

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 expected change – 2002 to 2007

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.

There is a wide range of skills and knowledge required for individuals to participate in a knowledge society. Some skills and knowledge are specific to employment contexts while others are generic and underpin effective participation in a range of life contexts. Tertiary education has a key role to play in helping develop both generic and specialist skills and knowledge.

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 graduates will require in employment and wider society. This is more than just trying to match graduate supply with labour market demand. It is ensuring that graduates have the skills and knowledge needed to participate effectively in a changing labour market and society, and to contribute to higher levels of innovation and productivity, thereby contributing to New Zealand's development.

There needs to be a 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.

ITOs are now expected to take a much stronger leadership role in this area, connecting their industries with the tertiary education system. Their role will be to develop strategic training plans to assist industries to meet current and future skill needs and promote training for employers and employees.

It is vital that all groups in society have equity of access and opportunity to participate and succeed in education at all levels. In particular, there is a need to improve access for Pasifika peoples, people from low socio-economic backgrounds, people with disabilities and those living in remote areas. Access for Māori to degree-level tertiary education also needs to be improved.



The tertiary education system needs to provide opportunities for people to continue to engage in learning throughout their lives. This needs to include a range of options that meet the needs of adult learners, such as on-the-job learning, courses focused on updating skills and knowledge and community-based learning.

A critical part of developing the skills New Zealanders need for our knowledge society is improving the information and support for learners to make well-informed decisions about education and career options. This involves development of good decision-making skills, as well as wider access to accurate and impartial advice on learning and careers.

This strategy includes an emphasis on the development of generic skills, which complement the development of specialist skills. As with foundation skills, there has been a shift in thinking towards 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.

It is expected that there will be greater explicit recognition of key competencies in programmes and qualifications throughout the tertiary education system. A shared language for talking about and understanding key competencies will be critical if they are to be systematically improved throughout tertiary education programmes.

In addition to better communication about key competencies, effective teaching and assessment will include:

- the systematic articulation of key competency learning outcomes already implicit in programmes and qualifications
- teaching and assessing key competencies in partnership with specialist skills which provide a meaningful learning context
- inference of proficiency based on professional judgement through observation of performance in authentic contexts.

There needs to be a sharper focus on the development of specialist skills through

postgraduate education. Specialist skills include technical, research, entrepreneurial and managerial skills. These skills add value to the economy through enhancing innovation, speeding up the adoption of new technologies and improving productive capacity. These skills add value to society by focusing innovation and attention on matters key to cultural and social development and enhanced well-being.

It is expected that postgraduate students will engage in a wide range of fields of study, including the areas government has identified as critical to continued economic development, such as biotechnology, information and communications technologies (ICT) and the creative disciplines. There needs to be more attention to the quality of provision at this level and the match to social and economic development requirements. Opportunities for postgraduate students to gain international experience through their studies also need to be enhanced.

The baseline picture in 2002

There has been good progress in implementing the recommendations of the 2001 Industry Training Review. This will enable ITOs to take a greater leadership role in their industries and develop a more strategic view of training needs.

ITOs have achieved increased coverage of employers and employees. However, some gaps in coverage persist, which TEC is working with ITOs to fill. Women remain significantly under-represented in industry training, including Modern Apprenticeships.

Differences in participation of various groups provides an indicator of relative access to tertiary education. In 2002, there were significant differences in participation by ethnic group, disability status and socio-economic background. Some of these are easier to quantify than others. This shows up a need to have greater focus on improving access:

- for Māori to higher-level qualifications
- overall for Pasifika peoples and students with disabilities
- from school to tertiary study for students in low decile schools.

New Zealand had good engagement of people over 25 in tertiary education. This has been an area of growing participation from 1999 to 2002.

Industry training has been effective in engaging trainees aged over 40. Adult and community education provides learning opportunities to a significant proportion of the adult population.

Research and policy work is proceeding on developing a better understanding of generic skills within tertiary education. This is leading up to publication of a discussion document in 2004 to stimulate debate about key competencies, a possible shared framework and best practice in teaching and assessment.

There has been sustained growth in postgraduate enrolments and completions, including growth in PhD completions. However, in 2002, completions of qualifications which are specialised in the areas of particular attention for the government's growth and innovation strategy, namely ICT, biotechnology and the creative arts, made up five percent of postgraduate qualification completions.

Further development of monitoring

Future monitoring of this strategy will have a greater focus on the engagement of TEOs with business, industry and their communities to ensure that the education they are delivering is relevant to the future needs of their students and stakeholders. Key source information for this area will come from TEO profiles and charters. This will be supplemented with information from stakeholder groups.

The development and implementation of ITO strategic plans will also have greater focus in future monitoring – particularly in terms of the value being added for learners and industries through industry training and the improved connections facilitated between the tertiary education system and industry. This will include analysis of completion rates for both on-the-job and off-the-job training, to the extent that this is possible.

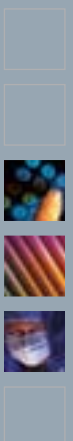
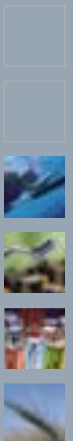
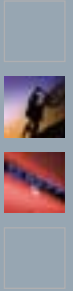
The monitoring will also need to look at measures of employer investment in workforce training and skill development. This needs to include shifts in employer attitudes towards the value of training and returns for employers on their investment in training, as well as the amount of money invested.

The availability and quality of careers information and advice and decision-making support to learners will also be covered in future monitoring. This will be underpinned by research on student decision-making.

Analysis of the above areas on a regional basis will be an important aspect of future monitoring.

Moves to recognise and assess key competencies more explicitly in tertiary qualifications will also be included. TEO profiles will provide information on the focus of TEOs on key competency provision within planning. Analysis of qualification specifications will provide information on how well key competencies are being explicitly structured into learning outcomes.

Broader information on people with high-level specialist qualifications within the population and workforce will also be included within future monitoring. There will also be a focus on the improvements being made by TEOs to the quality and relevance of postgraduate education, including enhanced opportunities for postgraduate students to gain international experience.



Developments in industry training

Implementation of the Industry Training Review

In 2001, the government announced a number of new policy initiatives for industry training as a result of the Industry Training Review. These initiatives are intended to improve outcomes and strengthen the existing industry training system. In summary the changes are:

- requirements for ITOs to provide leadership to their industries on skill and training matters
- collective employee representation in the governance of ITOs
- provision to enable employers to have their training managed by an alternative ITO in certain limited circumstances
- provision for training levies
- the mandate for the TEC to facilitate and encourage co-operative arrangements and mergers among ITOs
- the mandate for the TEC to facilitate the expansion of industry training to cover a greater portion of the workforce
- the Small Business Fund for initiatives to facilitate access to industry training for small and medium-sized businesses
- the Technology Fund to encourage ITOs to develop technology-based solutions for training delivery.

Considerable progress has been made with the implementation of these initiatives as follows:

- Guidelines have been developed to assist ITOs to implement the Strategic Leadership Role. ITOs are committing to implementing this role in their charters and will include plans, objectives and key performance indicators in their 2005 profiles.
- The TEC has developed and promulgated operational policies for both the collective representation of employees in the governance of ITOs and the criteria for assessing applications from employers for their training to be managed by an alternative ITO.
- A levy provision has been included in the Industry Training Amendment Act 2002.

- A joint ventures and mergers fund has been established to assist ITOs to undertake co-operative arrangements and mergers where appropriate.
- The TEC has identified gaps in ITO coverage and is in a position to discuss with ITOs and industry groups how these gaps might be filled.
- Various projects have been funded from the Small Business Fund which have identified and explored barriers to small business engagement with industry training.
- Various projects were funded from the Technology Fund which raised awareness among ITOs of the issues relating to e-learning, particularly in a work-based environment, and improved access to industry training for particular trainees.

Increased coverage of industry training

At 31 December 2002 there were:

- 24,576 employers participating in Industry Training, an increase of 12 percent from 2001. Data collected from Industry Training applications shows that around 85 percent of the workforce are covered by ITOs.
- 83,456 trainees registered with ITOs, an increase of 26 percent from 2001. During 2002, 9,761 National Certificates were completed by trainees.
- 4,344 Modern Apprentices participating in 27 industries in which Modern Apprenticeships were available. The three largest industries by participation rates were Building and Construction (16 percent), Engineering (15 percent) and Motor (14 percent).

However, as noted earlier in the cross-strategy indicators section, women were under-represented in industry training and particularly in Modern Apprenticeships. In 2003, the ITOs with the largest number of women industry trainees were Community Support Services (2,671), Hospitality Standards (1,989) and Sport, Fitness and Recreation (1,574). Thirty-one percent of all women trainees were within these three ITOs, compared with 11 percent of all trainees. Within Modern Apprenticeships, 13 of the 28 participating industries had either none or only one woman participant in 2003.

Access to education

The main measure of access to education currently available is participation. This is an indirect measure, that does not take account of the range of reasons for higher or lower participation. However, it can be assumed that access, or lack of it, is a significant factor driving participation.

Access to higher level qualifications is a key issue for Māori

Māori participation in tertiary education increased between 1999 and 2002, with the Māori participation rate in 2002 (14.5 percent) exceeding non-Māori (10.0 percent). This has in part been due to the growth of wānanga. However in 2002, participation rates of Māori in tertiary providers other than the wānanga, exceeded those of non-Māori.

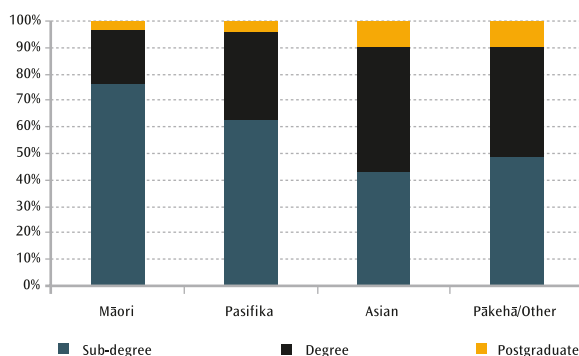
Much of the growth in participation has been in low level qualifications. The key access issue for Māori is ensuring progression from entry level qualifications to higher level qualifications.

Support for completion of qualifications is a key issue for Pasifika students

In 2002, Pasifika peoples continued to have lower participation rates (7.5 percent) than other ethnic groups. Their participation rate has been increasing at a rate similar to that of Pākehā and other ethnic groups, but much less than the increase in the Māori participation rate.

Pasifika peoples were under-represented at degree level and above, although there has been moderate growth in enrolments at this level. A key issue for Pasifika students at higher levels is to ensure that they have sufficient support to continue in their studies and complete their qualifications.

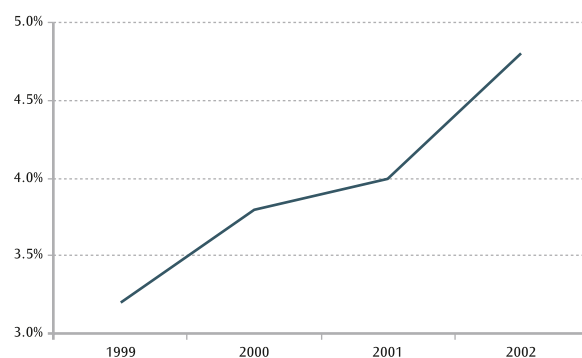
Figure 37: Distribution of each ethnic group by qualification level, July 2002



Access for students with disabilities is improving

Reported participation by students with disabilities has grown since 1999. In 1999, just over three percent of all students reported having a disability. This increased to nearly five percent in 2001. Overall reported numbers have more than doubled in this period. Reporting of disability status is a fairly new requirement. So the increase is likely to be a combination of increased actual participation by people with disabilities and increased reporting of disabilities by students at time of enrolment.

Figure 38: Students with a disability as a percentage of all students enrolled in formal tertiary education, July 1999–2002



However, participation of students with disabilities compared with the total population of people with disabilities appears to be quite low in comparison with those without disabilities. Participation rate estimates based on the 2001 Disability Survey show a participation rate in 2001 of around two percent for people with disabilities, compared with nearly 17 percent for those without.



Table 3: Estimated participation rates by disability status and age group, 2001

With Disabilities			
Age Group	Students	Population	Participation Rate
15–44	12,120	202,600	6.0%
45–64	2,870	210,600	1.4%
65 and over	179	240,600	0.1%
Total 15+	15,160	653,800	2.3%
Without Disabilities			
Age Group	Students	Population	Participation Rate
15–44	323,910	1,364,900	23.7%
45–64	41,590	629,400	6.6%
65 and over	1,510	205,400	0.7%
Total 15+	367,000	2,199,700	16.7%

Sources: Ministry of Education (student information) and Statistics New Zealand, 2001 Disability Survey (population information).

Students with disabilities are relatively under-represented in universities and colleges of education, while wānanga have proven very successful in attracting students with disabilities. This has resulted in a high proportion of students with disabilities being Māori.

Less than one percent of Asian students reported a disability and around four percent of Pasifika students. This indicates that barriers to participation by students with disabilities in these groups may be higher than for other ethnic groups. It may also reflect differing cultural attitudes to disabilities, which could have an impact on self-reporting.

Students with disabilities were more likely to be studying for qualifications below degree level and in programmes that have an emphasis on foundation, employment and life skills.

Attainment of school qualifications is a key issue for students from lower socio-economic backgrounds

There is very limited information on the socio-economic backgrounds of tertiary students. The best available information is the decile level of the school that they last attended. This information is most meaningful for students who access tertiary education shortly after leaving school¹⁸.

Students from low decile schools were significantly under-represented in degree courses in 2002. This reflects the lower levels of student achievement, on average, of students from low decile secondary schools. However, a student from a low decile school who achieves an A or B Bursary was as likely as a student from a higher decile school to go on to study towards a degree.

Students from high decile schools were more likely to proceed directly to tertiary education and enrol in a degree-level course¹⁹.

This data suggests that a major access barrier for students from lower socio-economic communities is the completion of a school or equivalent level qualification, in order to be able to participate in higher levels of tertiary education.

Lifelong participation in learning

Participation in a knowledge society includes the continued participation of people in learning and education over their lifetime. With rapid changes in society, economy and technology, skills can quickly become outdated. It is important that people can continue to access education after they have completed their initial education. It is equally important that these decisions to access education are made in conjunction with impartial career information, advice and guidance.

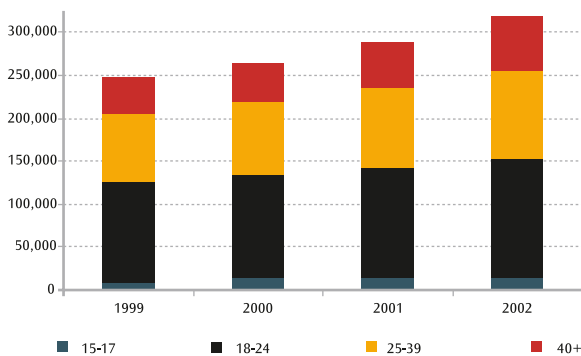
Increased participation by older age groups

Formal tertiary education provides an important avenue for lifelong participation in education. Participation by older age groups in formal tertiary education, particularly those aged 40 years and over, has been growing more rapidly than for other age groups.

¹⁸ It is also limited by the fact that school deciles are a measure of the levels of deprivation within the community served by the school, and not a measure of individual student socio-economic status.

¹⁹ Ministry of Education, *New Zealand Schools: Ngā Kura o Aotearoa 2002*.

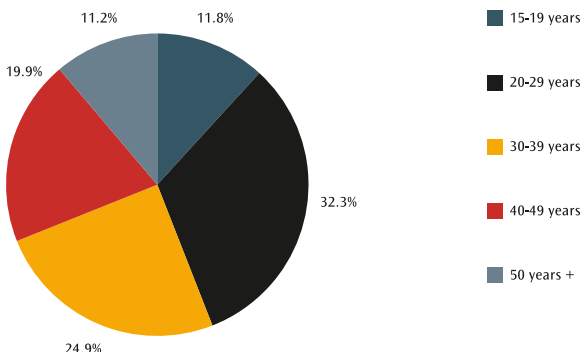
Figure 39: Enrolments in formal tertiary education by age group, July 1999–2002



One-third of industry trainees are over 40

Industry training provides opportunities for ongoing development and updating of skills. There has been significant participation in industry training in all age groups, with 31 percent of trainees being over 40 years of age. This demonstrates industry training is providing an important option for people in mid to late career to improve or update their work-related skills.

Figure 40: Participation in industry training by age, June 2003



Source: Tertiary Education Commission

Adult and Community Education is a significant option for lifelong learning

ACE provides opportunities for adults to continue to participate in learning in a wide range of areas, without having to engage in formal study.

Schools provided a significant proportion of government-funded ACE, with approximately 180,000 enrolments in 2002. The most popular courses provided in schools in 2002 were in art, music and crafts, followed by fitness, sport, recreation, computing, home management and English for Speakers of Other Languages.

In 2002, 29 TEIs provided community education programmes to around 130,000 students. The total number of students in tertiary community education increased by 145 percent from 2000 to 2002. The most popular courses provided by TEIs in 2002 were in management and commerce (nearly all of which were office studies courses), society and culture (about a third of which were language courses) and mixed-field programmes.

The majority of participants in ACE provided by schools and TEIs in 2002 were women and most were aged over 30.

There was also government-funded ACE provision by Rural Education Activities Programmes and community learning supported through grants from Community Learning Aotearoa New Zealand. In addition, many community organisations provide adult and community educational activities with support from local funding sources.

Development of key competencies policy

In 2003, extensive research and conceptual work was undertaken by the Ministry of Education in association with other agencies and the OECD to better understand the nature of generic skills. This work resulted in the shift in thinking from generic skills to the broader framework of key competencies, which includes knowledge and dispositions, as well as skills.

The purpose of this work is to develop a common language and understanding of key competencies to assist communication within and between the education and employment sectors, and to support their explicit incorporation in all teaching programmes and qualifications.

In addition, significant work has focused on professional practice in teaching and assessing key competencies, including avoiding the trap of long checklists and burdensome assessment requirements.

It is intended to publish a discussion document in mid-2004 to stimulate debate about key competencies, a possible shared framework and professional practice in teaching and assessment.



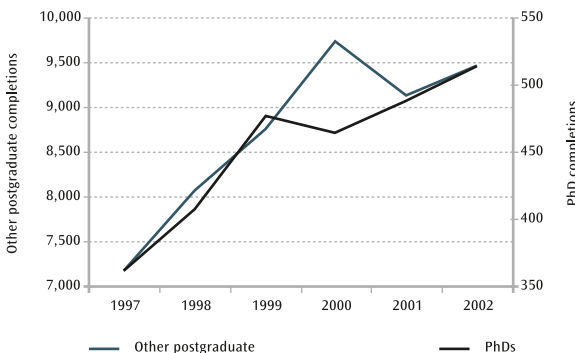
High-level specialist skills

The TES includes an emphasis on developing high-level specialist skills through engagement in postgraduate study. Specialist skills include technical, research, entrepreneurial and managerial skills. It is expected that postgraduate students will engage across a wide range of fields of study, including the areas government has identified as critical to continued economic development, such as biotechnology, ICT and the creative disciplines.

Increased postgraduate qualification completions

In the period from 1997 to 2002, there has been an overall increase in the number of postgraduate qualifications completed each year. Over this period, the number of PhDs completed annually rose by 42 percent and the number of other postgraduate degrees completed (masters and postgraduate diplomas and certificates) rose by 32 percent.

Figure 41: Completion of postgraduate qualifications, 1997–2002



Most completions are in society and culture and management and commerce

The largest field of study for postgraduate completions is society and culture, followed closely by management and commerce. Both of these areas had over 2,000 postgraduate completions in 2002. Health and the sciences had between 1,000 and 1,500 graduates in 2002. Other fields had under 1,000 graduates in 2002 at postgraduate level.

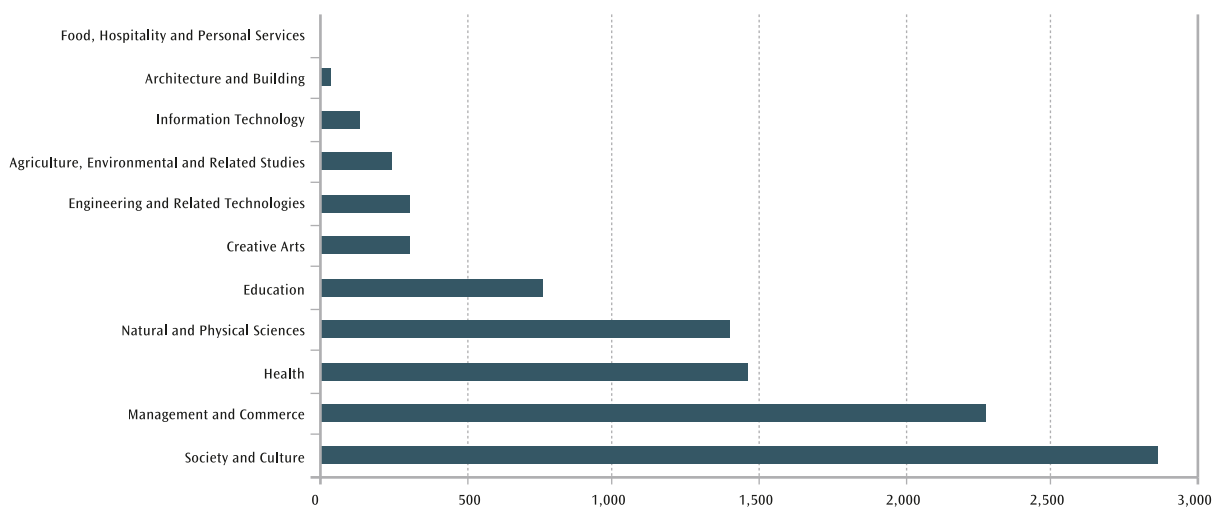
Qualifications coded as ‘mixed-field’ have been recorded, where possible, to a subject field, using the main subject codes.

The government has identified three sectors that have high growth potential and can enable growth in other sectors of the economy, namely information and communications technology, biotechnology and the creative industries. The number of postgraduate qualifications completed in these areas in 2002 made up five percent of total postgraduate qualification completions.

Table 4: Postgraduate qualification completions in priority areas, 2002

Priority area	Postgraduate qualifications completed
Information technology	133
Biotechnology	69
Creative arts	307

Figure 42: Completion of postgraduate qualifications by field of study, 2002



Note: Qualifications coded as ‘mixed-field’ have been recorded, where possible, to a subject field, using the main subject codes.