Society*, it is not just **skills** that are important, but rather the **knowledge, skills and dispositions** that people require to be competent in a knowledge society. In this report, we use the term **foundation learning** in recognition of this wider understanding of what is needed to participate in a knowledge society.

The NZQA Foundation Learning Quality Assurance Project has defined foundation learning as follows:

"Foundation learning covers competencies in literacy, numeracy and language. In practice, foundation learning for adults may be defined as the application of a complex web of reading, writing, speaking, listening, critical thinking, problem solving, numeracy skills and communication technology so that people can achieve their own goals in meaningful social, cultural, vocational and/or learning contexts. Foundation learning may be in English or Te Reo Māori."[7]

The change required to achieve this strategy

The overall goal of this strategy is to ensure that foundation learning results in real gains for learners and, over time, results in significantly improved literacy, numeracy and language levels in the population.

This requires moving foundation learning from a relatively marginal position within the tertiary education system to being a core activity, underpinned by informed professional practice and improved diagnostic and teaching tools. It also requires improving access for those who are not currently participating.

The greatest investment in foundation learning will continue to be in the compulsory education system. The responsibility of the tertiary education system is to facilitate access to learning foundation skills for those adults and young people who have not benefited from improvements in the compulsory system, or whose skills have become 'out of date'.

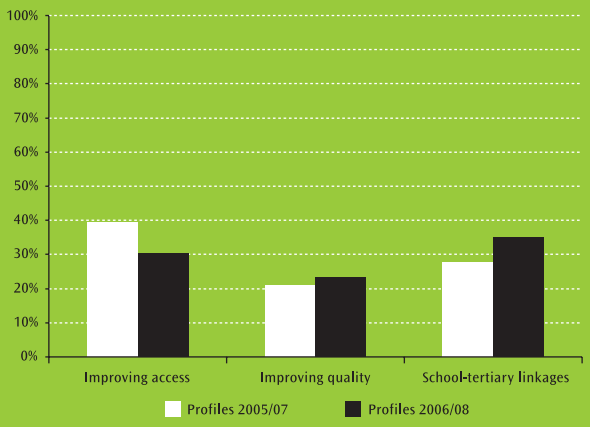
At the same time, connections and clearer pathways for learners between foundation learning and other types of education need to improve, including from school to tertiary education. This change will require stronger connections between TEOs and schools, as well as between TEOs themselves.

7 Ministry of Education, *Learning for Living: Te Ako mo Te Ora*, Issue 4, December 2005.

Progress to 2005/06

The analysis of profiles shows that less than half of TEOs had a change-focus on this strategy in 2005/07 and 2006/08, with ITOs most likely to have a focus on it.

Figure 23: Percentage of TEOs with change-focused objectives relating to 'Raise Foundation Skills' in profiles 2005/07–2006/08



Significant progress has been made in understanding and developing professional practice in foundation learning. There is now a much sounder evidence base around 'what works' in teaching and learning in this area. This information is being used to inform professional development for those working in foundation learning, quality assurance and funding of foundation learning.

There has been a decline in foundation education funded through the Student Component fund. However, increased funding is being made available through the new Foundation Learning Pool, the Workplace Literacy Fund and direct to ITOs. This funding aims to open up learning opportunities to a wider range of learners, across various contexts and a range of providers.

More students are leaving school with qualifications. However, as the labour market improves, fewer are going directly into certificate- or diploma-level study. Most ITPs are now involved in curriculum alignment projects that seek to make stronger connections between what is taught at school and what is taught at ITPs and that aim to make the transition from school to vocational education easier. The government is investing over $100 million in youth transition projects over a four-year period. It is currently focusing on improving coordination across the initiatives.

Key challenges for moving forward

From the analysis of progress to date, the following key challenges for moving forward to achieve this strategy are evident:

- continuing the momentum of the Learning for Living Strategy to provide quality learning for learners who haven't previously accessed foundation learning
- continued focus ensuring access to quality tertiary education and training for young people who leave school with few or no qualifications, including those entering low-skilled work.

Improving Quality in Foundation Education

Learning for Living Strategy

The Learning for Living Strategy provides the overview for a range of intiatives being undertaken by government agencies to enhance teaching and learning in literacy, numeracy and language for adults.

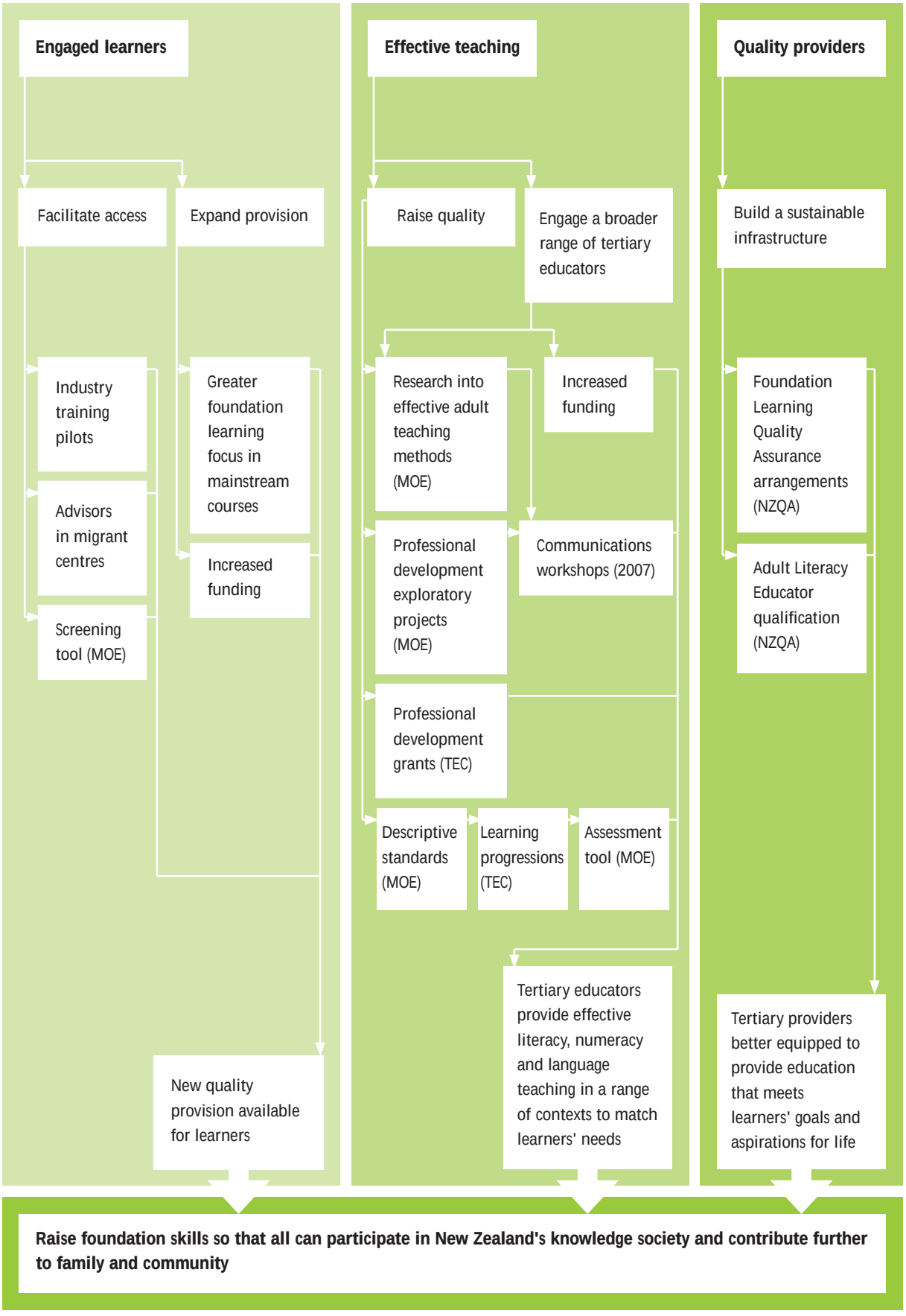
The first stage of the Strategy involved building the evidence base about what works in foundation learning in order to improve effectiveness. The second phase, starting in 2005, involves expanding the provision of foundation education to new learners, especially those who need it most.

Building the evidence base

A number of pieces of research have been completed to improve the evidence base for foundation learning.

- A clearer picture of adult literacy in New Zealand has been developed, with valuable insights for tertiary and adult education providers, as well as for employers, from research using the 1996 International Adult Literacy Survey and Census data.
- Information on what matters in teaching and learning in foundation education has been provided by a literature review of original research studies, where there was strong evidence that specific aspects of teaching and programmes led to improvements in literacy, numeracy and language skills of learners.

Figure 24: Initiatives in the Learning for Living Strategy, as at 2006



- The nature and extent of literacy, numeracy and language provision in New Zealand has been mapped using reports and data from TEOs.
- Insights into what teachers actually do with their learners in typical programme situations have been provided by an observational study which looked at a cross-section of 15 literacy, numeracy and language teachers.

Exploratory projects

A first round of 10 exploratory projects is underway to build up evidence of the best ways for teaching literacy, numeracy and language to adults by looking at the operations of a diverse range of tertiary education providers.

The second round of six clusters (involving 27 projects) was launched at the end of 2005 with a more tightly focused objective. The projects are looking at either reading or numeracy and will work with researchers and developers to develop sustainable professional learning communities exploring effective teaching practice and learning for adults.

A third round of projects that will extend the reading and numeracy clusters to a wider range of providers will be underway in the second half of 2006.

Articulating a clearer understanding of effective teaching and learning

In 2005, the Ministry of Education developed Draft Descriptive Standards of adult foundation learning in reading, writing, listening, speaking and mathematics. The descriptive standards represent an attempt to define the essence of the literacy, language and numeracy that adults need in everyday life. They will help educators to consider learning needs, and employers and employees to understand the demands that adults face in their everyday lives, in terms of literacy, numeracy and language competencies. The next stage will be to provide examples of how they can be used in different settings and in combination with other competencies.

The TEC is developing Learning Progressions, which follow on from the Draft Descriptive Standards. The Learning Progressions will identify the common progression of knowledge and skills that an adult will follow to reach foundation-level competency and preparation for lifelong learning. They will be used to establish common understanding about skills and knowledge and build teaching capability. They will be accompanied by supporting handbooks for tutors containing both theoretical and practical advice.

The NZQA's Foundation Learning Quality Assurance project seeks to provide a clear quality measurement for foundation learning. Draft quality provider practices and requirements to help build an infrastructure supporting good quality literacy, numeracy and language teaching are currently being consulted on with the tertiary education sector. The final set of requirements will be integrated into NZQA's quality management and audit systems.

NZQA has also developed a foundation learning educator qualification. Study grants are available to assist tertiary tutors to undertake the qualification.

Adult Literacy and Lifeskills Survey to provide new and updated information on literacy in the adult population

The Ministry of Education will be running the OECD's Adult Literacy and Lifeskills Survey during 2006. This international survey will provide information on literacy in the adult population, comparable with that collected in the International Adult Literacy Survey in 1996. It will enable comparison of literacy in New Zealand with other literacy in other participation countries and also measure the changes in literacy in New Zealand over the last decade.

The survey will also provide new information about problem-solving skills and health literacy. It is designed to provide robust information on Māori and Pasifika. Information from this survey will be available in 2007.

















Improving Access to Foundation Education

English language-based provision through the Student Component fund declining

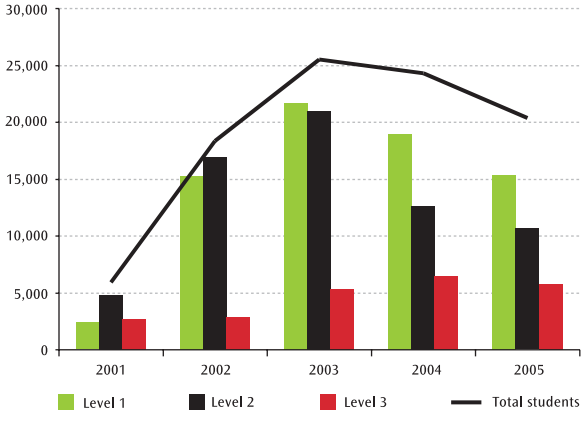
TEIs, and some PTEs, are able develop their own foundation education programmes using Student Component funding. These programmes are wide ranging and cover general life-skills through to specific areas of literacy and numeracy. The following indicator looks at English-language based foundation education courses, which have been identified as formal courses classified as mixed field (with a focus on literacy, numeracy, life-skills, employment skills etc), English language and English for speakers of other languages courses at levels 1 to 3.

Research on effective teaching in foundation education has highlighted the importance of adequate teaching time to move learners' skills to a new level. The research indicates a minimum of 100 hours of teaching being required in a year to achieve this.

The indicators for Student Component-funded provision focus on learners engaging in more than 0.30 EFTS learning during the year in foundation education courses. This equates to 400 notional learning hours, typically made up of around 100 teaching hours and 300 study hours.

In Student component-funded English language-based foundation education 32 percent of learners were engaged for more than 0.3 EFTS during 2005. The number of learners with this level of engagement grew from 2001 to 2003 and has since decreased, most notably in level 1 and 2 courses.

Figure 25: Formal domestic students in Student Component-funded English language-based foundation courses undertaking more than 0.3 EFTS by course level 2001–2005

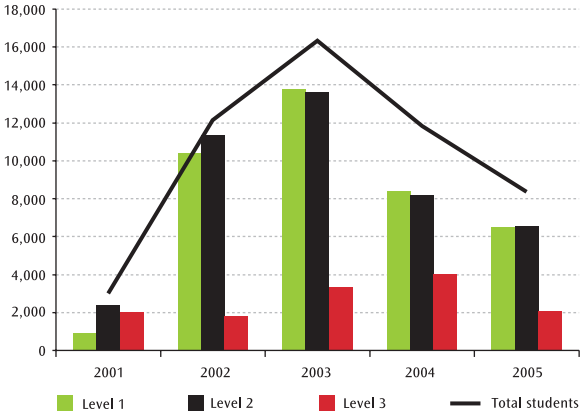


In 2005, 66 percent of these learners were studying in wānanga and 28 percent in ITPs. The proportion in wānanga has declined, while the proportion in ITPs has grown. Seventy percent were women and 47 percent were Māori, 13 percent Asian and 5 percent Pasifika.

Te reo Māori-based provision through the Student Component fund declining

In Student Component-funded, te reo Māori-based foundation education, 57 percent of formal learners in 2005 were engaged for more than 0.3 EFTS during the year. The number of learners with this level of engagement grew rapidly from 2001 to 2003 and has since decreased. The numbers in level 1 and 2 courses peaked in 2003, and the numbers in level 3 course peaked in 2004.

Figure 26: Formal domestic students in Student Component-funded te reo Māori-based foundation courses undertaking more than 0.3 EFTS by course level 2001–2005



In 2005, 89 percent of these learners were studying in wānanga and 8 percent in other tertiary education providers (OTEPs). Seventy-one percent were Māori.

Range of provision within the workplace

Foundation education is also provided within industry training. Different ITOs have different approaches in this area. Some ITOs include it as a specific part of industry qualifications, some are developing and implementing specific foundation education qualifications and others promote its delivery within the context of industry-related standards.

In 2005, 29 percent of credits achieved through industry training were at levels 1 and 2. Many of these would have had some component of foundation education.

The Workplace Literacy Fund supports literacy, English language and numeracy skills training integrated with vocational/workplace training to help workers meet their employment and training needs. In 2003/04, 17 projects were funded, involving over 800 learners.

Work-related foundation skills are also provided pre-employment through Training Opportunities and Youth Training.

TEO approaches to supporting foundation learning

The analysis of TEO profiles found that foundation education was not a consistent area of change-focus across TEOs. ITOs were most likely to have a focus on this area, while only half of ITPs had a change-focus in this area.

ITO profiles generally contained objectives relating to targeting assistance and services to those needing additional help with foundation skills. A number were also looking at the content and relevance of qualifications to ensure that foundation skills are adequately addressed.

ITPs had a focus on maintaining or increasing the volume of provision, mostly with a focus on providing pathways to further study. In the 2006/08 profiles there was increased attention to programmes with a specific focus on foundation skills, rather than just bridging and study preparation.

Adult literacy funding refocused

The Foundation Learning Pool is a fund that supports projects in literacy, numeracy and language and replaces the Adult Literacy Learning Pool from 2006.

The purpose of the Foundation Learning Pool is to provide funding for the delivery of high-quality and intensive foundation learning opportunities that build learners' skills in literacy, numeracy and language.

Two types of projects will be funded:

- intensive projects that engage learners in intensive foundation learning in a variety of contexts
- enhanced projects that provide complementary intensive foundation learning to learners who are already engaged in other funded programmes.

Increased funding for those not accessing current provision

From 2006, additional funding is available to expand provision of current programmes, particularly to those in low-skilled occupations. This new provision has a focus on community and intergenerational family literacy and is administered through the Foundation Learning Pool and Workplace Literacy Fund.

A further $7 million over four years is also being provided to deliver foundation learning through industry training. This initiative aims to develop an approach, initially working with two or three ITOs, that will see foundation learning embedded within the industry training system, using existing tools for quality assurance and capability building.

Improving basic skills in the workforce

The government has allocated a further $33.5 million over the next four years to improving literacy, numeracy and language skills of the workforce. The new funding will continue work already underway with ITOs to improve foundation skills of people employed at the low-skill end of the workforce.

In 2006/07, the focus will be on developing ways of motivating and assisting workers to take up and continue training in literacy, numeracy and language. By 2009/10 it is intended that about 20 ITOs could be participating in the programme, with nearly 9,000 trainees funded as part of their training.

The funding will be available from 1 July 2006 to:

- improve workplace practices so more employers and workers can access suitable training
- expand the number of professional development clusters for training providers and tutors in the Learning for Living exploratory projects
- fund 200 additional study grants to increase the number of fully qualified adult literacy tutors
- further integrate literacy, numeracy and language training with industry training
- increase the quality of training by supporting some 220 providers to meet the Foundation Learning Quality Assurance requirements.









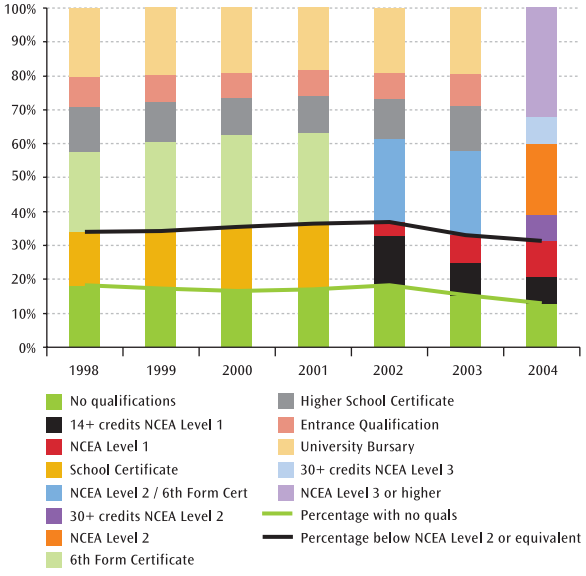
Moving from School to Tertiary Education

More students leaving school with qualifications

The proportion of students leaving school with the equivalent of the National Certificate in Educational Achievement (NCEA) level 2 or higher has continued to increase. While the proportions of Māori and Pasifika students achieving this level of qualification are lower (compared with other ethnic groups), there were increases in both groups from 2003 to 2004.

The proportion of students leaving school with no qualifications continued to decrease. While greater proportions of Māori and Pasifika students continue to leave school with no qualifications, in both groups the proportion continues to decline.

Figure 27: Proportion of school leavers by highest leaving qualification 1998–2004



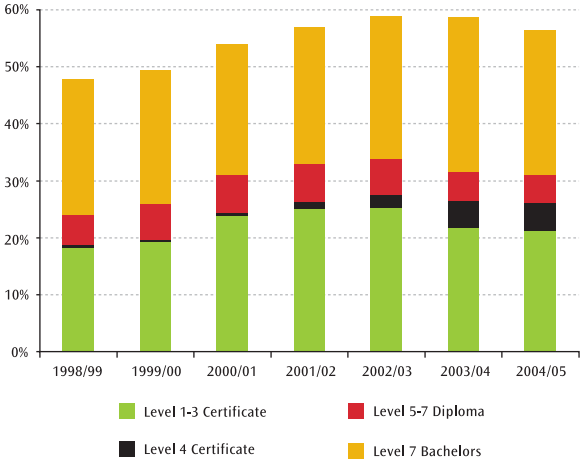
Fewer students going from school directly to tertiary study

The proportion of school leavers undertaking degree-level study in the year after leaving school decline from 2003 to 2005. Māori and Pasifika school leavers are around half as likely as all students to go into degree-level study in the year following school. The proportion of Māori students doing so in 2005 dropped, while the proportion of Pasifika students increased.

The proportion of school leavers undertaking level 1 to 3 certificate-level study in the year after school has declined since 2003. Māori and Pasifika students are more likely to study at this level following school. The proportion of Māori and Pasifika students going into this level of study following school has also declined since 2003.

There was a small decrease in students going directly to diploma-level study as well. The only level where there was an increase was level 4 certificates.

Figure 28: Proportion of school leavers in tertiary study of more than 0.3 EFTS in the following year by level of tertiary qualification 1998/99–2004/05



Improving Links Between School and Tertiary Education

National Secondary Tertiary Curriculum Alignment Project

The Manukau Institute of Technology (MIT) has been funded, through the Innovation Development Fund, to run a national project on secondary tertiary curriculum alignment.

The curriculum alignment project has been in operation at MIT since 2002. The national project involves close collaboration between secondary schools and their neighbouring ITPs to establish clear pathways based in curriculum for students moving from secondary to tertiary education. The Innovation Development Fund grant enables MIT to assist all other ITPs to establish similar programmes.

TEO approaches to improving the transition from school

The analysis of TEO profiles found that around 40 percent of ITPs and universities had a change-focus on school to tertiary transitions in 2005/07 and 2006/08. There was also increased focus on this area in the 2006/08 ITO profiles (also around 40 percent).

In both years, the most consistent focus for ITPs was on curriculum alignment projects. Some were also developing broader relationships with secondary schools and a few offered scholarships for school leavers.

The universities largely focused on study advice, open days and mentoring. The ITOs, in 2006/08, were working with schools to improve school-to-work transitions, including developing joint programmes and aligning school and industry qualifications.

The analysis, however, found that no TEO had objectives focusing on young people who leave school with few qualifications and few or no prospects of sustainable employment.

Improving coordination of youth transition services

In 2003 and 2004, the government invested over $110 million over a five-year period on a variety of initiatives to assist young people to make successful transitions from school to tertiary education and employment. Initially the priorities focused on raising skills and qualifications and employment outcomes. In 2004, the focus was also on improving career information, advice and guidance, improving post-school support structures, and enhancing vocational education available at and post school. By the end of 2004 the government was satisfied that the broad components of a good youth transition system were in place.

In 2005, the emphasis has been on improving the coordination between agencies and on raising awareness about the programmes that are available to assist youth transitions. Programmes are delivered by a range of agencies, and information about them is provided on different websites. To bring this information together through one access point, a website called ‘in-transit’[8] was launched in 2005. It is a youth-orientated site that provides an easy guide to decision-making and available services.







8 http://www.in-transit.govt.nz/

Develop the Skills New Zealanders need for our Knowledge Society

Objectives

- Accurate and timely skills forecasting capability
- Industries are supported in meeting their self-identified skill needs
- Equity of access and opportunity for all learners
- Learners are equipped to make informed choices about career and learning options
- Broader development of skills for active citizenship and the maintenance of New Zealand's cultural identity
- Improved provision of, and better systems of recognition for, high-level generic skills
- Promotion of specialist skills that contribute to New Zealand's development

The change required to achieve this strategy

New Zealand's continued prosperity and social well-being will rely on the skills and knowledge of its people, and how successfully their skills and knowledge are applied to generate economic growth and improve social outcomes.

Achieving this strategy requires greater engagement between the tertiary education system and employers, regional development organisations and communities to identify the current and future skills and knowledge that graduates will require in employment and wider society. It also requires a tertiary education system that is more effectively connected with global knowledge developments.

ITOs have been asked to take a much stronger leadership role in this area, connecting their industries with the tertiary education system, to meet current and future skill needs and promote training for employers and employees.

There needs to be greater ownership by employers, communities and individuals of the need to foster and develop skills. It cannot be seen solely as the responsibility of the education system.

This strategy recognises the importance of specialist skills, particularly through postgraduate education. Specialist skills include technical, research, entrepreneurial and managerial skills. The 2005 STEP also had a strong emphasis on trade and technical skills required to support and maintain New Zealand's infrastructure.

Another key part of this strategy is the development of generic skills, which complement the development of specialist skills. As with foundation skills, there has been a shift in thinking about generic skills within a broader framework of 'key competencies'. Competencies cover the knowledge, skills and dispositions that are needed by people to participate in a knowledge society. Key competencies are those that are important across a range of areas of life and contribute to overall success in life and a well-functioning society. Key competencies are acquired and further developed at all levels of learning. The strategy emphasises greater, explicit recognition of key competencies in programmes and qualifications throughout the tertiary education system.

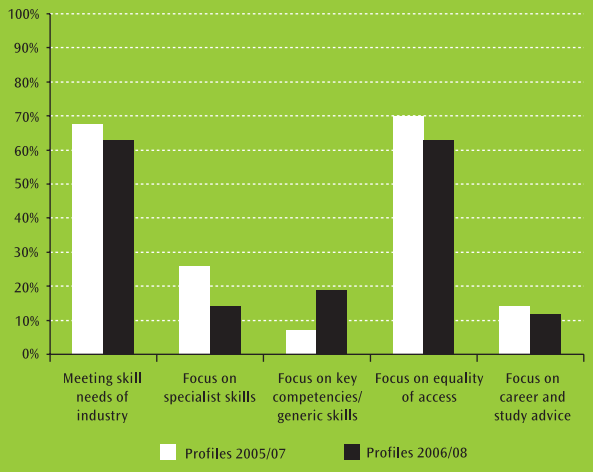
This strategy addresses equality of access and opportunity to participate and succeed in education at all levels. There is a particular focus on Māori, Pasifika, women (within industry training), learners from low socio-economic backgrounds, learners with disabilities and those living in remote areas.

Accompanying this is improving the information and support for learners to make well-informed decisions about education and career options.

Progress to 2005/06

Analysis of profiles shows that most TEOs had some change-focus on this strategy in 2005/07 and 2006/08 profiles. However, there was slightly less change-focus in 2006/08. In many cases, TEOs developed new or improved approaches in this area over the 2004 and 2005 period, which are now referenced as 'business as usual' in the 2006/08 profiles. The two areas within the strategy that had consistent focus across TEOs were meeting the skill needs of industry and focusing on access for under-represented groups.

Figure 29: Percentage of TEOs with change-focused objectives relating to 'Develop the Skills New Zealanders Need' in profiles 2005/07–2006/08



Skill shortages continue, although they are easing somewhat as the economy slows down. A recent OECD report concludes that raising productivity is the first challenge for New Zealand in order to improve standards of living. The challenge remains to raise the overall skill levels of the New Zealand workforce to remain economically competitive, to improve productivity and to facilitate the rapid introduction of new technologies and processes.

ITOs have continued working with their industries to develop skill plans and better understand workplace needs. Several ITOs are starting to implement their plans. ITPs are also focusing on industry requirements in their qualifications development. However, in research on stakeholder engagement, industries reported wide-ranging levels of engagement and expressed frustration at the relative slowness of tertiary education providers to respond to immediate market needs. The disparate goals of industry and education also made engagement problematic, along with scarce resources on both sides. The government is providing funding through several schemes to build better linkages between industry and tertiary education.

In the area of specialist skills, the number of postgraduate degree completions continues to increase, especially in health. In the government's Growth and Innovation Framework priority areas, enrolments at postgraduate level are static or declining, with the exception of creative arts. There is little growth also in completions in trade and technical subjects at levels 4 to 7, with declining completions in information technology.

In the area of equality of access and opportunities, there has been little change in participation, retention and progression for Māori, with the exceptions of declining participation at certificate level (following historically high levels) and increased progression to doctorates (most probably in response to additional funding through the PBRF). There has been an overall improvement in participation, retention and progression for Pasifika students across most levels. The number of students with disabilities has levelled off and the number recorded as accessing disability support services has decreased. There has been a continued increase in the number of first-time students aged over 25 in tertiary education.

Improvements to the availability of study-related information for prospective and current students continue and Career Services is expanding its service, particularly to assist young people to make good choices about tertiary education options. However, organisational commitment to study and career advice by TEOs is low.

Key challenges for moving forward

From the analysis of progress to date, the following key challenges for moving forward to achieve this strategy are evident:

- Meeting the skill needs of industry remains an important, but challenging, task for the tertiary education sector.
- There is much more to be done to improve the engagement between tertiary education and industry and build common understanding of the outcomes to be achieved.
- As government policy shifts focus to the quality of tertiary education, it will be important that recent gains in participation, retention and progression for under-represented groups are not lost and indeed are built on.
- Greater engagement and commitment are needed from TEOs to ensure current and prospective students can access quality study and career advice.








Skills in the Labour Market — the Current Context

This section provides an updated summary of the current labour market context for skills demand. The latest Department of Labour report on skills in the labour market[9] concludes:

"Labour market conditions have improved considerably in recent years. The unemployment rate was an equal 20-year low of 3.6% and the labour force participation rate was the second highest on record in the December 2005 quarter. Wage growth has increased in response to this tightening of labour market conditions. Net migration inflows are much lower than in 2003, but they have stabilised at around 7,000 per annum over the past year.

"Skill shortages have eased over the past year, mainly as a result of slowing economic growth. Higher labour force participation, net migration inflows, training, and wage growth also had a role in reducing shortages.

"Lower economic growth will continue to dampen employment growth and skill shortages. The February 2006 National Bank Business Outlook shows a net 9% of firms expect a fall in staff numbers in the year ahead, the worst result since October 2000. Despite a small reversal of recent labour market improvement, there will be continued pressure in the short to medium term as unemployment remains at or below a relatively low rate of 4.5%".

The implication for tertiary education is that while employers will be experiencing some easing of skill shortages as the economy slows, there will still be an ongoing need to meet skill demands. So long as unemployment remains low, much of this demand will be for education and training within the workplace.

A recent OECD review of New Zealand's economy[10] concluded that:

"while the country is now reaping the benefits of earlier reforms and real GDP growth has been very strong, it cannot afford to rest on its laurels if it wishes to catch up to the living standards of the top half of the OECD. The first challenge is to realise more rapid productivity growth, which provides the basis for real income gains. The second challenge is to improve labour utilisation among under-represented groups, not only to lift GDP per person but also to reduce the invidious social effects of benefit dependency".

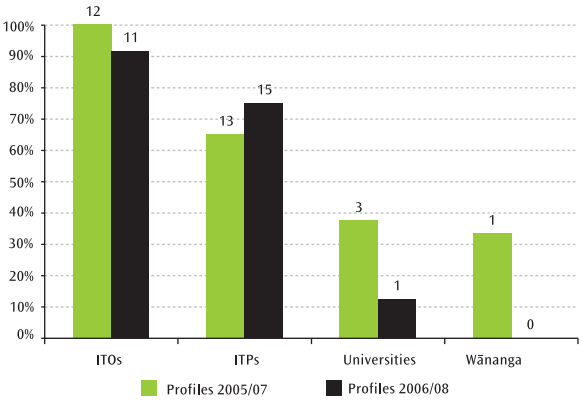
The report notes that lifting productivity growth is a multidimensional problem and "there is no 'smoking gun' to explain New Zealand's sub-par productivity performance". Improving human capital through education is just one dimension. The report notes that while New Zealanders are relatively well educated at tertiary level, there may be factors impeding this translating into higher economic productivity, including variable quality and relevance of the tertiary education being provided. The report also emphasises the need to raise the skills of those with low qualifications and poor foundation skills, both to improve productivity and to reduce social inequalities and intergenerational disadvantage.

Meeting Skill Needs in Industry

TEO approaches to meeting the skill needs of industry

The analysis of 2005/07 and 2006/08 profiles found that meeting the skill needs of industry was a strong area of change-focus for ITOs and ITPs. The decline from 2005/07 to 2006/08, in a number of cases, represents TEOs moving new initiatives into business as usual and focusing on operationalising and consolidating these initiatives.

Figure 30: Percentage of TEOs with change-focused objectives relating to meeting the skill needs of industry in profiles 2005/07–2006/08



ITOs are working in collaboration with industry to assess skill needs as part of their leadership role. In their profiles, most ITOs have objectives to ensure that their qualifications and training programmes reflect the needs of industry. Several also have objectives relating to good practice and quality provision of industry training, in a way that is responsive to industry needs. Many ITOs are also expanding and marketing their provision and coverage across their industries.

9 Department of Labour, *Skills in the Labour Market*, March 2006.

10 Organisation for Economic Co-operation and Development, *Economic Surveys — New Zealand*, 2005.

The most common approaches in ITPs are to develop partnerships, relationships and joint ventures with industry, and involving industry in the development of qualifications and programmes, with the latter often being achieved through advisory groups.

The research on stakeholder engagement found a similar pattern from the analysis of profiles. ITPs had the most frequent references to active engagement with industry of all tertiary education providers. This was followed by universities, whose engagement with industry is spread across education and research. The providers surveyed in that research were satisfied with their level of engagement with industry and believed they contributed substantially to the economic and moderately to the social goals of business and industry.

Industry views on provider engagement

The research on stakeholder engagement found that people within industry reported wide-ranging amounts of engagement from tertiary education providers, from none at all through to very frequent. The nature of the engagement varied from providers just promoting courses to more considered engagement. In general, engagement from universities was patchy and driven by faculty staff, while engagement from ITPs was somewhat more coordinated and driven by the organisation. Industry representatives were generally critical of the quality of engagement, often seeing it as narrowly based and lacking mutual respect; they tended overall to be dissatisfied with the engagement. Where successful engagement did occur, it was dependent on the people and providers involved and a willingness from both sides to identify and work on areas of mutual interest.

Across industry groups, three key barriers to engagement were identified. Firstly, more often than not, it was the stakeholders who had to initiate engagement, while providers were not proactive. Secondly, they found providers to be bureacratic, inflexible and unable to respond to rapidly changing industry needs. Thirdly, there were the disparate goals of industry and education providers and the difficulty of establishing common goals. These were exacerbated by lack of time and resources, both on the side of industry and from tertiary education providers.

Labour market and employment strategy coordinating a focus on a high-performing labour market

The government's new labour market and employment strategy, 'Better Work, Working Better' aims to achieve a high-performing labour market in New Zealand. The strategy has four inter-related goals:

1. high levels of participation in high-quality, well-paid and diversified employment
2. a diverse, adaptable and highly skilled workforce
3. high-quality and productive workplaces, within an effective regulatory environment
4. high-performing sector and regional labour markets.

Meeting skill needs through tertiary education is critical to the achievement of the second goal. However, tertiary education also has an influence on the other goals.

Partnerships for Excellence increasing the private sector investment in tertiary education

The Partnerships for Excellence framework aims to increase private sector investment in tertiary education and foster better links between tertiary education institutions, industry and business. Partnerships for Excellence enables tertiary institutions to seek matching funding from government for large-scale investment projects (generally those valued at $10 million or more).

In the 2005 funding round, six new proposals were approved with total funding committed of $40.6 million. This adds to the four projects approved from 2002 to 2004. The new projects cover such areas as:

- building capability in agriculture and life sciences, and the equine industry
- plastics, information and communications technology, and health innovation
- a real world learning centre for the trades.
















ITP Business Links Fund supporting closer collaboration

The ITP Business Links Fund provides a resource to build the capability of ITPs to establish and maintain effective working relationships with the business sector. Longer term, it is envisaged that ITPs will be able to adapt their provision to reflect more closely the skill requirements of business and industry.

The second allocation round of $5 million was held at the end of 2005. Funding was allocated to a range of projects including:

- research to support business engagement plans, particularly on skill needs analysis
- building human capability to develop staff skills to work with industry more effectively, including staff secondments to industry
- increasing the relevance of provision, including student placements and secondments from industry, also known as 'experts in residence'
- establishing centres, incubators or clusters for cooperative curriculum development, increasing staff knowledge, provision of work experience for students and opportunities for graduates
- improving advice received through programme advisory committees through improved structures, increased resources and additional activities, such as regular forums with business stakeholders and community representatives.

The focus for investment in 2006 has shifted from activities designed to improve relationships with business stakeholders, to the adaptation of provision to meet the needs of local business/industry.

Growth and Innovation Pilot Initiatives (Growth Pilots) testing new ideas

The Growth Pilots were designed to promote a culture of entrepreneurship and sharing of knowledge and expertise between TEOs and businesses in three target sectors — namely biotechnology, information and communications technology, and design. The pilots are also aimed at improving the quantity and fitness for purpose of graduates in relevant areas of study.

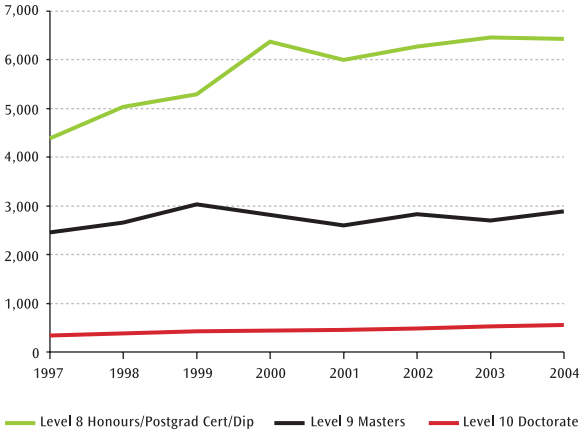
In the three funding rounds from 2004 to 2006, the TEC has approved just over $17 million for 31 projects, ranging from one to four years' duration. The projects are led by 10 TEOs and involve partners in over 25 TEOs and across a wide range of industries, including: game development, plastics, fashion, textiles, sports apparel, furniture, engineering, biopharmaceutical, biotechnology, agribiotechnology, healthcare, health informatics, tourism, software systems, whiteware manufacturing, timber and animal health industries.

Development of Specialist Skills

Small increase in postgraduate completions

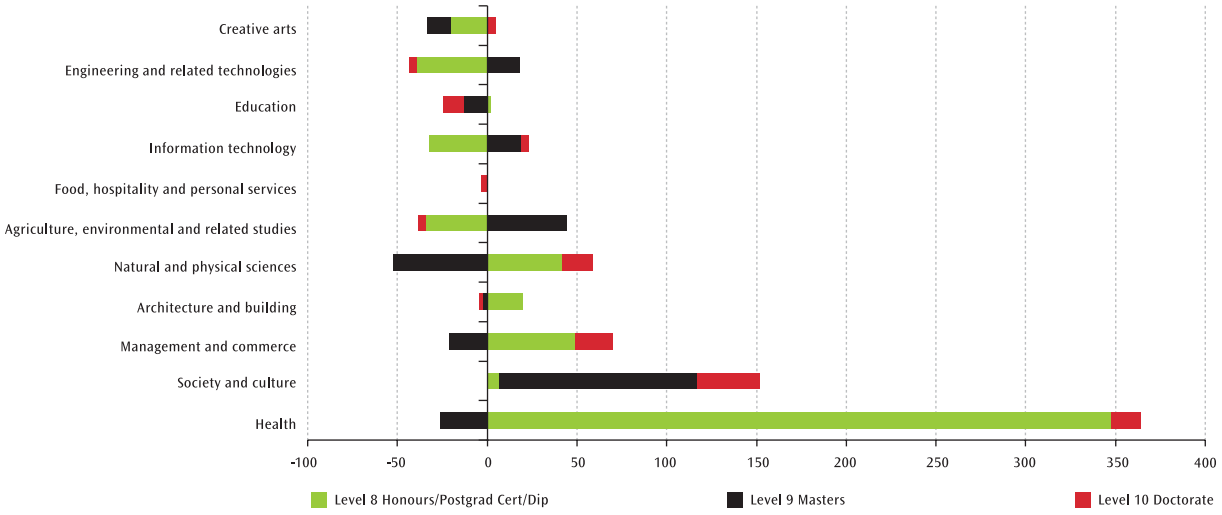
The number of postgraduate qualifications completions increased by 2.5 percent from 2002 to 2004. The largest proportional growth was in doctorates (16 percent from 2002 to 2004).

Figure 31: Postgraduate qualifications completed by domestic students 1997–2004



The fields of study with the largest increases in postgraduate qualification completions from 2002 to 2004 were health (mostly at level 8 — honours and postgraduate diplomas and certificates), society and culture and management and commerce. The fields where there were notable decreases were education, engineering and related technologies, and creative arts.

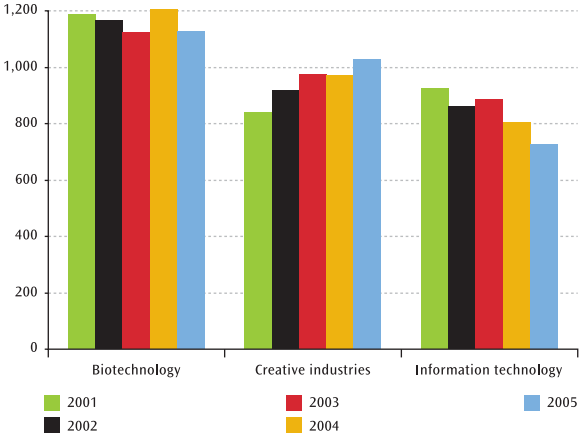
Figure 32: Change from 2002 to 2004 in postgraduate qualifications completed by domestic students by field of study and qualification level



The following indicator looks at postgraduate enrolments in EFTS terms in the three focus sectors identified in the government's Growth and Innovation Framework — biotechnology, creative industries[11], and information and technology. These were selected by government as sectors that could contribute directly to economic transformation in their own right, and as key technologies that can enhance the growth prospects of New Zealand's wider economic base.

Postgraduate enrolments in biotechnology-related courses have remained reasonably stable from 2001 to 2005. Enrolments in creative industries have been steadily increasing, while enrolments in information technology have declined from 2001.

Figure 33: EFTS consumed by domestic students in postgraduate courses in the Growth and Innovation Framework priority areas 2001–2005



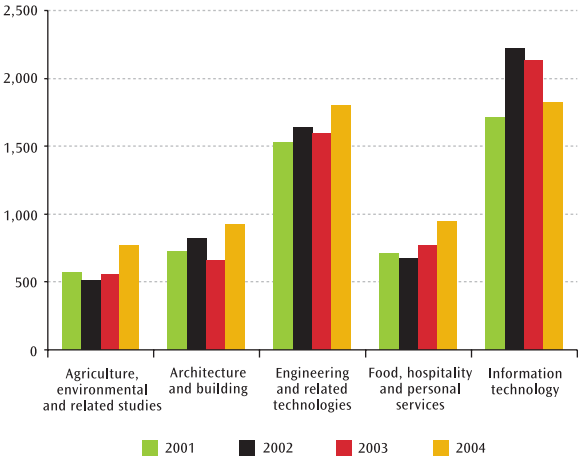
Little growth in trade and technical qualification completions

Another area of critical specialist skills is in the trade and technical areas. These are acquired through qualifications from levels 4 to 7, covering higher-level certificates, diplomas and degrees.

The following indicators use broad field of study categories with a trade and/or technical focus and look at qualification completions from level 4 certificates to bachelors degrees.

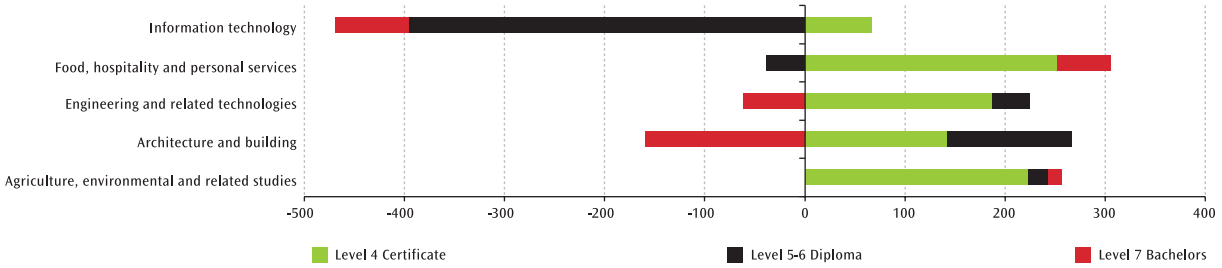
Four of the five fields show limited growth in completions from 2001 to 2004. Completions in information technology have declined since peaking in 2002.

Figure 34: Level 4 to 7 qualifications in trade- and technical-related fields completed by domestic students 2001–2004



11 Within creative industries, the priority focus has been on design and screen production. The indicator here covers all courses relating to architecture, design and creative arts, and, as such, represents a proxy for the specialist 'talent pool' available to the creative industries.

Figure 35: Change from 2002 to 2004 in trade and technical qualifications completed by domestic students by field of study and qualification level



Looking at the change from 2002 to 2004 by level of study, there has been an increase in level 4 certificate completions in all fields. Diploma completions have increased in architecture and building, engineering, and agriculture and environmental studies, and decreased notably in information technology and slightly in food, hospitality and personal services. There has been a decrease in bachelors completions across information technology, architecture and building, and engineering, while there has been a small increase in agriculture and environmental studies and food, hospitality and personal services.

Better by Design

The government's Better by Design programme includes four design education initiatives. These initiatives build the ability of the tertiary education sector to improve the design capability of graduates and New Zealand companies.

The four design education initiatives are:

- Design Education Internships
- Profit by Design
- Design in Business Academic Forum
- Professional accreditation of tertiary design qualifications.

The purpose of the design education initiatives is to:

- facilitate connection and integration of industry and design talent
- contribute to upskilling senior managers and business and engineering graduates in design management/strategic application
- catalyse raising of design education standards and credibility of design qualifications
- encourage and support collaboration between the tertiary design education sector and businesses.

Development of Key Competencies

In 2005, the Ministry of Education released a discussion document on a framework for key competencies in the tertiary education sector. Some feedback on the document was received. The framework was utilised in the 2005 STEP in the context of a 'stronger focus on skills for work and life'.

The framework is being, and will continue to be, used to guide thinking in a number of key policy projects, including upskilling the workforce, Learning for Living and the development of new quality arrangements. It is also being used to think about advanced skills in the context of economic transformation and further work on growth and innovation.

In response to the framework, and its inclusion in the 2005 STEP, some TEOs have included objectives relating to key competencies in their 2006/08 profiles. These objectives include developing adaptive learning, lifelong learning skills, fostering intellectual independence of students and developing students' skills, attributes and knowledge to make a positive contribution to society and their employment prospects. These objectives are to be achieved through improvements to qualifications, assessment and curriculum.

Equality of Access and Opportunity

The first part of this section looks at access and opportunity for Māori and Pasifika learners in level 1 to 3 certificates, bachelors and masters degrees in 2002 and 2004 in terms of:

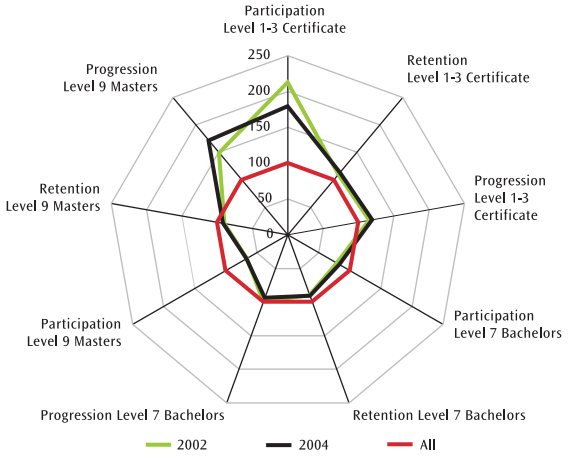
- age-standardised participation rates (participation)
- the proportion of students at these levels who either completed a qualification or remained in study from 2001 to 2002 and 2003 to 2004 (first-year retention)
- the proportion of students completing a qualification in 2001 or 2003 who moved on to further study at a higher level the following year (progression).

Little relative movement for Māori students

From 2002 to 2004 there has been little change overall in participation, retention and progression for Māori students relative to all students. The notable changes have been:

- reducing participation rates at levels 1 to 3, from the historically large participation in 2002
- some improvement in retention rates at bachelors level
- significantly increased progression from masters to doctorate, possibly in response to the additional funding for Māori doctorate completions available under the PBRF.

Figure 36: Comparison of participation, first-year retention and direct higher-level progression rates for Māori and all domestic students 2002 and 2004

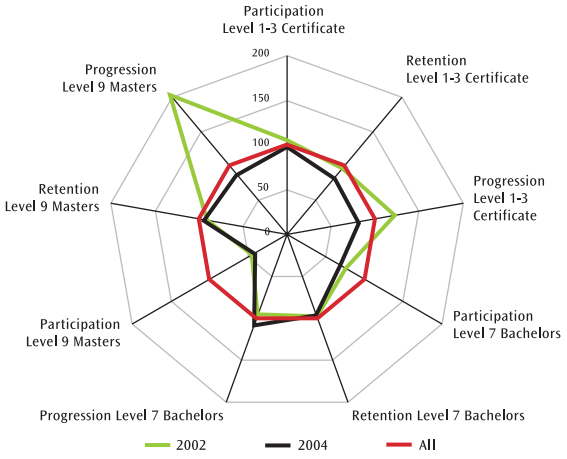


Note: Rates are represented on an index for comparison, where the rate for all students in each year is set to 100.

Improving participation and retention for Pasifika students relative to all students

From 2002 there have been noticable increases in participation, retention and progression of Pasifika students. In level 1 to 3 certificates, participation and progression rates of Pasifika students exceeded that of all students and their retention level approached that of all students. At bachelors level there was an increase in participation, although at a lower rate than for all students, and retention rates are now close to those of all students. However, progression rates have slipped relative to all students. Participation at masters level continues to be much lower than for all students, and retention rates somewhat lower. However, there has been a jump in progression rates to doctorate studies, again probably in response to additional PBRF funding for Pasifika doctoral completions.

Figure 37: Comparison of participation, first-year retention and direct higher-level progression rates for Pasifika and all domestic students 2002 and 2004



Note: Rates are represented on an index for comparison, where the rate for all students in each year is set to 100.

Greater proportion of women in industry training

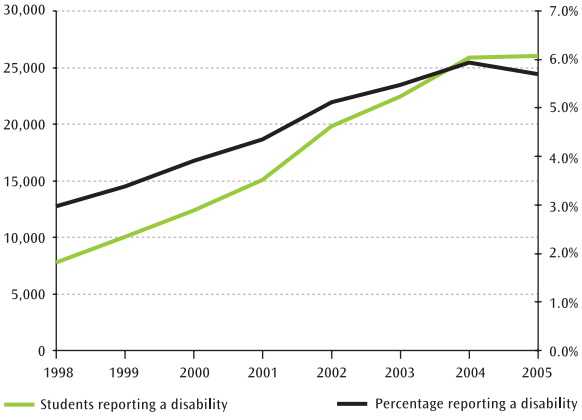
In most parts of the tertiary education system, participation of women is greater than that of men. The one exception is industry training.

The proportion of women in industry training increased from 24 percent in 2002 to 28 percent in 2005. The proportion in Modern Apprenticeships was 8.5 percent in 2005, up from 7.0 percent in 2002.

Slight decline in number of students with disabilities

The number and proportion of students with a reported disability[12] has decreased slightly in 2005 compared with 2004, following a period of sustained growth. The growth in students in disabilities from 1998 to 2004 may, in part, be due to greater participation of students in older age groups in tertiary education over this time period. In 2005, there were 26,000 students with disability, making up 5.7 percent of all students.

Figure 38: Number and percentage of domestic students with a disability 1998–2005

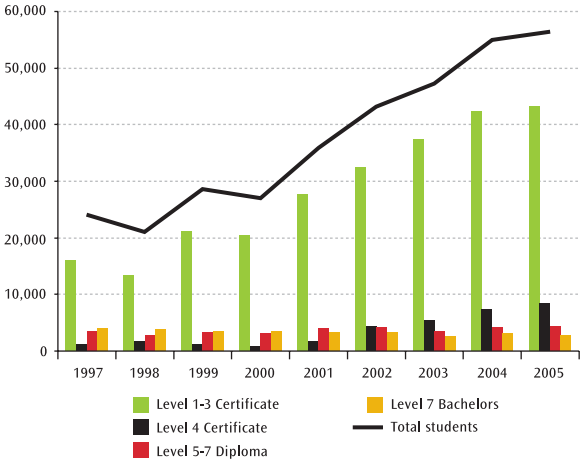


In 2004, information on students accessing disability services was collected for the first time. This information showed that 4,500 students accessed disability services in 2004 , representing 1.0 percent of all students. This number fell to 3,750 in 2005, representing 0.8 percent of all students. This change may be more a reflection of improving data quality as this new piece of information is implemented.

Continuing increase in number of first-time students 25 and over

The number of first-time students aged 25 and over continued to increase in 2005, but at a lower rate than in previous years. In 2005, an estimated 56,400 students aged 25 years and over started tertiary education for the first time. The majority (43,200) enrolled in level 1 to 3 certificates. The largest number were in ITPs (31,500), followed by wānanga (10,400).

Figure 39: Domestic students aged 25 and over in tertiary education for the first time by qualification level 1997–2005



TEO approaches to improving equity of access and opportunity for under-represented groups

The analysis of 2005/07 and 2006/08 profiles found that around 70 percent of TEOs had change-focused objectives relating to equality of access and opportunity in their 2005/07 profiles, decreasing to just over 60 percent in 2006/08 profiles.

In ITO profiles, the focus has been on equality of access for all workers. A number have specific focus on increasing participation and achievement of women. Several have a specific focus on Māori and Pasifika. Actions to achieve these objectives include removing barriers to participation, improving appropriateness of training materials and flexible learning provision.

The main focus in TEI profiles is on improving representation of Māori, Pasifika and students with disabilities. Some TEIs are also addressing access for students in remote areas. The most common way of improving access is through student support services, particularly in the first year of study. Quite a few TEIs are looking at how to improve their programme structure to prepare students for study and encourage progression to higher levels. Some also see flexible learning as a means to improving access for some students.

12 These numbers are based on students who self-reported having a disability to their provider as part of the enrolment process. The recommended question for providers is "Do you live with the effects of significant injury, long-term illness, or disability?" However, the actual question used may vary across providers.

Support for Learning and Career Decisions

TEO support for learning and career decisions

The analysis of TEO profiles shows that support for learning and careers decisions was not a strategic focus for most TEOs. While many do provide services in this area, few TEOs mentioned it as an area for development in their profiles objectives.

Of those that did have objectives in this area, they were fairly evenly split between study advice and career planning in 2005/07 profiles. In 2006/08 profiles, the focus was more towards career planning.

Initiatives to support learning and career decisions

Expanding advice offered through Career Services

Career Services enhanced and expanded its delivery of career information, advice and guidance via website, free phone, and face-to-face consultations. In particular, Career Services continued to develop and deliver Take-Off To Tertiary, an initiative aimed at prospective tertiary students to provide them with impartial and user-friendly tertiary information through a range of different media and help them make informed decisions relating to their tertiary study. Another initiative introduced in 2005 was Designing Careers, targeted at Year 10 students and at Year 11 to 13 students deemed to be "at risk" of not making a successful transition from school. Its desired outcome is that all targeted students will have completed an individual learning and career plan with assistance from parents, the careers advisor and their teachers, leading to more successful transitions between school and further education, training or work.

Services delivered are continuously monitored and evaluated. Results show a high degree of engagement and satisfaction with the services offered.

New web resources available

The Ministry of Education has developed a new web-based resource on the Tertiary Education Portal for prospective and current tertiary students and their families. The website draws on information about student enrolments and qualification completions from Ministry and TEC data sources. Impetus for the new website came from concerns about the lack of objective and neutral information available about TEOs, qualifications and courses.

The Ministry's Team-Up project provides parents, caregivers and families/whānau with information and resources to help them get involved in and support their children's education – from the early years to when they leave school and beyond. The Team-Up website includes a significant section of resources on making decisions on tertiary education options.

















Strengthen Research, Knowledge Creation and Uptake for our Knowledge Society

Objectives

- Excellent research performance is encouraged and rewarded
- Stronger accountability and enhanced performance reporting for tertiary education research
- Increased global connectedness and mobility
- A more focussed tertiary research investment through world-class clusters and networks of specialisation
- Greater alignment of tertiary education research with national goals
- Improved knowledge uptake through stronger links with those that apply new knowledge or commercialisation of knowledge products
- Increased breadth of support for research students and emerging researchers, with a particular focus on the development of Māori researchers

The change required to achieve this strategy

A key aspect of this strategy is to encourage and reward excellent research in the tertiary education sector, supported by improved accountability and performance reporting. The PBRF is a key policy for achieving this.

Achieving this strategy requires TEOs involved with research to develop a more concentrated research effort based on networks of specialisation and a strong focus on quality, relevance to end-users and uptake of new knowledge.

While it is expected that there will be greater engagement with end-users and improved knowledge uptake, the continued contribution of the tertiary education sector to basic and long-term research will be essential.

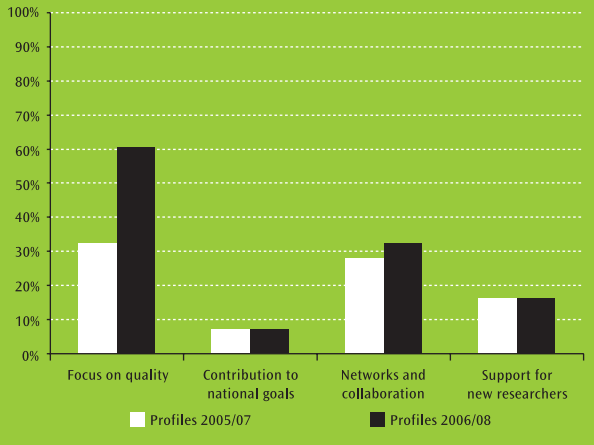
This strategy also addresses support for research students and emerging researchers, particularly Māori and Pasifika researchers.

Progress to 2005/06

The analysis of profiles found that around half of TEOs had change-focused objectives in this strategy in 2005/07 profiles, increasing to nearly two-thirds in 2006/08 profiles. The growth in focus has largely been in the ITP and wānanga sub-sectors.

In 2005/07 profiles the main focus was developing quality research programmes, as well as networks and collaboration. The increased focus in 2006/08 profiles has largely been concentrated on developing quality research programmes, in ITPs as well as universities, as they prepare for the 2006 PBRF quality evaluations.

Figure 40: Percentage of TEOs with change-focused objectives relating to 'Strengthen Research, Knowledge Creation and Uptake' in profiles 2005/07–2006/08



Universities continue to contribute heavily to new and future knowledge through basic research. However, it is harder to trace the contribution of tertiary education research to specific national goals. In general, TEOs are not specifically focused on national goals in their organisational planning.

Evidence suggests that collaboration among New Zealand TEOs in research is increasing. The Centres of Research Excellence (CoREs) have played an important role in modelling and encouraging collaboration and demonstrating the benefits of working across discipline and institutional boundaries.

There appears to be increased support for new researchers, with improved retention in doctorate degrees. The progression of Māori and Pasifika students to doctoral studies has also increased substantially. These improvements may relate to the additional funding for doctoral degree completions within the PBRF.

Key challenges for moving forward

From the analysis of progress to date, the following key challenges for moving forward to achieve this strategy are evident:

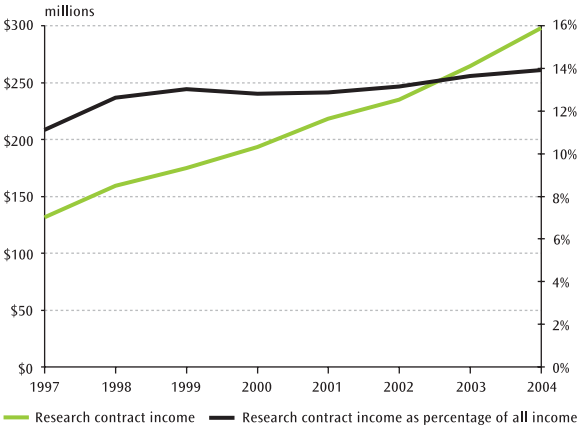
- continuing to develop and implement support for quality research programmes in TEIs
- establishing clearer connections between tertiary education research and its contribution to national goals
- continuing to support greater collaboration among institutions, particularly where benefits of new knowledge creation are possible
- continuing to support new researchers through doctoral studies, followed up with post-doctoral opportunities.

Quality of Research

Sustained quality of research output shown by high-level indicators

External research earnings provide a measure of perceived quality and confidence in university-based research. Research income has continued to increase, although it has levelled off as a proportion of total income. As noted in the cross-strategy indicators, most of the growth comes from sources other than government-sponsored research funds and hence is valued by private and public sector clients as contributing directly to their needs.

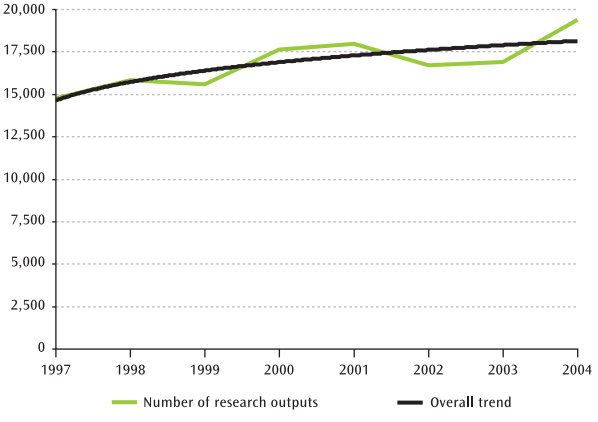
Figure 41: University research contract income 1997–2004



Source: University Annual Reports

Analysis of PBRF results has also shown that research outputs are highly correlated to research quality[13]. As with income, overall growth in outputs has continued, although it is possibly levelling off.

Figure 42: University research outputs 1997–2004

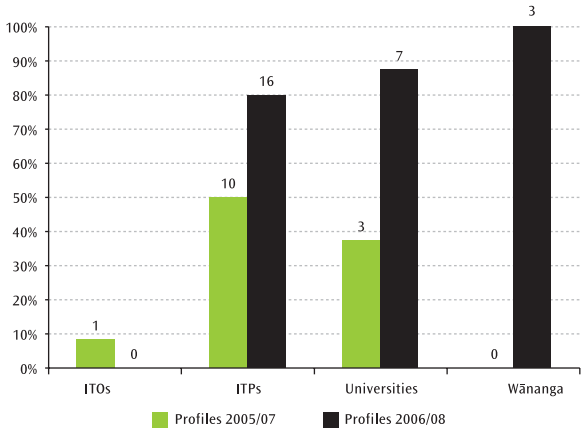


13 Warren Smart and Roger Smyth, *Research Measures — comparing the new with the old*, Ministry of Education, 2005.

TEO approaches to developing quality research programmes

The analysis of profiles shows increased change-focus on quality research programmes across TEIs as they prepare to participate in the 2006 PBRF quality evaluations.

Figure 43: Percentage of TEOs with change-focused objectives relating to quality research in profiles 2005/07–2006/08



In 2006/08, most ITPs had profile objectives around developing their research programmes and capability. Their focus is on applied research and research by staff in degree and postgraduate programmes. In 2005/07, universities had a focus on developing their organisational infrastructure and support. In 2006/08, the focus shifted to developing quality research programmes, as well as specific research centres. In 2006/08, all three wānanga had objectives relating to developing research programmes and capability.

Contribution of Research to National Goals

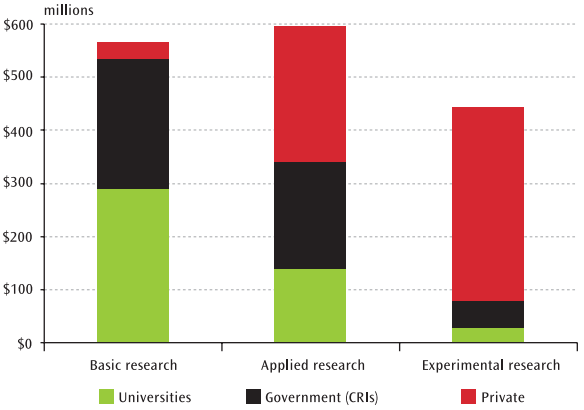
The link between research and economic and social development goals is difficult to establish, as contributions occur over a long period of time following completion of the research output and the linkages can be quite indirect. This section looks at key research output indicators to see how well positioned tertiary education research is to contribute to national goals in various ways.

Contribution to new and future knowledge

One of the long-term contributions of tertiary education research to national goals is through expanding the body of new knowledge through basic research. The 2004 Statistics New Zealand Research and Development Survey shows that around two-thirds of university-based research expenditure is in the basic research category[14], compared with about half for Crown Research Institutes and only 5 percent for private research establishments.

Looking at research expenditure in terms of research types, universities contribute to about half of the country's total expenditure on basic research and a quarter of the total expenditure on applied research.

Figure 44: Expenditure on types of research by sector 2004



Source: Statistics New Zealand, Research and Development Survey 2004

Contribution to economic and social development, Māori development and environmental management

The TES identifies four critical national areas where the tertiary education sector should be contributing in terms of research and knowledge creation. These are economic development, social development, Māori development and environmental management.

Understanding the contribution of research to specific national goals requires careful analysis of individual research outputs. One such analysis for social science is referred to in the accompanying text box.

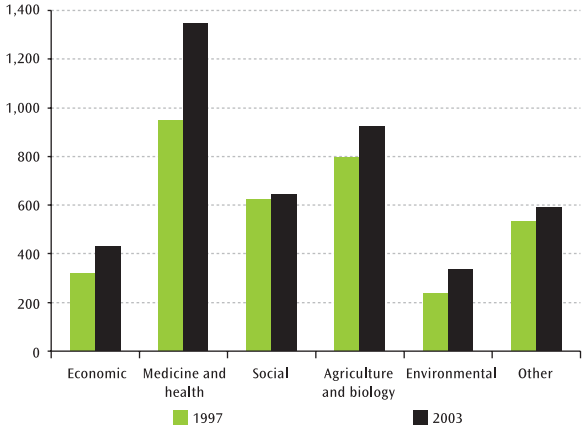
14 Category definitions are not comparable with the 2002 survey results published in the Baseline Monitoring Report (April 2004).

At a more general level, it is possible to look at the balance of published papers across broad subject domains as follows:

- Economic: engineering, economics and business and computer science
- Medicine and health: clinical medicine, psychology/psychiatry, neuroscience, pharmacology and immunology
- Social: social sciences, humanities, education and law
- Agriculture and biology: plant and animal science, biology and biochemistry, agricultural sciences, molecular biology and genetics and microbiology
- Environmental: geosciences and ecology and environment
- Other: chemistry, physics, mathematics, multidisciplinary and astrophysics.

Data from a Ministry of Research, Science and Technology study of indexed research papers[15] from the tertiary sector shows that the largest growth in numbers is in the area of medicine and health. There has been steady growth in subjects classified under economic, agriculture and biology, and environmental. The number of papers in social disciplines has remained the same.

Figure 45: Published indexed research papers from the tertiary education sector by general domain 1997 and 2003



Source:Ministry of Research, Science and Technology, 2003 Bibliometric Study

Contribution of social science research to government Knowledge Theme Areas

The government has identified seven Knowledge Theme Areas of strategic interest for social policy knowledge investment. A recent paper by Charles Crothers[16] maps the titles of social science research outputs evaluated for the 2003 PBRF to the Knowledge Theme Areas, amongst other things.

Crothers found that 24 percent of social science research outputs could be mapped directly to one of the Knowledge Theme Areas. The largest contribution was in the areas of work and knowledge and knowledge and skills.

Table 1: Social science outputs assessed in the 2003 PBRF mapped to social policy Knowledge Theme Areas

Knowledge Theme Areas	Percentage of outputs
The changing nature of work	6.4%
Developing human capabilities – knowledge and skills	6.6%
Disparities between groups – how to change the picture	1.8%
Enhancing positive social outcomes – developing risk and protective factors	1.6%
Measuring and understanding social well-being	2.2%
Social connectedness	1.5%
Social and cultural identities	3.2%
Total mapped to Knowledge Theme Areas	**23.6%**

TEI approaches to contributing to national goals

The analysis of profiles found that the link of research to national goals is not addressed in most profiles. This is not to say that TEI research is not contributing to national goals but, rather, there is not an explicit process for linking research priorities to national goals within the institutions.

15 Using the Thomson-ISI National Citation Report.

16 Charles Crothers, *Mapping the Social Sciences: characteristics of New Zealand academic social sciences research outputs*, 2006.

Research Networks and Collaboration

TEI approaches to research networks and collaboration

The analysis of profiles found that most universities have a focus on research networks and collaboration within their profile objectives. There was increased focus in research networks and collaboration within ITP and wānanga profiles for 2006/08.

The common areas of focus for universities are business and industry and international linkages. Some are also focusing on linkages with other TEIs and research organisations and with Māori and iwi.

The main focus for the ITPs with objectives in this area is on collaboration with business and communities. In 2006/08 profiles, there was also mention of increased research contracts and developing links with researchers in other TEIs. In 2006/08, wānanga with objectives in this area had a focus on increasing research contracts and consultancy.

Centres of Research Excellence linking institutions across disciplinary boundaries

Seven CoREs were established in 2001 and 2002 to support leading-edge, international standard research that fosters excellence and contributes both to New Zealand's national goals and to knowledge transfer. The CoREs are primarily, but not exclusively, inter-institutional research networks, with researchers working together in a commonly agreed work programme.

In 2004, the TEC, in consultation with the Ministry of Education, undertook a review of the performance of each of the CoREs.

The review has found that, by and large, the establishment of the CoREs has been a success. CoREs have, among other things, encouraged the production of well-focused, excellent research, concentrated researchers on areas of excellence, and increased collaboration within institutions, with other institutions, with CRIs, and with businesses. The CoREs have contributed to the training of New Zealand's future researchers and innovators, and improved knowledge output and transfer from TEOs.

One notable finding of the review was that the different CoREs had taken different approaches to research and related activities and that this promotes different outcomes. Success in the first three years of operation depended on overcoming traditional barriers between disciplines and institutions and building new relationships with end-users and international collaborators. The advances made by the CoREs in their first three years suggest that it is in the boundary areas between disciplines, and between stages in the development of knowledge, where real untapped opportunities exist. Collaboration among research groups and across disciplines also has the potential to avoid duplication and make best use of New Zealand's resources, tackling the problem of scale that can be a barrier to the success of New Zealand's research programmes.

New and Emerging Researchers

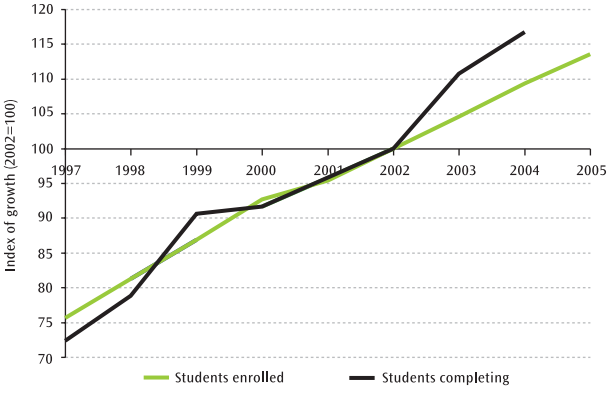
Support for research students and emerging researchers is an important emphasis of this strategy. Formal training in research is mainly carried out through postgraduate research degrees.

The PBRF provides additional funding to participating TEIs for completions of doctoral degrees, with higher amounts for completions by Māori and Pasifika students. The effect of this of new funding arrangement can be seen in the following indicators.

Increased doctoral completions

From 2002 to 2004, the number of doctoral students completing degrees grew by 17 percent, while the number of enrolments grew by 9 percent. Enrolments continued to grow in 2005.

Figure 46: Index of doctoral degree completions and enrolments for domestic students 1997–2005 (2002=100)



The proportion of women enrolled in doctoral degrees has increased from 49 percent in 2002 to 53 percent in 2005. They have also increased as a proportion of completions from 48 percent in 2002 to 51 percent in 2004.

Māori students continue to represent 6.6 percent of domestic doctoral students, as their numbers grow at a similar rate to all enrolments. Māori students have increased as a proportion of completions in recent years from 4.9 percent in 2002 to 6.4 percent in 2004.

The proportion of Pasifika students in doctoral studies has increased from 1.7 percent in 2002 to 2.3 percent in 2004, as the total number of enrolments has increased from 62 to 95. In 2004, there were eight doctoral completions by Pasifika students, the highest number in one year in the period from 1997.

Dramatic drop in first-year attrition rates

From 2002/03 to 2003/04 there has been a dramatic drop in first-year attrition rates for doctoral students. In 2002, 18 percent of doctoral students did not continue study in the following year. This figure is reasonably consistent with figures from previous years. In 2003, only 8 percent of doctoral students did not continue study in the following year.

This change has been particularly strong for women, where the rate has dropped from 17 percent in 2002/03 to 6 percent in 2003/04. It has also brought the Māori first-year attrition rate much closer to that of all students, from 24 percent in 2002/03 to 11 percent in 2003/04.

Increase in Māori and Pasifika students progressing from masters to doctoral study

The other significant shift from 2002/03 to 2003/04 has been in the proportion of Māori and Pasifika students completing masters degrees and moving directly to doctoral studies in the following year.

In 2002, 7 percent of completing Māori students moved directly on to doctoral studies in the following year, a figure consistent with previous years. In 2003, this proportion increased to 10 percent.

For Pasifika students, the 2002/03 progression figure was also 7 percent, somewhat higher than in previous years. And it increased to 12 percent in 2003/04.

TEI support for new researchers

The analysis of profiles found that this is an area of focus for universities and wānanga. Surprisingly it is not seen as an areas of focus by ITPs, even though several offer postgraduate programmes and/or degree programmes leading to postgraduate qualifications.

In the universities and wānanga in 2005/07, there was a strong emphasis on support and supervision of research students. Some also had an emphasis on developing infrastructure to support new and emerging researchers. This may be in response to funding incentives for doctoral completions through the PBRF and the addition of a new category of 'new and emerging researchers' in the next PBRF quality evaluation round.

In 2006/08 profiles, universities had a much stronger focus on increasing the number of research degree completions. Wānanga had a focus on developing the research capability of their staff and development of postgraduate programmes and support.
















Te Rautaki Mātauranga Māori — Contribute to the Achievement of Māori Development Aspirations

Objectives

- Tertiary education leadership that is effectively accountable to Māori communities
- Strong and balanced Māori staff profiles within the tertiary education system
- Quality programmes that recognise Te Ao Māori perspectives and support the revitalisation of Te Reo Māori
- Robust options for kaupapa Māori tertiary education that reflect Māori aspirations
- Increased participation by Māori in both a broader range of disciplines and in programmes that lead to higher-level qualifications
- A tertiary education system that makes an active contribution to regional and national Māori/whānau/hapū/iwi development

The change required to achieve this strategy

Contributing to the achievement of Māori development aspirations requires the tertiary education sector to work in partnership with Māori, whānau, hapū and iwi to improve the success of Māori students, be more responsive to diverse Māori realities and make an active contribution to Māori, whānau, hapū and iwi development. The importance of this strategy is reinforced in the key changes, particularly developing effective partnership arrangements with Māori communities.

In 2001, the Hui Taumata Mātauranga endorsed three goals for Māori education, advanced by Professor Mason Durie:

- to live as Māori
- to actively participate as citizens of the world
- to enjoy a high standard of living and good health.

The success of this strategy needs to be assessed in terms of all three of these dimensions.

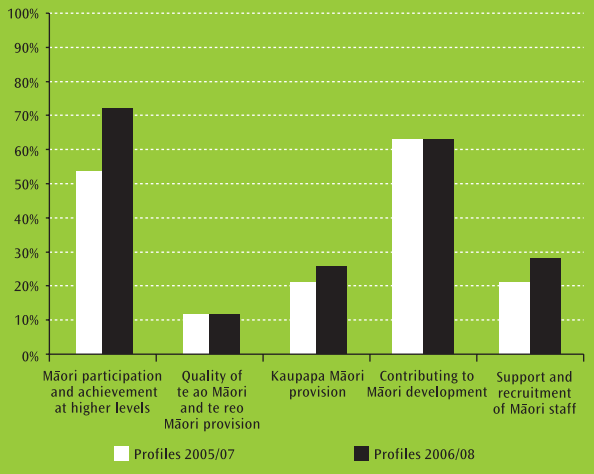
While the contribution to Māori development is specifically addressed by this strategy, it is expected other strategies in the TES will also contribute to progress towards achieving the goals of this strategy.

This strategy places particular emphasis on increased participation of Māori in a broader range of subjects and at higher levels, further development of quality provision in te ao Māori, te reo Māori and kaupapa Māori, and on building management and staff capability within TEOs.

Progress to 2005/06

Most TEOs had change-focused objectives relating to this strategy in their 2005/07 and 2006/08 profiles. This pattern was consistent across sub-sectors. The two theme areas most commonly covered in profile objectives were ‘participation and achievement at higher levels’ and ‘contributing to Māori development’.

Figure 47: Percentage of TEOs with change-focused objectives relating to ‘Te Rautaki Mātauranga Māori’ in profiles 2005/07–2006/08



Māori participation at diploma and postgraduate levels continues to increase. Māori enrolments at bachelors level have declined faster than the overall decrease in enrolments at this level in 2005. Retention rates are improving for Māori students across most levels, but are still lower than those of other students. Direct progression across postgraduate degrees has also improved, particularly from masters degrees to doctorates.

Te ao Māori and te reo Māori provision has decreased, as numbers have decreased in wānanga. This may represent some clearing of the 'waiting list' of people who were prospective students for the wānanga type of provision in this area. Recent publicity about difficulties at Te Wānanga o Aotearoa will also have had an impact on the 2005 student numbers. However, there is little sign of increased numbers of students in enrolling in these kinds of courses in other sub-sectors.

There has been steady growth in enrolments for bilingual and immersion teaching in early childhood education, as the new quality requirements for early childhood education are introduced. Enrolments in school-related bilingual and immersion teaching qualifications are falling.

Overall numbers at wānanga have fallen, reflecting fewer students at Te Wānanga o Aotearoa. While certificate-level enrolments have fallen from historic highs, the number of masters students at wānanga doubled from 2004 to 2005. Wānanga continue to achieve better retention rates for Māori students below degree level than other sub-sectors.

The number of Māori students in Māori PTEs has been static, while Māori enrolments in the PTE sub-sector have increased overall.

A number of TEIs and ITOs are developing kaupapa Māori delivery within their organisations. In many cases, this involves developing qualifications with a kaupapa Māori focus. Some are also developing kaupapa Māori-based centres of learning within their organisation.

TEOs are continuing to strengthen their relationships with iwi and Māori. The analysis of profiles shows a shift from process objectives to more objectives with an outcome focus from 2005/07 to 2006/08. Māori and iwi groups view tertiary education as vital to achievement of their economic and social goals, but continue to have mixed experience of engagement with providers.

Analysis of profiles shows limited attention to support and recruitment of Māori staff within TEO objectives.

Key challenges for moving forward

From the analysis of progress to date, the following key challenges for moving forward to achieve this strategy are evident:

- increasing Māori participation, and success, at bachelors level and ensuring that there is not a 'glass ceiling' between sub-degree and degree studies
- increasing participation in te reo Māori courses at higher levels of study and increasing the supply of Māori bilingual and immersion teachers
- assisting Māori providers to move into a broader range of provision and not be so reliant on targeted training funds
- TEOs building outcome-focused engagement with iwi and Māori that explicitly contributes to development aspirations
- giving greater attention to recruitment and support of Māori staff.









Māori Participation and Achievement at Higher Levels and across Disciplines

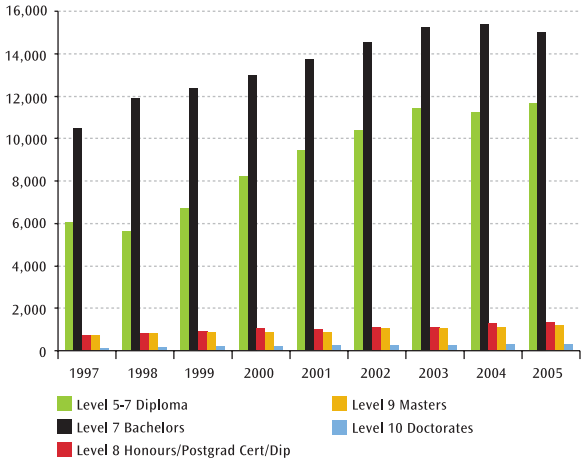
Māori participation growing in diplomas, falling in degrees, while retention improving in both

Māori enrolments in diplomas continue to increase. Māori enrolments in bachelors degrees fell from 2004 to 2005 by 2.2 percent, twice the relative decrease for all students of 0.9 percent over the same period. Māori participation rates in bachelors degrees continue to lag behind those of all students, while Māori continue to be over-represented in diplomas.

From 2001/02 to 2003/04, Māori first-year attrition rates in diplomas and bachelors degrees have reduced. At diploma level, the rate has reduced from 52 percent to 45 percent, and is very close to the rate for all students. At bachelors level, it has reduced from 42 percent to 32 percent, but is still higher than that of all students (25 percent).

Over the same period, the rate of progression directly to higher qualifications has remained fairly similar. In 2003, 23 percent of Māori students completing a diploma went on to higher-level study in 2004, compared with 16 percent of all students. For bachelors, the rate for Māori students was 14 percent, compared with 15 percent for all students.

Figure 48: Māori formal students at diploma level and above by qualification level 1997–2005



Longer degree completion times for Māori and Pasifika students confirmed by research

Recent research by the Ministry of Education shows that, after adjusting for other measurable factors, Māori and Pasifika students take 1.3 times longer to complete degrees than their European counterparts[17].

This finding is consistent across all sub-groups analysed. For example, even after controlling for school qualifications, Māori and Pasifika students still showed lower completion rates than their European counterparts. Māori students who had a prior activity of house person or retired had the smallest chance of completing their degree, compared with European students. Māori students who had previously been in tertiary study had the best relative performance compared with European students.

The report comments that much of the international research literature on retention and completion of tertiary qualification hints at the value of belonging and integration, and these factors are likely to be particularly relevant for students who are not part of the majority culture of the student body.

Increased numbers enrolling and achieving in postgraduate qualifications

There has been a continued increase in the number of Māori students enrolled in postgraduate qualifications. From 2004 to 2005, numbers increased by 4 percent for honours degrees, 6 percent for masters and 6 percent for doctorates. However, Māori participation rates in these qualifications continue to be below that of all students.

From 2001/02 to 2003/04, Māori first-year attrition rates for masters and doctorates have reduced. For masters, the rate for Māori students has reduced from 39 percent to 32 percent and for doctorates from 25 percent to 11 percent. However, in both cases, the rate is still higher than that of all students. Counter to this trend, the attrition rate at honours level has remained the same for Māori (38 percent), while the rate for all students has reduced to 33 percent.

Over the same period, the rate of progression directly to higher qualifications has improved for Māori. From 2003 to 2004, 22 percent of Māori honours students and 10 percent of Māori masters students went on to study at a higher level. This compares with 20 percent and 8 percent, respectively, for Māori students in the period 2001 to 2002. The 2003/04 progression rates for Māori are higher than the rates for all students.

Māori participation growing faster in some areas of under-representation

The following indicators look at the spread and growth of Māori participation by field of study at diploma level and above, using EFTS consumed and course subjects.

Relative growth is the percentage point difference between the growth rate in Māori student EFTS and the growth rate of total EFTS in each subject area[18]. It provides an indicator of subject area growth where Māori student growth rates exceed total growth rates (positive number) or lag behind total growth rates (negative number).

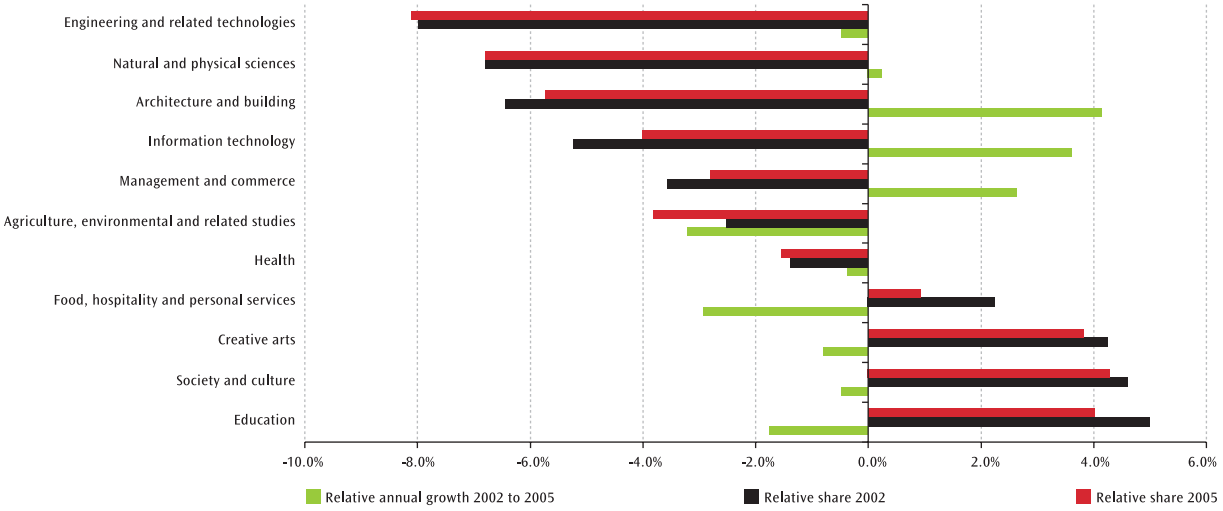
Relative share is the percentage point difference between the proportion of Māori student EFTS in the subject area and the proportion of Māori EFTS across all subjects[19]. It provides an indicator of relative over-representation (positive number) or under-representation (negative number).

17 David Scott and Warren Smart, *What Factors Make a Difference to Getting a Degree in New Zealand?*, Ministry of Education, 2005.

18 (Percentage increase in Māori student EFTS in field) — (Percentage increase in total student EFTS in field).

19 (Percentage of Māori in the field) — (Percentage of Māori in total).

Figure 49: Relative growth and relative share indicators for Māori formal students by field of study at diploma level and above 2002 and 2005



These indicators show a mixed picture. The areas of highest relative growth at diploma level and above have been in architecture and building, information technology, and management and commerce. In all of these areas, Māori tend to be under-represented. However, in other areas, such as science and engineering, where Māori are significantly under-represented, Māori participation growth remains similar to that of all students.

Retargeting the Māori Special Supplementary Grant

The Māori Special Supplementary Grant provides funding to TEIs to provide support for retention and achievement of Māori students. From 2006, funding will be provided only for students at diploma level and above, with higher funding for postgraduate students. The aim is to provide incentives for TEIs to promote greater participation at higher levels of study. From 2008, TEIs will determine their own appropriate target groups on the basis of socio-economic disadvantage.

TEO approaches to Māori participation and achievement

The analysis of profiles found that from 2005/07 to 2006/08 an increased number of TEOs had a change-focus on Māori participation and achievement. The most commonly expressed approach in profile objectives was monitoring Māori participation, retention and achievement, including setting targets. However, only a few TEOs had a specific focus on higher levels of study.

In general, the focus in 2005/07 was to achieve improvements in participation and achievement for Māori through student support services. In the 2006/08 profiles, there were more TEOs looking at how they could develop and improve their programmes to meet the learning needs of Māori students.

Supporting te ao Māori and te reo Māori

One of the aspects of this strategy is developing quality programmes that recognise te ao Māori perspectives and support the revitalisation of te reo Māori. This section looks at the provision of all te ao Māori and higher-level te reo Māori courses. The provision of foundation-level te reo Māori courses is reported in the foundation skills chapter.

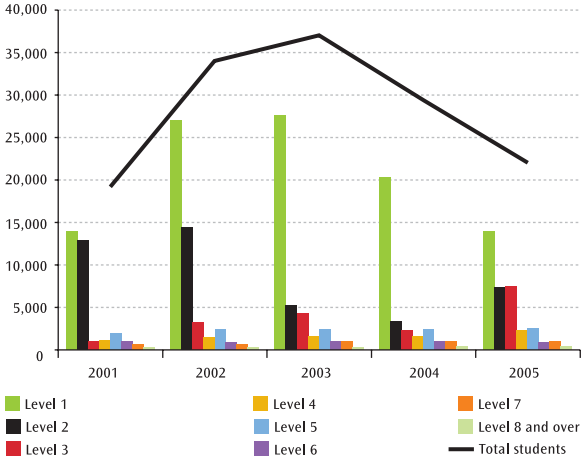
The analysis of profiles found that few TEOs, other than wānanga, had an organisational focus on this area of provision.

Numbers in te ao Māori courses decreasing

This indicator covers courses which fit in a subject code descriptor with an explicit te ao Māori aspect. It does not include all courses taught from, or including, te ao Māori perspectives. However, it does given some indication of the strength of provision in this area.

The number of students enrolled in this area grew rapidly from 2001 to 2003 and has since decreased. From 2003 to 2005, the main decrease has been in level 1 courses, while the numbers in level 2 to 5 courses grew from 2004 to 2005.

Figure 50: Formal domestic students in Student Component-funded te ao Māori courses by course level 2001–2005



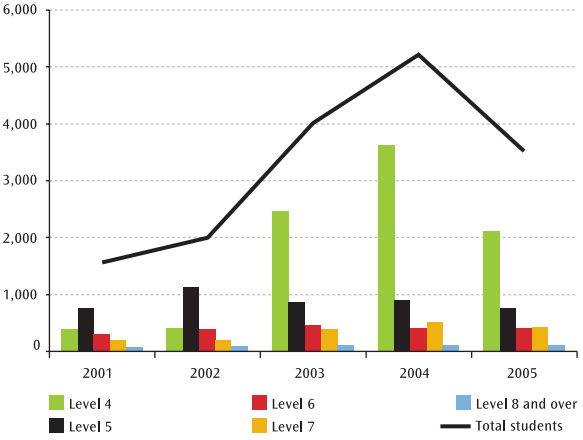
In 2005, three-quarters of the students in te ao Māori courses were Māori. Around three-quarters of the students (73 percent) enrolled in these courses were enrolled in wānanga, 13 percent were enrolled in universities and 11 percent in ITPs. The overall decline from 2003 to 2005 reflects the decreased enrolments in wānanga in that period.

Numbers in te reo Māori courses decreasing

The following indicator looks at students taking more than 0.3 EFTS in a year in te reo Māori courses at level 4 and above. This provides a measure that is consistent with participation at foundation level te reo Māori courses, reported earlier in this report.

In 2005, around 40 percent of students in higher-level te reo Māori courses were taking more than 0.3 EFTS. The number of students taking more than 0.3 EFTS in higher-level te reo Māori courses peaked in 2004 and declined in 2005, similar to the numbers enrolled in 2003. While the biggest drop in numbers were in level 4 courses, there was a decline at all other levels from 2003 to 2004.

Figure 51: Formal domestic students in Student Component-funded higher-level te reo Māori courses undertaking more than 0.3 EFTS by course level 2000–2005



In 2005, 86 percent of the students in these courses were Māori. Four out of five students (81 percent) in these courses were studying at wānanga, 11 percent at universities and 8 percent at ITPs.

As with te ao Māori courses, the decline from 2004 to 2005 reflects decreased enrolments in wānanga. It suggests that students who might have enrolled in these courses in wānanga are not seeking out courses in other sub-sectors. There may also have been a 'waiting list' effect, where the wānanga have taken a large intake of prospective students who had been wanting this kind of provision for some time. Now that the 'waiting list' is clearing, the numbers enrolling each year might be expected to settle down. Recent publicity about difficulties at Te Wānanga o Aotearoa will also have had an impact on the 2005 student numbers.

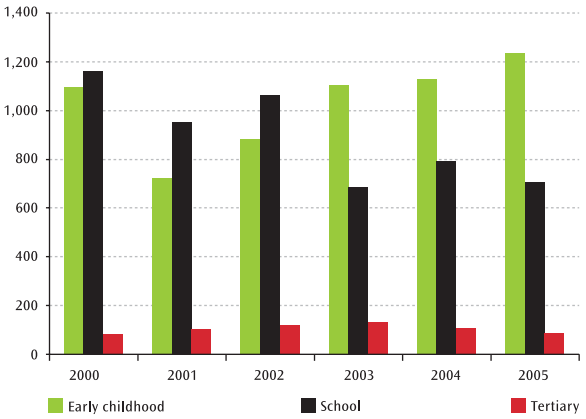
Māori bilingual and immersion teacher education increasing for early childhood and decreasing for schools

One of the critical areas where the tertiary education system contributes to the revitalisation of the Māori language is through the training of teachers for bilingual and immersion education.

The following indicator looks at people enrolled in specialist qualifications in Māori bilingual and immersion teaching. These numbers do not include students undertaking a general teaching qualification with a specialisation in bilingual and immersion teaching.

There was a steady increase in the number of students enrolled in early childhood qualifications in this area, reflecting the new quality requirements for early childhood education providers. The numbers enrolled in school bilingual and immersion teaching qualifications have fluctuated and show an overall decline. There is a small but steady number of students taking a qualification in bilingual and immersion tertiary teaching.

Figure 52: Domestic students in Māori immersion and bilingual teaching qualifications by educational sector of the qualification 2000–2005



Provision of Kaupapa Māori Tertiary Education

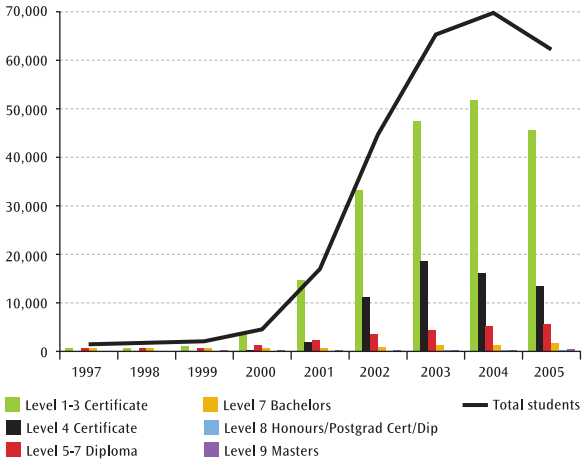
This strategy includes an emphasis on developing robust options for kaupapa Māori tertiary education. There are two major groups of providers in this area: the three wānanga (established as TEIs) and Māori providers (established as PTEs). There is also some provision within other TEOs.

Overall wānanga numbers at peak in 2004

The total number of students at wānanga declined by 11 percent from 2004 to 2005, decreasing from 69,700 to 62,200. Most of the decline was in level 1 to 4 certificates. There was continued growth at diploma, bachelors and masters levels, with masters enrolments doubling from 2004 to 2005, to reach 231 students.

Te Wānanga o Aotearoa continues to account for the vast majority of wānanga students (93 percent in 2005). Student numbers at Aotearoa declined from 2004 to 2005, while numbers at Te Wānanga o Raukawa remained steady and numbers at Te Whare Wānanga o Awanuiārangi grew by 70 percent. The growth in masters students was at both Raukawa and Awanuiārangi.

Figure 53: Formal domestic students enrolled in wānanga by qualification level 1997–2005



First-year attrition rates for Māori students studying below degree level at wānanga were lower than those of Māori students across all TEIs for 2003/04. However, first-year attrition rates for Māori students studying at degree level and above at wānanga were higher than those of Māori students across all TEIs.

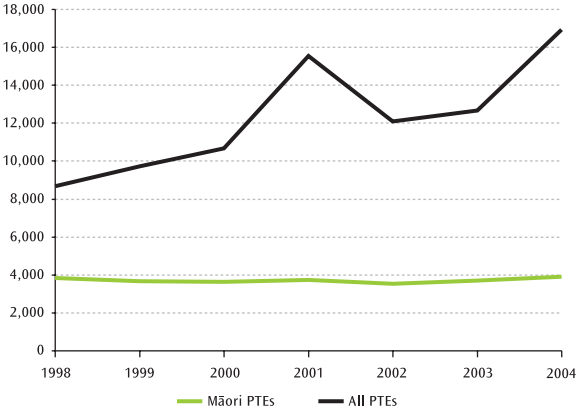
In 2003/04, Māori students at wānanga had similar rates of direct progression to higher levels of study as Māori students across all TEIs.

Māori PTE enrolments remain steady

In 2004, there were 115 PTEs that self-identified as Māori providers and provided data returns to the Ministry of Education[20]. At at 31 July 2004, there were 5,755 domestic students enrolled with these providers, of which 3,880 were Māori.

The total enrolment numbers in Māori PTEs have been stable over the last seven years, while the number of students in other PTEs has started to increase again. In 2004, just under one in four Māori students (23 percent) enrolled in a PTE was enrolled with a Māori PTE.

Figure 54: Māori formal students in PTEs by type of provider 1998–2004



NZQA audit cycle data shows continuing improvement in management capability for Māori PTEs. The proportion of Māori PTEs on two- or three- year audit cycles has increased from 9 percent in the year to June 2001 to 42 percent in the year to December 2004. Placement on these longer-term cycles indicates NZQA's significant satisfaction with management systems and processes of the provider.

Provision within other TEOs

Kaupapa Māori provision is also developing within universities and ITPs, as well as the delivery funded through ITOs. Many of the universities and ITPs are developing Māori-focused qualifications across a number of subject areas, including business, environment and creative arts. Some ITOs are developing Māori-focused qualifications where their industry has a strong area of Māori service delivery, such as in the public service, social services and tourism and travel.

20 This is less than the total number of registered PTEs that self-identified to NZQA as Māori providers. This analysis only covers those that had formal students enrolled as at 31 July 2004.

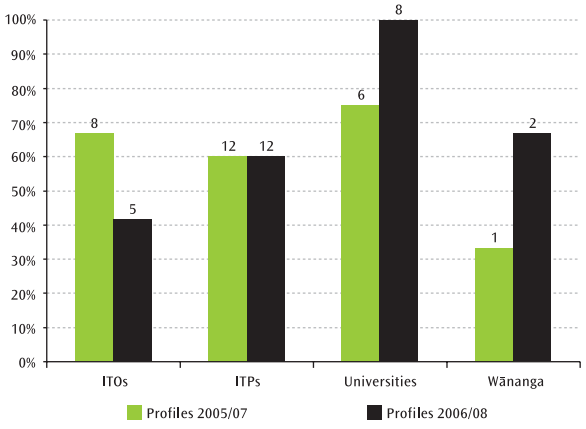
The analysis of profiles found that around one in four TEOs examined had objectives relating to this area. In ITOs, the focus was on the development of kaupapa Māori qualifications. Several ITPs are developing a kaupapa Māori approach to learning within their institution, including specific learning centres. Some universities are looking at specific kaupapa Māori qualifications and Māori-specific curriculum content.

Contributing to Māori and Iwi Development

TEO approaches to contributing to Māori and iwi development

The analysis of profiles found that most ITOs, ITPs and universities had change-focused objectives relating to Māori development in 2005/07. There was a similar pattern in 2006/08, with all universities having change-focused objectives in this area.

Figure 55: Percentage of TEOs with change-focused objectives relating to contributing to Māori and iwi development in profiles 2005/07–2006/08



In both years, ITOs were mostly focused on consultation and engagement with Māori as a means of increasing Māori participation and meeting the needs of Māori trainees. A few were looking at partnerships with Māori providers and communities.

In 2005/07 TEI profiles, the objectives were generally expressed in broad terms with little clarity of what would be achieved. Some did include specific, but limited, actions, such as research and involvement in course design and development. The objectives were often more focused on the processes of engagement, with many developing relationships and partnerships with Māori and iwi organisations and/or involving Māori in consultation and advisory processes.

The 2006/08 TEI profiles also talked about developing relationships and partnerships with iwi and Māori. ITPs had a focus on improving teaching and learning that contribute to Māori development. Universities had a stronger focus on research projects.

In the case of wānanga, contributing to Māori development is an underlying theme for the organisations. Where they had explicit objectives, these focused on developing relationships with whānau, hapū, iwi and Māori communities.

The research on stakeholder engagement found that wānanga had the greatest frequency of mention of active engagement with Māori in their profiles, followed by universities and ITPs. Universities had a particular engagement around research, while ITPs were focused more on skill development. Of all stakeholder groups included in the research, Māori were the ones that providers appeared to have most engagement with. Tertiary providers were generally satisfied with their levels of engagement with Māori organisations and most thought they were making moderate contributions to Māori social and economic goals.

Māori views on provider engagement

The research on stakeholder engagement found that Māori stakeholders reported considerable engagement with providers. In the case of an ITP, it was more student and programme driven. With universities the engagement was student and research driven, while with wānanga it was more iwi driven and focused. The quality of engagement was mixed. Some reported difficulties successfully articulating their views and aspirations through engagement at governance level. There seemed to be somewhat better engagement at programme level.

Māori stakeholders reported that succesful engagement relied on the quality of individual connections and relationships, a mutual understanding of kaupapa, principles and values and the relevance of the education being delivered or planned. Barriers to engagement included narrowly defined contractual arrangements between Māori organisations and providers, frustration over providers' inability to meet the needs of Māori students and changing personnel within providers.

The Māori stakeholders see tertiary education making a strong and vital contribution to Māori achievement of economic and social goals. Their engagement with the tertiary education sector is driven by their aspirations, research and planning. It is clear that Māori stakeholders have a large stake, and commitment to, education, particularly at the tertiary level and this drives their engagement with providers.

Māori Staff in Tertiary Education

The TES includes a focus on developing a strong and balanced Māori staff profile within the tertiary education system. This means Māori being well represented in TEO staffing, particularly in teaching, research and decision-making positions.

The analysis of 2005/07 and 2006/08 TEO profiles shows that recruitment and support of Māori staff is only picked up in some TEI profiles. As ITOs employ relatively few staff and rely on contracted providers and assessors, their lack of focus on this area is understandable.

In 2005/07 profiles, the most common type of objective related to monitoring the proportion and/or number of Māori staff in the institution. Some TEIs talked about developing support networks and one talked about flexible employment arrangements. There was also a focus in some on developing Māori staff for management and leadership positions. Only two talked about developing a recruitment and retention strategy.

In 2006/08 profiles, more TEIs, particularly universities, were focused on developing strategies and initiatives to improve recruitment and retention of Māori staff. Others mentioned staff development and monitoring of recruitment and staff data.

Māori research staff held in greater peer esteem and make greater contribution to the research environment

A recent report from the Ministry of Education examines the relationship between staff characteristics and their assessed research performance in the 2003 PBRF Quality Evaluation[21]. The research used the various component and overall quality scores as a measure of research performance.

Using the research output score, the research found that Māori female staff received a lower score than European female staff, after taking other factors into account. No difference was found for Māori males.

On the peer esteem score, the research showed that male Māori staff received a peer esteem score 0.42 points higher than their European counterparts, while there was no statistical difference between scores achieved by female Māori and European staff.

Analysis of the contribution to research environment score found that Māori professors received higher scores than their European peers on average.

Once these scores were combined into the overall weighted measure of quality, no significant difference by ethnicity could be found, that is, the differences in the component scores evened out.









21 Warren Smart, *What Determines the Research Performance of Staff in New Zealand's Tertiary Education Sector?*, Ministry of Education, 2005.

Educate for Pacific Peoples' Development and Success

Objectives

- Pacific learners are encouraged and assisted to develop skills that are important to the development of both the Pacific and New Zealand
- A tertiary education system that is accountable for improved Pacific learning outcomes and connected to Pacific economic aspirations
- Pasifika for Pasifika education services are assisted to grow their capability and enhance Pasifika peoples' learning opportunities
- An increased proportion of Pacific staff at all levels of decision-making in the tertiary education system

The change required to achieve this strategy

Achieving this strategy requires attention to the skills that Pasifika peoples need for their development, both in New Zealand and in the wider Pacific. This requires improved connections between the tertiary education system and Pasifika communities, so that TEOs can contribute more actively to the needs of the communities and so that Pasifika learners are better informed about available study and career options that can help them to achieve their aspirations.

This strategy recognises the need to improve the capability and capacity of Pasifika for Pasifika education services. These include Pasifika PTEs, community education services and services within 'mainstream' organisations. It also places emphasis on increasing the representation of Pasifika staff at all levels of decision-making in the tertiary education system.

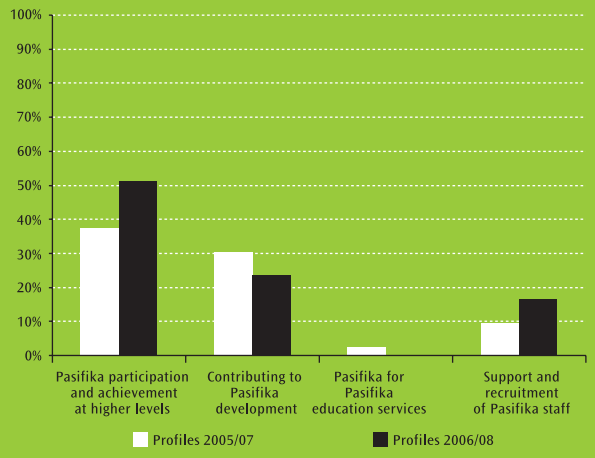
This strategy sits alongside, and reinforces, the revised Pasifika Education Plan, which spans 2006 to 2010. This plan sets a focus in tertiary education on 'increasing participation, retention and achievement and encouraging progression to higher levels of study'. The sub-goals for tertiary education are:

1. increase Pasifika participation and improve retention in tertiary education
2. increase Pasifika students' achievement and progression in tertiary education at all levels, particularly at the degree level and above
3. ensure that the needs and aspirations of Pasifika communities are identified and addressed.

Progress to 2005/06

The analysis of 2005/07 and 2006/08 profiles found that only 50 percent of TEOs had change-focused objectives addressing this strategy in 2005/07 profiles and just under 60 percent in the 2006/08 profiles. There was no strong relationship found between the number and proportion of Pasifika students in a TEI and the number of change-focused objectives relating to this strategy in the TEI's profiles over a two-year period.

Figure 56: Percentage of TEOs with change-focused objectives relating to 'Educate for Pacific Peoples' Development and Success' in profiles 2005/07–2006/08



Pasifika enrolments are steady at diploma level and growing in bachelors and postgraduate degrees. The growth in bachelors degrees is occurring at a time when overall numbers at this level are falling. There is an overall trend towards decreasing first-year attrition rates and increased progression at postgraduate level, especially from masters to doctorate. There has been relative growth in Pasifika enrolments across most subject areas. Where TEOs have a focus in profiles on Pasifika participation and achievement, this generally involves monitoring and student support.

Around a third of TEOs had change-focused objectives in profiles relating to engagement with Pasifika communities. Most of this engagement is focused on meeting the needs of Pasifika students. There is less mention of contributing to Pasifika development and almost no mention of an international perspective on Pasifika development. Pasifika communities had varied experiences of engagement from tertiary providers. Most found engagement to be narrowly focused on student recruitment and support and not contributing to their social goals.

Pasifika student numbers in Pasifika PTEs are gradually increasing. However, the number of Pasifika students in other PTEs has increased markedly.

Only a few TEOs are focused on recruitment and retention of Pasifika staff in their profiles.

Key challenges for moving forward

From the analysis of progress to date, the following key challenges for moving forward to achieve this strategy are evident:

- continuing to support successful Pasifika participation at all levels
- improved engagement from TEOs with Pasifika communities, with more focus on the contribution of tertiary education to Pasifika development aspirations in New Zealand and the wider Pacific
- supporting Pasifika PTEs to access a wide range of provision, so as not to be so reliant on targeted training funds
- greater focus from TEOs on recruitment and support of Pasifika staff.



Pasifika Participation and Achievement at Higher Levels and across Disciplines

Pasifika participation in degrees continuing to increase, while achievement remaining steady

Pasifika enrolments in diplomas have levelled off from 2004 to 2005. Enrolments in bachelors degrees have continued to increase, with a 4 percent growth from 2004 to 2005. This growth runs counter to the decrease in overall student numbers at this level. Pasifika participation rates in diplomas are similar to that of the rest of the population; in bachelors degrees the rate of participation is less than the rest of the population.

From 2001/02 to 2003/04, Pasifika first-year attrition rates at diploma levels have remained the same, while attrition rates for all students have increased slightly. At bachelors level, the Pasifika first-year attrition rates have decreased (from 39 percent to 36 percent), while rates for all students have remained the same (at 25 percent).

Over the same period, the rate of progression directly to higher qualifications has remained steady for both Pasifika and all students. The rates for Pasifika students are very close to those for all students, at around 15 percent of students completing at each level moving into higher qualifications the following year.





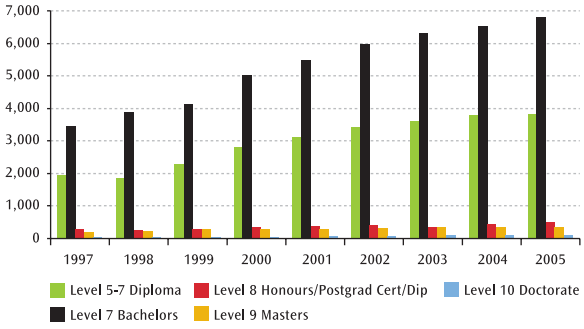





Increased participation and progression for Pasifika students in postgraduate qualifications

The overall number of Pasifika students enrolled in postgraduate qualifications continues to increase. From 2004 to 2005, numbers increased by 15 percent for honours degrees and 10 percent in doctorates, while numbers in masters declined by 5 percent, after a period of steady growth. While Pasifika participation rates at these levels are steadily increasing, they continue to be below those of the rest of the population.

Figure 57: Pasifika formal domestic students at diploma level and above by qualification level 1997–2005



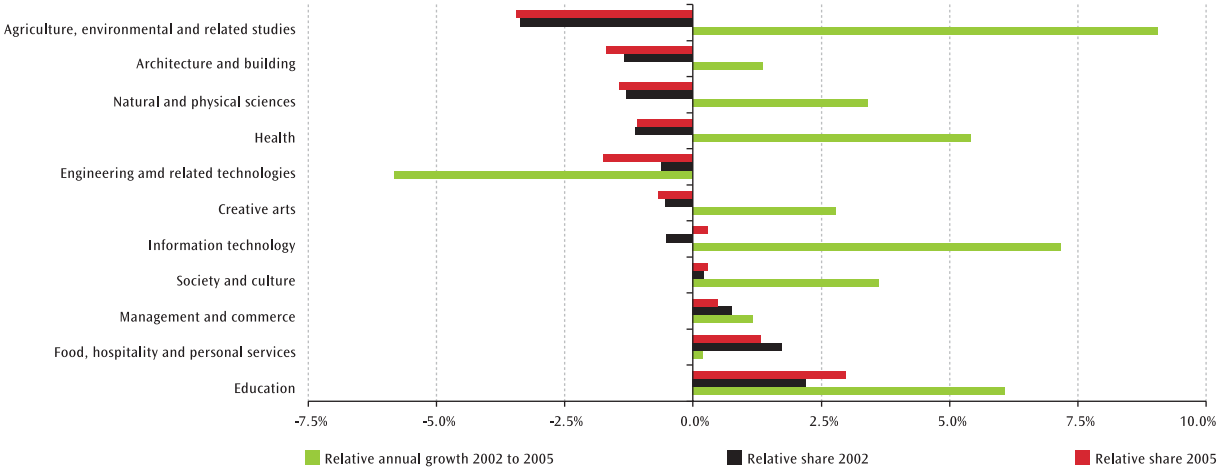
From 2001/02 to 2003/04, Pasifika first-year attrition rates for honours degrees have remained steady (at around 36 percent), while the rate for all students has decreased from 36 to 33 percent. At masters level, there has been a slight decrease for Pasifika students from 35 to 33 percent, while there has been a larger improvement for all students from 32 to 26 percent[22].

Over the same period, the rate of progression directly to higher level qualifications has improved for Pasifika students in honours degrees, rising from 13 percent in 2001/02 to 18 percent in 2003/04. It is now very similar to that of all students. At masters level, the direct progression rate has increased significantly from 5 to 12 percent and is now twice the rate for all students.

Increased Pasifika participation across most fields of study, but little change in patterns of under- and over-representation

The following indicators look at the spread and growth of Pasifika participation by field of study at diploma level and above, using EFTS consumed and subjects of courses taken. The indicators are defined on page 52.

Figure 58: Relative growth and relative share indicators for Pasifika formal domestic students by field of study at diploma level and above 2002 and 2005



The indicators show that there has been relative growth for Pasifika students across all subject areas, with the exception of engineering. Areas of strong relative growth have been in agriculture, environmental and related studies, information technology and education.

22 The small numbers of Pasifika students at doctorate level do not allow for accurate attrition rates to be calculated.

The patterns of over- and under-representation have remained fairly steady. The over-representation of Pasifika students in education and food, hospitality and personal services has increased, while the under-representation in engineering and related technologies has also increased.

Retargeting the Pacific Peoples' Special Supplementary Grant

The Pacific Peoples' Special Supplementary Grant provides funding to TEIs to provide support for retention and achievement of Pasifika students. From 2006, funding will be provided only for students at diploma level and above, with higher funding for postgraduate students. The aim is to encourage greater participation at higher levels of study. From 2008, TEIs will determine their own appropriate target groups on the basis of socio-economic disadvantage.

TEO approaches to Pasifika participation and achievement

The analysis of profiles showed that around half of TEOs in 2006/08 had a focus on Pasifika participation and achievement. This area was addressed across ITOs, ITPs and universities, with an increased number of TEOs in each sub-sector having change-focused objectives compared with 2005/07 profiles.

In both 2005/07 and 2006/08 profiles, the most common focus of objectives in this area was on monitoring the participation and success of Pasifika students. However, this was generally expressed in broad, institution-wide terms, with little discussion on success at higher levels of study.

In 2005/07, the ITOs had a focus on increasing Pasifika participation in industry training, and in some cases the industry itself. Some also focused on improving achievement and a few on progression to higher levels of study. The 2006/08 ITO profiles had more focus on achievement and completion and reviewing participation and success of Pasifika students to determine what further assistance may be required. ITOs were addressing this area through understanding Pasifika needs, looking at reducing barriers to participation and success, and improving communication with Pasifika communities.

In both years, most TEIs with objectives in this area were focused on providing and improving support for Pasifika students. In 2005/07, two were looking at programme development to support success. In 2006/08 some also referred to mentoring programmes and support networks.

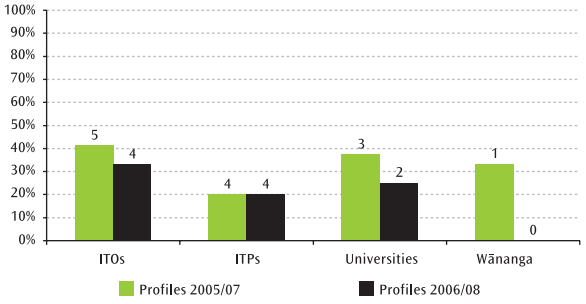
Contributing to Pasifika Development

An important focus of this part of the TES is on the contribution of tertiary education to the development of Pasifika communities in New Zealand and in the wider Pacific.

TEO approaches to contributing to Pasifika development

The analysis of profiles showed that 30 percent of TEOs had change-focused objectives in this area in 2005/07, falling to 25 percent in 2006/08. TEOs with objectives in this area were spread across sub-sectors.

Figure 59: Percentage of TEOs with change focused objectives relating to contributing to Pasifika development in profiles 2005/07–2006/08



Where TEOs had change-focused objectives in this area in their 2005/07 profiles, they were mostly focused on developing relationships with Pasifika communities. In some cases they talked about understanding and meeting the needs of Pasifika peoples, as a general statement. Only one TEI framed its objectives specifically in terms of Pasifika aspirations and long-term well-being and the sustainable development of Pasifika peoples.

In the 2006/08 ITO profiles, there was a clearer focus on consulting with Pasifika stakeholders to ensure their needs and interests were taken into account. The 2006/08 ITP profiles with objectives in this area were nearly all focused on improving relationships with Pasifika stakeholders to address Pasifika issues and needs. The 2006/08 university profiles covered maintaining links with Pasifika communities and addressing needs and interests through teaching and research. One was also looking at working with the University of the South Pacific to make their programmes available to Pasifika students in New Zealand. This was the only example found of an objective with an international Pasifika perspective.

The research on stakeholder engagement found fairly low levels of active engagement with Pasifika communities across tertiary education providers. The highest frequency of engagement was from the ITPs. Providers surveyed in the research were generally

satisfied with their level of engagement with Pasifika groups. About half thought they were making minimal to no contribution to Pasifika economic development and the rest thought they were making a moderate contribution. Most thought they were making a moderate contribution to Pasifika social goals.

Pasifika stakeholder views of engagement with providers

The Pasifika community organsiations interviewed in the stakeholder research thought that while they had lots of engagement with providers, these engagements varied in kind and intensity. They tended to be narrow in focus, with an emphasis on recruiting Pasifika students, providing information to the provider and students on Pasifika perspectives and role models, and helping retain and progress Pasifika students. Most pointed out that the engagements were more beneficial to the provider than to the Pasifika community.

The level of Pasifika community organisation satisfaction with engagement varied from low to very high, depending on the benefits to the Pasifika community. The most successful engagements were well structured with good communications. Some community organisations reported they were tired of being used for research by providers. All pointed out that the wealth of knowledge of older Pasifika people is not valued by the providers.

Barriers to engagement included provider infrastructure and systems, lack of Pasifika staff within providers, views and attitudes of non-Pasifika staff, difficulties with funding, and differing mandates and inspirations.

All of those interviewed stated that their engagements with providers did not contribute to their achieving their social goals. Some thought it did help achieve their economic goals, through success of their students and provision of education-related contracts to Pasifika community organisations.

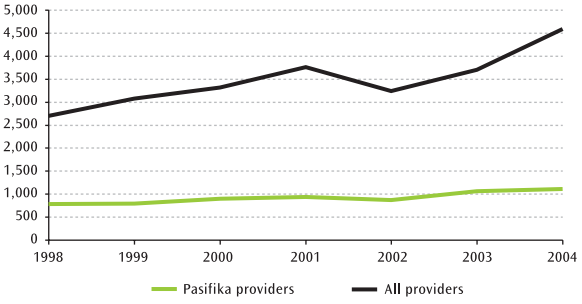
Pasifika for Pasifika Education Services

The main area of provision of Pasifika for Pasifika education services is through Pasifika PTEs. There is limited provision within TEIs, and nearly all of it is directed towards student support services.

Student numbers steadily increasing at Pasifika private training establishments

In 2004, there were 23 PTEs that self-identified as Pasifika providers and provided data returns to the Ministry of Education[23]. As at 31 July 2003, there were 3,746 domestic students enrolled with these providers, of which 1,105 were Pasifika. The total enrolments in Pasifika PTEs have been gradually increasing over the last six years. In 2004, just under one in four Pasifika students (24 percent) enrolled in a PTE was enrolled with a Pasifika PTE.

Figure 60: Pasifika formal domestic students in PTEs by type of provider 1998–2004



NZQA audit cycle figures show an overall improvement in confidence in the management and development of Pasifika PTEs. The proportion on two- and three-year audit cycles increased to 45 percent by December 2004, compared with 27 percent in 2003.

Pasifika Staff in Tertiary Education

The TES includes a focus on increasing the proportion of Pasifika staff at all levels of decision-making in the tertiary education system. This includes staff in governance, management, teaching and research positions.

The analysis of profiles found that only a few ITPs and universities had change-focused objectives relating to the support and recruitment of Pasifika staff. Those that did have objectives were mostly focused on monitoring and targets for the proportion and number of Pasifika staff at their institution. One university in 2005/07 talked about supporting recruitment and development of Pasifika staff and another mentioned supporting the Pasifika staff network.

In 2006/08 profiles, three more institutions referred to initiatives and strategies to recruit and/or support Pasifika staff. These covered increasing the number of applicants through to support networks and professional development.

A recent report on research performance of tertiary education staff[24] reinforced the need for greater support and development of Pasifika staff involved in research. The study found that European staff were twice as likely to be quality weighted in the PBRF (i.e. scoring 'A', 'B' or 'C') than Pasifika staff, after controlling for other factors.

23 There was a total of 27 registered PTEs that self-identified to NZQA as Pasifika providers. This analysis only covers those that had formal students enrolled as at 31 July 2003.

24 Warren Smart, *What Determines the Research Performance of Staff in New Zealand's Tertiary Education Sector?*, Ministry of Education, 2005.

Strengthen System Capability and Quality

Objectives

- Improved strategic capacity and leadership at both governance and management levels
- Increased differentiation and specialisation across the system
- Greater collaboration with the research sector, the creative sectors, industry, iwi and communities
- Sustainable growth of export education capability centred on a reputation for quality teaching and pastoral care
- A stronger system focus on teaching capability and learning environments, to meet diverse learner needs
- Learners and the wider public have confidence in high levels of quality throughout the system
- A coherent and reliable system of qualifications, learning recognition and credit transfer

The change required to achieve this strategy

Key to achieving this strategy is supporting and developing strategic capacity and leadership at both management and governance levels. This has required TEOs to give greater attention to student success and to developing robust, long-range planning, based on the needs of their communities, regions and the nation.

This strategy requires TEOs to understand and articulate their distinctive contribution to the tertiary education system, and requires developing a more differentiated system.

One of the ways of achieving the greater capability identified in this strategy is improved collaboration between TEOs and with key stakeholders, to make better use of resources, improve networks of professional practice and offer more integrated courses and qualifications to learners.

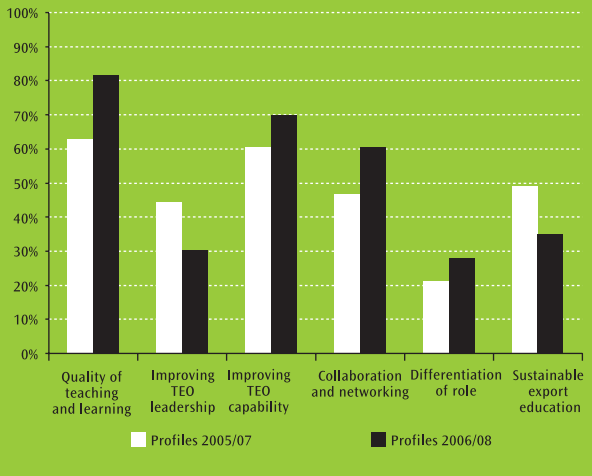
This strategy also emphasises continued improvement in quality throughout tertiary education through improving teaching capability and learning environments, supported by the sector and government agencies working together to develop a more coherent and reliable system of qualifications, learning recognition and credit transfer.

Included within this strategy is a focus on sustainable development of export education capability, centred on a reputation for quality teaching and pastoral care.

Progress to 2005/06

The analysis of profiles found that most TEOs had change-focused objectives relating to this strategy. In 2005/07, the areas with most consistent change-focus across TEOs were 'quality of teaching and learning', 'improving capability' and 'sustainable export education'. In 2006/08 profiles there were more TEOs with a change-focus on 'quality of teaching and learning', 'improving capability' and 'collaboration and networking'.

Figure 61: Percentage of TEOs with change-focused objectives relating to 'Strengthen System Capability and Quality' in profiles 2005/07–2006/08



Ako Aotearoa: Tertiary Teaching for Learning Centre will provide new leadership for excellence in tertiary teaching and learning from within the tertiary sector. Combined with a sharper focus on quality and relevance in the new funding arrangements, this will shift the system focus from volume to outcomes and results. TEO profiles show an increased focus on monitoring retention, completion and outcomes, professional development of teachers and developing quality educational programmes.

Financial viability of TEIs remains an issue, particularly for ITPs. The government has signalled its intent to address certainty and sustainability of funding in its new funding arrangements. There is an overall improvement in management in PTEs. Part of this is due to a shift towards larger providers and closure of smaller, marginally viable providers. TEO profiles show an ongoing emphasis on continuous improvement in leadership and management.

The evidence suggests that collaboration between TEOs is strengthening. However, there is more to be done to improve the quality of collaboration between TEOs and other stakeholders. This requires the development of reciprocal relationships, commitment of time and resources from both sides and a common sense of purpose.

The government has initiated several areas of work to shift sub-degree provision to areas of higher relevance and quality. These will impact on funding from 2006 onwards. The government has also made funds available for improving system capability. Work continues on developing a more differentiated system. This will be reinforced by the new funding and quality arrangements.

There has been a decline in international students from Asia in 2005. There has been a small increase in international students from other regions, but not sufficient to prevent an overall decline in numbers. TEOs are taking a more strategic approach to internationalisation.

Key challenges for moving forward

The key challenges for moving forward on this strategy are maintaining the momentum towards higher quality and greater relevance in tertiary education, while developing a capable and sustainable system. This is very much at the heart of the government's proposed new funding and quality changes.

Quality in Tertiary Education

Ako Aotearoa: Tertiary Teaching for Learning Centre

Good progress is being made towards the establishment of a centre to promote excellence in tertiary teaching and learning. Following wide consultation with the sector, the Minister for Tertiary Education has agreed to the establishment of the Centre, to be hosted by a TEO. The TEC is currently assessing proposals.

The functions of the Centre, as agreed with the Minister, will be:

- building the teaching capacity of TEOs and educators
- providing advice to the tertiary education and government agencies
- commissioning and, where appropriate, conducting research about, and monitoring and evaluation of effective teaching and learning in tertiary education.

The consultation process identifed the following strategic priorities for teaching and learning in tertiary education:

- the creative potential of Māori learners
- Pasifika learners
- foundation learning
- international students and migrant learners
- learners with impairments.

New approach to funding for quality announced

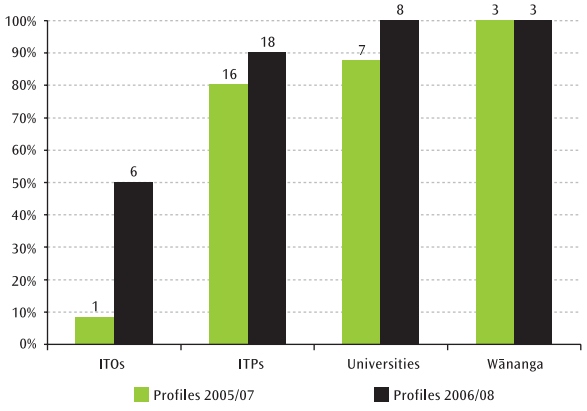
In April 2006, the government announced the development of a new approach to funding teaching and learning to encourage quality and relevance. The new system will fund institutions based on a multi-year plan and take into account a range of volume and quality measures. It will be underpinned by new quality and monitoring systems which will have a greater focus on student outcomes. The new funding and monitoring systems will be in place for the 2008 academic year.

Work has been undertaken to develop a performance measure for the Student Component fund. Officials are now considering the applicability of various aspects of the performance measure as part of work to develop new funding and monitoring systems. Much of the developmental work and thinking is likely to be utilised in developing the new arrangements.

Increased focus in TEO profiles

The analysis of profiles found that most TEIs had change-focused objectives relating to the quality of teaching and learning in both years, with a slight increase in the number with such objectives from 2005/07 to 2006/08. There was a big increase in the number of ITOs with objectives in this area in 2006/08.

Figure 62: Percentage of TEOs with change-focused objectives relating to quality of teaching and learning in profiles 2005/07–2006/08



In both years, the majority of ITPs had objectives relating to monitoring student success — including retention, completion and satisfaction. Some also included employment outcomes. In 2005/07, common areas of focus for many ITPs were flexible learning, including e-learning, and quality assurance processes. A number of ITPs were also focusing on teacher development, programme development and/or improving teacher practice. In 2006/08, the most common area of focus of ITPs was on staff capability and professional development, followed by the development of flexible learning, including e-learning.

In 2005/07 university profiles, the most common areas of focus were flexible delivery, including e-learning, and improving teaching practice. Half of universities also had objectives relating to monitoring student success. In 2006/08, the most common type of objectives were around overall development of quality programmes and improving monitoring of student outcomes.

The 2005/07 wānanga profiles had a focus on monitoring student success, programme development and staff development. In the 2006/08 profiles there was much more focus on developing teaching and learning that reflect Māori values, knowledge and pedagogy.

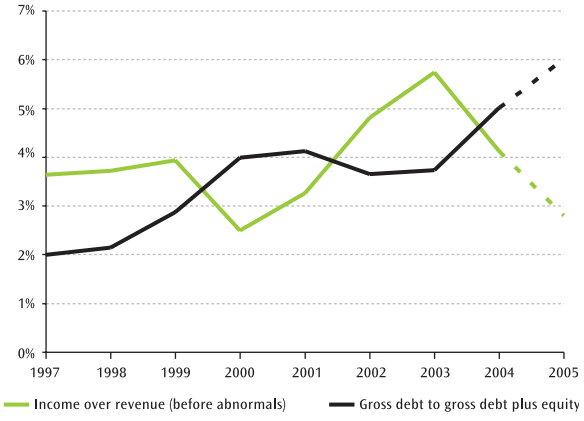
Profile objectives for ITOs covered monitoring trainees outcomes, working with providers to ensure quality delivery, and quality of assessment, moderation, training materials and training plans.

TEO Capability

Leadership and management in TEIs

Financial management provides one indicator of the overall management of organisations. In 2004, there was a drop in the operating surplus across TEIs following a peak in 2003. TEI 2005 budgets indicate a continued drop in operating surplus. At the same time, debt as a proportion of total assets started to increase, after a period of stability, and is forecast to continue to increase.

Figure 63: Financial performance of TEIs 1997–2005



Note: Figures for 2005 are budget, rather than actual.

Over the last three years, the ITP sector has relied heavily on community education and short courses to cross-subsidise core provision. The restrictions on provision in these areas have affected the financial performance of these insitutions. The government has embarked on a programme of reinvesting in the core provision of ITPs to develop a more sustainable sector.

The downturn in international students has also had an impact on TEIs, particularly universities. International students have been a significant source of additional funding. Not only have international student numbers decreased in 2005, but the cost and effort of recruitment have increased.

The analysis of profiles found that in 2005/07 and 2006/08 profiles, around a third of TEIs had objectives relating to improving leadership. These mostly focused on governance, including guidance on practice, training for new council members and strengthening links between council and the institution. Several also had a focus on senior management development and organisational leadership.

More than two-thirds of TEIs in both years had change-focused objectives focused improving their capability. The main areas of focus for ITPs were staff development, increasing and diversifying income, and developing new management systems. In 2006/08 there was more focus on effective and efficient use of existing resources and less on increasing overall income.

In 2005/07, universities were mostly focused on developing management systems and increasing and diversifying their income. In 2006/08 the main focus was on financial viability and staff development. In the financial area, the focus was on increasing income, rather than more efficient use of existing resources.

The wānanga had a focus on financial viability, as well as staff development and overall capability.

Leadership and management in ITOs

The analysis of profiles found that in 2005/07 many ITOs had a focus on improving their governance in order to exercise their leadership role. This was a lesser focus in 2006/08 as developmental issues were addressed and bedded into 'business as usual'.

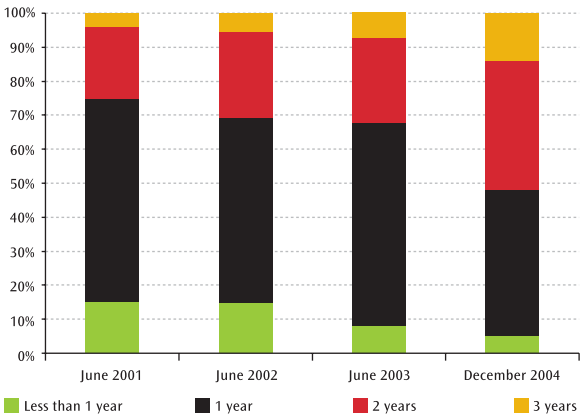
A number of ITOs also had a focus on developing their capability. In 2005/07, the general focus was on ensuring that their organisational systems and processes were appropriate to the growing size of their operations. In 2006/08, the focus of change covered staff development, finance and funding, and general organisational structure, capability and sustainability.

Management in PTEs

Analysis of PTE financial data for 2004 shows that the financial position of PTEs is stable or improving. This is allied with a trend towards fewer small PTEs and concentration of revenue into larger providers.

An indicator of general confidence in the management of PTEs is the length of the NZQA audit cycle. This varies from less than a year for PTEs with significant audit concerns to three years for well-performing and established PTEs. The general trend is towards more PTEs being on a two- or three-year cycle and fewer on less than one year, showing the maturing sector and overall development of management capability.

Figure 64: Percentage of PTEs by length of NZQA audit cycle 2001–2004



System Capability

Building a more collaborative system

Collaboration among TEOs

The analysis of profiles found an increase in the focus of ITOs on collaboration with other TEOs from 2005/07 to 2006/08. This included working both with other ITOs and with tertiary education providers around the provision of tertiary education. This increase may in part reflect the operationalisation of ITO leadership plans, as well as TEC's review of overlapping provision (discussed below).

The analysis found that, in both years, 60 percent of ITPs had change-focused objectives around collaboration and networking with other TEOs. These focused on developing programme connections with wānanga and PTEs and staircasing into university programmes. However, working with ITOs was not often mentioned.

From 2005/07 to 2006/08, there was an increased number of universities with change-focused objectives around collaboration and networking with other TEOs. However, these objectives were more generally described than in the ITP sector and were focused more towards university to university linkages.

In both years wānanga had objectives of building relationships with other tertiary providers, including PTEs, ITPs and universities.

Clearer agreements between ITPs and ITOs as a result of review

In 2005, the TEC examined the range of provision in trade training, with a view to identifying areas where there is unnecessary competition or duplication between training funded through the Industry Training fund and training funded through the Student Component fund.

The review resulted in a principle-based agreement between the ITO and ITP sectors, which will underpin future decision-making relating to training in industry. These principles set out good practice standards for ITOs and ITPs to work together to meet the needs of industry, without creating undesirable competition and duplication.

Collaborating with stakeholders

The research on stakeholder engagement with tertiary education providers found that engagement was wide ranging. It varied from well-structured, successful engagement to ad hoc engagement to no engagement at all. Providers generally perceived that their engagement with stakeholder groups was satisfactory and that they were making moderate to substantial contribution to the economic and social goals of stakeholders.

Stakeholders reported much more varied success of engagement and were more often dissatisfied with the level and quality of engagement. The institutional culture and bureaucracy of providers, along with lack of common focus, were commonly reported barriers to engagement. Stakeholders were much less convinced about the contribution providers made to their social and economic goals. The research concludes that successful engagement requires reciprocal relationships, commitment of time and resources from both sides and a common sense of purpose.

Building quality and relevance

Reinvesting in quality provision

The Quality Reinvestment Programme provides $178 million over the next five years to support ITPs and wānanga to achieve alignment of certificate- and diploma-level education with the 2005 STEP and the needs of learners, employers, their communities and New Zealand as a whole.

The funding has come from savings made as a result of restricting the provision of community education and short courses by TEIs. The process aims to ensure that the government obtains value for money from its investment in the tertiary education sector.

The first stage of the programme was providing grants of $250,000 from August 2005 to all ITPs and wānanga to assist with capability development, strategic thinking and analysis, and planning initiatives to support a network of quality and relevant certificate and diploma provision aligned with the STEP.

The second stage was to make grants of $750,000 per institution available to support institutions wishing to undertake early alignment activities that require funding prior to developing a five-year Alignment Plan. As at March 2006, 10 proposals had been received by the TEC, of which two had been approved and the others were in discussion. It was expected that further proposals would be received, following the Minister's announcements of funding changes.

The third stage will be to provide substantive grants to fund alignment plans of ITPs and wānanga. Alignment Plans may include activities aimed at planning and capability development for, and transition to, a network of sustainable quality and relevant provision and/or funding aligned education and training provision. The Alignment Plans for 2006 and 2007 will be forerunners of the new funding plans to be introduced in 2008 for all providers currently receiving Student Component funding.

Reviewing sub-degree provision for quality and relevance

The TEC has undertaken a number of reviews of areas of provision below degree-level. 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). Around 40 qualifications were selected for review. As a result of the review:

- some of these qualifications were withdrawn by the institutions
- some were shown to be able to justify need but not volume and will be scaled down
- cases were identified where further information on learner outcomes was required before a final assessment could be made.

In addition to focusing funding on qualifications with proven quality and relevance, this review has stimulated the institutions to improve their own self-review of these kinds of qualifications. The review has also resulted in measures to limit sub-contracting and out-of-region provision.

Over the three-year period from 2005 to 2007, the TEC is reviewing all Student Component-funded provision at PTEs to ensure it is aligned with the TES and STEP. The purpose of the PTE reviews is to:

- shift funding from areas of low relevance to those of higher strategic relevance within the available funding
- ensure that the Student Component-funded provision is high performing and relevant, meets the educational needs of students and the needs of stakeholders such as industry, complements existing public sector provision and builds on the strengths of PTEs.















In each year, a third of PTE Student Component-funded provision will be assessed.

The TEC also reviewed dive-related provision in 2005.

Building system capacity

The e-Learning Collaborative Development Fund (eCDF) has allocated $28 million worth of funding over four years — from 2003 to 2007. It is designed to improve the tertiary education system's capability to deliver e-learning that improves education access and quality for learners. Funding for the 2006/07 year covers projects in areas such as information literacy, formative assessment, kaupapa Māori provision and professional development in literacy for adults.

The Innovation and Development Fund aims to foster new and innovative ideas, and to develop TEOs' capability to improve the operation of the tertiary education system, and to help TEOs align with and deliver on the TES and national goals. Up to $10 million is available each financial year. Funding for the 2006/07 year covered projects in areas such as 'mechatronics', school-university partnerships in biological sciences, and a prototyping facility.

Other strategic development funding, mentioned elsewhere in this report, includes:

- Partnerships for Excellence (refer p 37)
- Growth and Innovation Pilots (refer p 38)
- ITP Business Links (refer p 38)
- Design Education (refer p 40).

A more differentiated system

The 2005 STEP reinforced the government's intent to encourage a more differentiated tertiary education system with clearer role expectations for universities, ITPs, wānanga and PTEs. The rationale for this is to build stronger, more specialised capability within each sub-sector and reduce unnecessary duplication across sub-sectors. Subsequent to this the Ministry of Education and the TEC have been working with sector representatives to build a better understanding of the roles of each sub-sector and ways of strengthening capability and distinctive contribution within sub-sectors.

The analysis of profiles shows increased explicit attention to differentiation of roles within 2006/08 TEI profiles, albeit with a tendency towards greater promotion and prominence of each institution.

A number of ITPs in 2006/08 profiles included objectives around enhancing their reputation as quality providers of vocational education and training and/or centres of excellence in specific areas, nationally and regionally. A number of 2006/08 university profiles included a focus on developing the reputation and recognition of the institution. In the 2006/08 wānanga profiles, the focus was on the distinctive advantages of the wānanga learning environment.

The April 2006 announcements from the Minister for Tertiary Education reinforced the government's desire for a more differentiated system, where different parts of the sector work together in more complementary ways. This will be a critical feature of the new funding and monitoring arrangements.

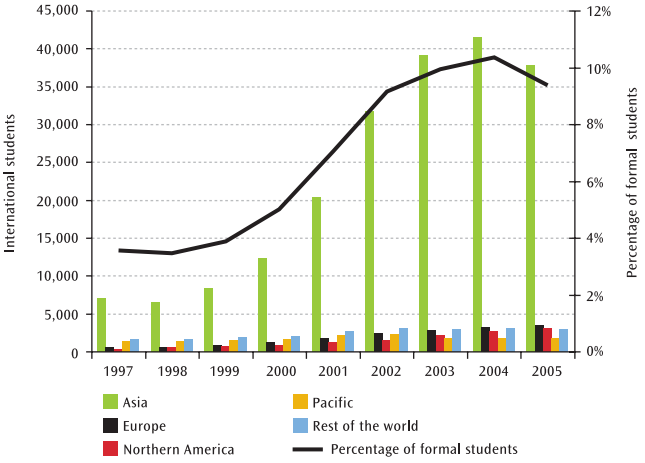
Export Education

The TES includes an emphasis on sustainable export education centred on a reputation for quality teaching and pastoral care.

International student numbers at peak in 2004

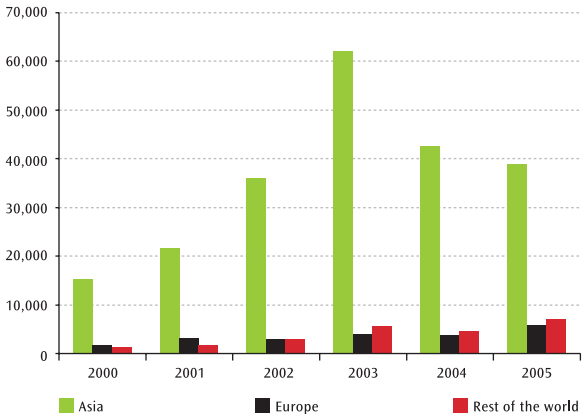
The total number of international students in formal tertiary education peaked in 2004 and declined in 2005. International students as a proportion of all tertiary students also declined from 10 percent in 2004 to 9 percent in 2005. A large proportion of international students (80 percent) come from Asia. There is small growth in student numbers from other regions, particularly Europe and North America.

Figure 65: Formal international students by region of origin 1997–2005



As well as formal tertiary education, New Zealand also provides English language education for international students. Numbers in this type of provision have been more volatile. The number of students coming from Asia peaked in 2003 and has since declined. There has been small growth in the numbers from Europe and other countries. This area has been affected by high-profile problems with a few New Zealand providers as well as international circumstances, such as economics and international security threats.

Figure 66: International students in English language schools by region of origin 2000–2005



Source: Statistics New Zealand, Survey of English-Language Providers.

TEO internationalisation

Recent Ministry of Education-commissioned research on internationalisation[25] found that:

- there is increasing commitment from TEIs to internationalisation, with 80 percent of institutions believing internationalisation to be very important
- half of academic and business units surveyed have strategic plans that include internationalisation objectives
- most institutions have involvement in an international or regional network of some kind
- most provide a specialist centre specifically for the support of international students and almost all provide orientation programmes
- there has been a significant increase in international collaborative research activities since 1998, although the bulk comes from a small number of institutions
- there has been an increase in the number of courses offered offshore, and an increase in offshore activity, especially in the development of strategic alliances with overseas institutions.

The analysis of profiles found that most ITPs and all universities had change-focused objectives relating to export education and internationalisation in 2005/07. However, there were fewer with a focus on this area in their 2006/08 profile, even though there was greater uncertainty about international student numbers.

Objectives in this area typically focus on increasing international student numbers (including offshore provision), diversifying countries of origin and pastoral care. There was a shift in 2006/08 ITP profiles towards offshore provision rather than attracting more international students to New Zealand.

In both years, several TEIs also had objectives relating to internationalisation of the curriculum and educational experience for domestic students and supporting English-language development and educational pathways for international students.

Compliance with the Code of Practice

The Code of Practice for the Pastoral Care of International Students provides mandatory rules for care of international students within education providers. Complaints against the Code can be made to the International Education Appeal Authority.

In the year to 2004, there was an increased number of complaints to the Authority, from 69 for the previous year to 101. The Authority report notes that it seems likely that this increase is due to increased awareness of the complaints mechanisms rather than any deterioration in the quality of services offered by providers.

The complaints involved 84 providers out of the 1,249 providers who were signatories to the Code as at 1 October 2004. Complaints related to poor-quality homestay accommodation, course quality and inappropriate course placement, misleading information about course costs, inadequate information about the nature of courses, expulsion, inadequate information about refund provisions and interpretation of refund provisions.










25 Craig McInnis, Roger Peacock and Vince Catherwood, *Internationalisation in New Zealand Tertiary Education Organisations*, report to the Ministry of Education 2006.

Technical and Data Definitions

First-year attrition

The percentage of students starting a qualification in one year who have not completed or are not enrolled in the following year. Where first-year attrition rates are shown by level, it is the percentage who have not completed or further enrolled at that level.

Direct higher progression

The percentage of students completing a qualification who are enrolled in the following year in a higher-level qualification. A higher- level qualification means a qualification that is the next band up or higher, as presented in the data. Students who move to a higher-level qualification without completing a lower-level qualification are not included in this indicator.

Counting students

All student counts are for enrolments over the full academic year, unless otherwise stated. Students are counted on the basis of unique individuals. Where data is presented in categories, students are counted in each category they appear in during the year, such as level and field of qualification. This means the sum of the categories may exceed the total number of individuals.

EFTS (Equivalent full-time student)

EFTS is a unit for counting tertiary student numbers. The basis of EFTS is that a student taking a normal year's full-time study counts as a 1.0 EFTS unit or the equivalent of 120 credits on the National Qualifications Framework. The courses taken by part-time students are proportions of 1.0 EFTS unit e.g. 0.75 EFTS.

Formal student

For the purposes of statistical reporting, a tertiary student is considered to be a formal student when enrolled at a tertiary education provider in a formal programme of study of more than one week's full-time duration (i.e. an EFTS value greater than 0.03). The programme must lead to a qualification approved by an authorised certifying body or issued by an institution.

Data on formal students currently excludes on-job industry training (where there is no enrolment with an education provider) and students at PTEs that neither received tuition subsidies nor offered courses approved for student loans and/or allowances during the year (where the Ministry of Education does not collect full-year data).

Index

An index is a way of comparing two or more dissimilar sets of numbers over time. In some places in this report, completions and enrolments are indexed to the value of 100 in a given year to compare relative growth. In effect, the index shows how many completions and enrolments there would be in each of the following years, if there were exactly 100 completions and 100 enrolments in the reference year.

Profiles analysis

The analysis of profiles looked at the organisational objectives expressed in the 2005/07 and 2006/08 profiles of all TEIs and a random sample of 12 ITOs. Each objective was coded to one aspect of the TES and assessed as to whether it expressed an intent for change or maintenance of the status quo. Only change-focused objectives are counted in the analysis presented in this report.

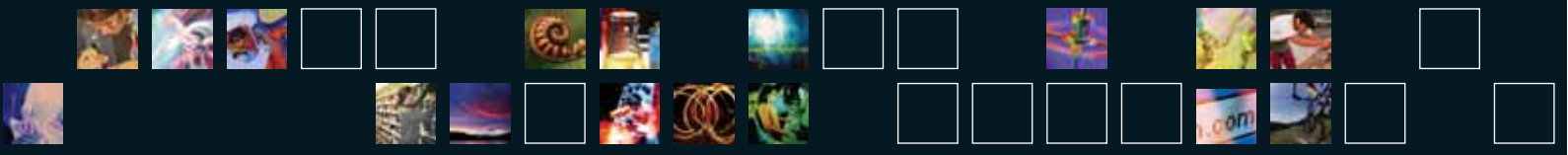
This analysis is intended to provide a broad picture of strategic change in the tertiary education sector, from the perspective of governance and management. As such, several limitations of this analysis must be noted.

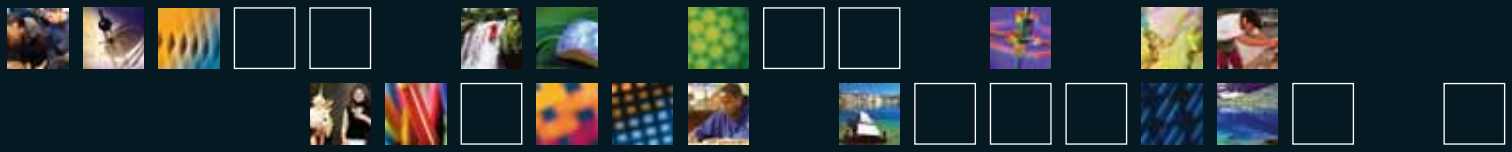
- Profiles are very much developing documents.
- Profiles reflect a governance and senior management perspective of the organisation. The fact that a profile is silent on an aspect of the TES does not necessary mean that the organisation is not contributing in that area.
- Profiles vary in the extent to which they fully reflect the activities of the organisation.
- The analysis is subject to the interpretation of the researcher of the statements made in the profile.
- It is difficult to judge from the profiles how much TEOs are representing existing strategies within the framework of the TES or are actively reshaping their strategies to respond to the TES.
- This analysis needs to be read in the context of other information presented in this report.

Stakeholder research

The stakeholder research was conducted by a research team based at Waikato Insitute of Technology, under contract to the Ministry of Education. The research focused on the engagement of business, industry, Māori and Pasifika communities with tertiary education providers. The research involved:

- analysis of the level of engagement with stakeholders expressed in 2005/07 profiles of tertiary education providers
- a follow-up survey with tertiary education providers to gain additional information
- focus groups with selected stakeholders.





ISSN: 1176-9238