



economics

Report to:

Industry Training Federation

INDUSTRY TRAINING: AN OVERVIEW

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1 Introduction

In the previous sections of our report we have discussed how industry training makes a significant contribution to the New Zealand economy. This was observed through experiments using the BERL computable general equilibrium model, and through our analysis of the costs and benefits of industry training borne by the public and private sector.

To illustrate how ITOs are the conduit between industry, employers and the labour market including potential new entrants; the tertiary education system including tertiary education providers; and the Government, this section of our report focuses on how ITOs fulfil each of their recognised roles under section 5 of the Industry Training Act 1992.

Under the Act, ITOs in New Zealand have three main roles. They are required to:

- Arrange for the delivery of industry training that enables trainees to attain these standards.
- Design national qualifications and run moderation systems to ensure fair, valid and consistent assessment against national standards.
- Provide leadership to their industries on skill and training matters, identify current and future skill needs, and work with employers and employees to meet those needs.

To do this, this report is split into three sections. The first section discusses how many people are currently engaged in industry training; what industry training involves in terms of delivering national standards and qualifications in the workplace; and how ITOs work with employers to set and maintain industry standards, and to review, modify and develop qualifications. This section also discusses how qualifications development and standards setting does not occur in a vacuum and how government policy changes such as the Targeted Review of Qualifications modify behaviour in the tertiary education sector.

The second section of our report discusses how ITOs provide a key role in identifying and responding to industry skill and training needs. These skill and training needs may be due to demographic changes or economic changes, or a combination of both. Here, we also discuss how ITOs work with schools to encourage new entrants into industry training, and to provide career information and advice to career influencers such as parents and secondary school teachers. This section illustrates that whatever the driver of change, ITOs work with industry and employers to identify current and future skill needs and how industry training can meet this.

The third section of our report discusses the economic rationale for government investment in industry training. Here, we discuss how government invests in industry training and vocational education to reduce market failure and improve efficiency. We briefly discuss the situation in other countries in terms of the provision of vocational education and training before discussing in more detail how ITOs rectify the potential for market failure in New Zealand. As well as looking at government investment in industry training, we explore why employers invest in industry training and how productivity improvements are only one part of the equation. Examples here are drawn from two international studies and interviews with employers and ITOs.

Overall, this report provides qualitative and quantitative information on the process of arranging and delivering industry training, establishing recognised national qualifications for different levels of skill and experience, and the leadership required to ensure that future industry skill needs will be available or addressed. Throughout, we draw on data and information provided in interviews with ITOs, industry representatives, training and Modern Apprenticeship Co-ordinators, and employers. We also refer to official data sources, BERL databases, and information and data provided by the ITOs.

2 Industry training and development

This section of the report provides an overview of how many people are currently engaged in industry training; what industry training involves in terms of delivering national standards and qualifications in the workplace; and how ITOs work with employers to set and maintain industry standards, and to review, modify and develop qualifications.

2.1 A snapshot of industry trainees

To undertake industry training, a prospective trainee must be in employment. To begin training, a training agreement is signed between the prospective trainee and an ITO, and a training programme is established.

Table 2.1 shows the number of industry trainees with a training agreement by ITO.

Table 2.1 Total number of trainees per ITO, 2007-2010

ITO	Total at 31 December 2007	Total at 31 December 2008	Total at 31 December 2009	Total at 31 December 2010	% Change from 2009 to 2010	% Change from 2007 to 2010
Agriculture	6,359	6,902	7,087	6,791	-4%	7%
Apparel & Textile	1,227	1,299	1,127	920	-18%	-25%
Aviation, Tourism & Travel	3,091	3,412	2,668	3,712	39%	20%
NZ Marine	526	597	559	538	-4%	2%
Building & Construction	8,779	7,973	6,680	5,391	-19%	-39%
Building Service Contractors	1,027	1,010	757	691	-9%	-33%
Careerforce	8,664	8,200	9,311	6,996	-25%	-19%
Competenz	13,377	14,743	13,346	9,914	-26%	-26%
Electricity Supply	2,228	1,902	2,038	1,962	-4%	-12%
Electrotechnology	9,387	10,468	9,397	9,295	-1%	-1%
Equine	232	211	457	209	-54%	-10%
Extractives	4,591	4,860	4,028	3,812	-5%	-17%
EMQUAL	1,541	1,871	1,768	1,839	4%	19%
Flooring	534	583	647	453	-30%	-15%
Forestry	12,731	11,519	9,046	7,950	-12%	-38%
Hairdressing	1,525	1,491	1,486	1,390	-6%	-9%
Horticulture	2,231	2,616	2,333	2,069	-11%	-7%
Hospitality	11,085	9,503	9,722	7,145	-27%	-36%
Infratrain	2,429	2,654	2,875	2,470	-14%	2%
Joinery	817	778	658	896	36%	10%
Motor	4,300	4,298	3,748	3,087	-18%	-28%
NZITO	9,810	13,242	12,250	5,969	-51%	-39%
Opportunity Training	843	1,213	986	791	-20%	-6%
DecorateNZ	929	842	696	593	-15%	-36%
Pharmacy	68	96	90	76	-16%	12%
Plastics	834	738	821	1,058	29%	27%
PGDR	1,697	2,190	2,175	1,958	-10%	15%
CMITO	552	568	589	552	-6%	0%
Learning State	3,508	3,526	3,127	3,013	-4%	-14%
Retail	1,616	1,577	3,704	4,003	8%	148%
Retail Meat	419	449	423	342	-19%	-18%
TRANZQUAL	7,300	5,882	4,745	1,188	-75%	-84%
Seafood	2,764	3,276	3,480	2,139	-39%	-23%
Skills Active	2,743	2,420	2,680	2,951	10%	8%
Sports Turf	399	394	458	332	-24%	-17%
Total	130,163	133,303	125,962	102,495	-19%	-21%

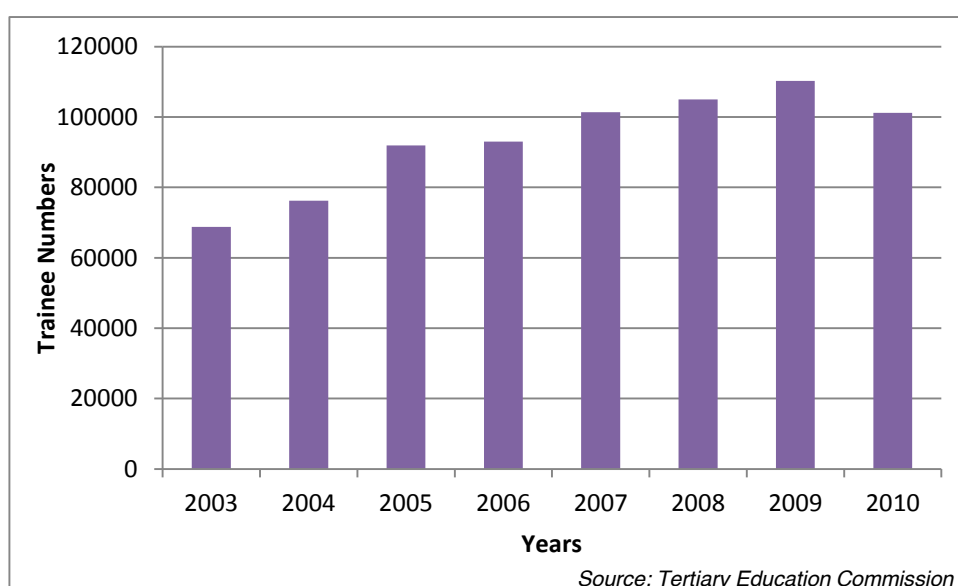
Note: trainee numbers from cancelled/expired ITOs have been added to the ITO that took over industry coverage.

Source: Ministry of Education

In 2010, 181,300 industry trainees had a training agreement with one of the 38 ITOs in New Zealand. At the end of the 2010 calendar year this total had dropped to 102,495. The difference in these two numbers is due to trainees completing their qualifications and leaving the industry training system, losing their job and being unable to continue their training, or trainees dropping out of the system through being inactive.

Between 2003 and 2009 industry trainee numbers grew due to economic growth and changes in the New Zealand labour market. During this period, the number of people entering the Working Age Population increased and New Zealand had high net inward migration. This growth is illustrated in Figure 2.1.

Figure 2.1 Total number of industry trainees, 2003-2010



In 2010, however, there was a reduction in trainee numbers as the number of people entering industry training slowed as a result of the Global Financial Crisis and the subsequent recession in New Zealand. During this period changes also occurred in tertiary education policy. A focus on return on investment and Education Performance Indicators resulted in ITOs reviewing their training agreements and dropping inactive trainees from their systems. This may have also impacted on trainee numbers.

Between 2009 and 2010, ITOs with the largest decline in trainee numbers were Tranzqual (down 75 percent), the New Zealand Equine Industry Training Organisation (down 54 percent), the New Zealand Industry Training Organisation (down 51 percent), and the New Zealand Seafood Industry Training Organisation (down 39 percent).

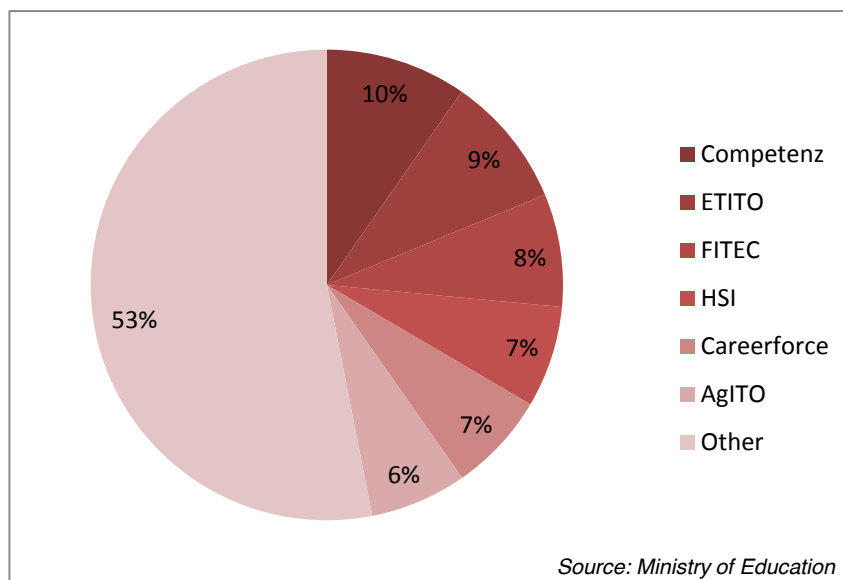
In addition, a small number of ITOs merged during this period. Social Services ITO became part of CareerForce, Real Estate ITO became part of the Electrotechnology Industry Training

Organisation (ETITO), and the Local Government Industry Training Organisation became part of Learning State Limited.¹

Despite the overall drop in trainee numbers, some ITOs have seen trainee numbers increase in 2010. These include the Aviation, Tourism and Travel Training Organisation (ATTTO) with an increase in trainee numbers of 39 percent, the Joinery Industry Training Organisation (JITO) up 36 percent, and the Plastics and Materials Processing Industry Training Organisation (PaMPITO), up 29 percent.

According to 2010 trainee numbers, the six largest ITOs are currently Competenz, ETITO, the Forest Industry Training and Education Council (FITEC), the Hospitality Standards Institute (HSI), Careerforce, and the Agriculture Industry Training Organisation (AgITO). Figure 2.2 illustrates how these six ITOs accounted for 47 percent of all trainees engaged in industry training in 2010.

Figure 2.2 Share of total trainees by six largest ITOs, 2010



2.1.1 Modern Apprenticeship programme

The Modern Apprenticeship programme was introduced in 2001, and in 2010 Modern Apprenticeships were offered in 33 industries. Modern Apprenticeships provide work-based training and qualifications for 16 to 21 year olds. This training is based on the industry training model, but there are important differences.

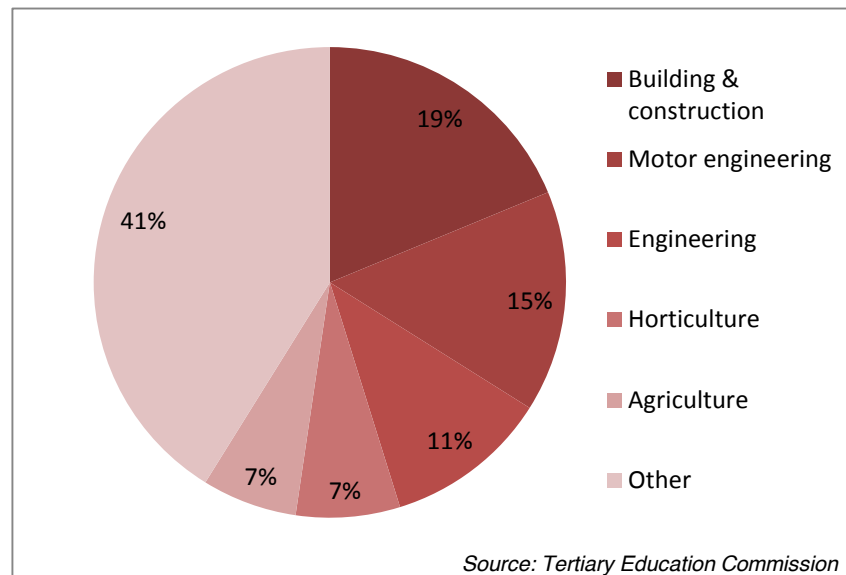
¹ Trainees in ITOs that merged have been added together in Table 2.1. In 2011, Tranzqual merged with the NZ Motor Industry Training Organisation (Inc). However, since this merge occurred in 2011 the data for these two ITOs has been kept separate in the table.

- Modern Apprenticeships require a higher number of total credits to be completed over a four year period than industry training.
- Modern Apprenticeships involve additional support for the employer and the apprentice.
- Modern Apprenticeship Co-ordinators provide this support and are responsible for helping young people access Modern Apprenticeships, encouraging employers to take on young people as Modern Apprentices, and providing on-going mentoring and support to both parties throughout the apprenticeship.²

ITOs identify and maintain the industry qualifications that Modern Apprentices work towards. But any Tertiary Education Organisation can operate as a Modern Apprenticeship Co-ordinator. This is the main difference between Modern Apprentices and industry trainees, as industry trainees undertake training solely organised by the ITOs.

Modern Apprenticeship Co-ordinators are funded by the Tertiary Education Commission from the Modern Apprenticeship Co-ordinators Fund. This fund consists of two components, the Modern Apprenticeship Co-ordinator Brokerage Fee and the Modern Apprenticeships Standard Training Measure.

Figure 2.3 Share of Modern Apprenticeships by five largest ITOs, 2010



² Tertiary Education Commission. Modern Apprenticeships Co-Ordinators Role. (www.tec.govt.nz/Learners-Organisations/Modern-Apprenticeships-Coordinators-MACs/Role/). Mahoney, P. (2010) *Comparing Modern Apprenticeships and industry training*. Ministry of Education: Wellington.

Figure 2.3 illustrates how Modern Apprenticeship numbers are distributed across the five largest industries. Between them these industries accounted for 59 percent of all Modern Apprentices engaged in industry training in 2010.

2.1.2 Industry trainee throughput

Another way of looking at industry trainee numbers is to look at the total number of unique trainees who signed a training agreement with an ITO during the year. This figure disregards how long the person takes to undertake industry training and focuses on industry trainee throughput. This differs from the previous calculation method used by the Ministry of Education, which counts the total number of trainees enrolled at a specific point of the year.

Table 2.2 Annual ITO throughput, 2003-2009³

ITO	2003	2004	2005	2006	2007	2008	2009
Agriculture	8,380	8,881	8,750	9,673	10,164	11,602	11,365
Apparel and Textile	1,237	1,241	1,355	1,389	1,474	1,540	1,528
Aviation, Tourism and Travel	2,771	2,753	3,576	3,806	4,042	4,292	3,856
Building & Construction	5,936	6,617	8,186	8,680	9,145	8,264	6,508
Building Service Contractors	531	649	685	965	1,368	1,584	1,386
Careerforce	6,375	7,601	9,233	10,006	11,599	12,377	13,699
CMITO	434	496	535	541	514	539	589
COMPETENZ	11,189	12,381	14,280	15,376	16,295	16,643	16,088
DecorateNZ	536	656	700	869	918	860	741
Electricity Supply	4,163	3,257	3,994	3,901	3,120	1,873	2,036
Electrotechnology	6,459	8,455	8,735	9,834	10,643	11,699	13,726
EMQUAL	1,545	1,180	1,534	2,929	2,585	2,402	2,394
Equine	241	252	331	332	291	259	417
Extractive Industries	3,757	3,337	3,933	4,695	5,428	6,050	5,758
Flooring	182	275	350	338	363	411	541
Forestry Industry (FITEC)	17,218	16,544	17,060	14,554	15,007	15,646	13,460
Hairdressing	1,972	1,877	1,894	1,971	1,979	1,871	1,422
Horticulture	1,152	1,328	1,393	1,277	2,040	2,638	2,602
Hospitality	5,465	7,333	12,665	14,978	15,781	16,419	15,297
InfraTrain	2,019	2,020	2,329	2,802	3,409	3,622	4,378
Joinery	562	672	823	862	783	675	543
Learning State	2,182	2,427	4,161	4,629	4,628	4,686	4,617
Motor	3,667	4,002	4,049	4,453	4,633	4,516	4,370
NZ Marine	319	303	265	234	273	330	417
NZITO	8,702	11,236	16,562	15,964	13,997	16,712	26,684
Opportunity	601	763	1,004	1,059	1,252	1,646	1,510
PGDR	1,334	1,468	1,698	1,831	1,898	2,125	2,030
Pharmacy	134	154	140	124	118	111	120
Plastics and Materials Processing	878	886	882	761	897	859	1,131
Retail Meat	595	647	543	569	554	555	580
Retail Training	2,719	2,777	2,702	2,676	2,931	3,030	4,318
Seafood	2,047	2,621	2,949	3,908	4,270	3,807	4,226
Skills Active	4,071	3,873	4,391	4,445	4,661	3,969	4,152
Sports Turf	409	414	384	357	358	345	417
TRANZQUAL	7,049	6,938	7,886	8,618	8,652	11,222	8,392
Total	116,831	126,314	149,977	159,396	166,070	175,179	181,298

Source: Tertiary Education Commission

³ Throughput: This is the total number of unique trainees who enrolled with an ITO throughout the calendar year. This throughput data was a customised output that covered the period 2003 to 2009. No data in the same format is available for 2010.

Table 2.2 shows that during 2009, 181,288 trainees had a training agreement with an ITO. This is significantly higher than the 125,925 trainees who had a training agreement with an ITO on 31 December 2009. It should be noted that in 2009 the ITO with the highest throughput was the NZITO with 26,684 trainees, while the Pharmacy Industry Training Organisation (PITO) had the fewest with just 120 trainees.

2.2 Setting national standards

Government investment in industry training occurs through the Industry Training Fund and Modern Apprenticeship programme. Since 2003, the Government has contributed approximately 70 percent towards the funding of industry training while industry has contributed 30 percent.

Table 2.3 Industry funding by source, 2003-2009⁴

Year	Government Funding (\$000s)	Industry cash contribution (\$000s)	Total Funding (\$000s)	Government funding (% of total)	Industry funding (% of total)
2003	97,549	41,205	138,755	70	30
2004	124,823	46,419	171,243	73	27
2005	136,718	55,271	191,989	71	29
2006	166,784	61,061	227,846	73	27
2007	190,579	66,258	256,838	74	26
2008	198,099	70,603	268,702	74	26
2009	203,466	87,487	290,953	70	30

Source: Tertiary Education Commission

In the 2009/10 financial year the tertiary education sector received \$5.87 billion in government funding. Of this, industry training received \$207 million, or 3.5 percent of total government funding in tertiary education.

The Industry Training Fund is for people who fall within the following categories:

- Employees in formal training agreements that are linked to employment agreements.
- Self-employed contractors in formal training agreements with an organisation that they have a principal contract of services with.
- Members of the New Zealand Defence Force who have a training agreement with the New Zealand Defence Force.⁵

The amount that ITOs receive through the Industry Training Fund and Modern Apprenticeship programme is agreed with the Tertiary Education Commission through

⁴ This includes funding for industry training and Modern Apprenticeships

⁵ Tertiary Education Commission. Rule ITO003: Industry Training Fund Purpose. (www.tec.govt.nz/Resource-Centre/Rules-and-Conditions/Container-ITO-Rules/ITO003-Industry-Training-Fund-purpose/).

investment plans. In these investment plans, ITOs outline the funding required for training towards the achievement of National Certificates and National Diplomas, and Limited Credit Programmes and Supplementary Credit Programmes that are derived from these.

2.2.1 National Certificates

National Certificate programmes consist of a number of short, specialised, practical courses. To gain National Certificate funding approval an ITO must meet the following criteria:

- An ITO must have accreditation from the New Zealand Qualifications Authority (NZQA) to register workplace assessors for the qualification, and/or must use providers accredited by NZQA to assess the unit standards.
- The National Certificate must be unit standards based, and be registered on the New Zealand Qualifications Framework (NZQF).
- The National Certificate must be for a minimum of 40 credits.

2.2.2 National Diplomas

National Diplomas are generally offered to those trainees who have already completed a National Certificate or have extensive prior knowledge of the subject matter. To gain National Diploma funding approval an ITO must meet the following criteria:

- The National Diploma must be registered at level 5, 6 or 7 on the NZQF, and consist of at least 120 credits at level 4 or above.
- The National Diploma must meet the NZQA quality assurance requirements for diplomas.

2.2.3 Limited Credit Programmes

Limited Credit Programmes (LCPs) are designed to introduce trainees to training programmes and are intended to staircase them into higher level programmes. Limited Credit Programmes are eligible for industry training funding if they meet the following criteria:

- The programme must include unit standards that are drawn from a registered National Certificate(s) within the ITOs gazetted coverage area, and for which the ITO has Tertiary Education Commission funding approval.
- It must provide a pathway towards the National Certificate(s) from which it has been developed.

- The National Certificate must be at levels one to four on the NZQF.
- At least 70 percent of the credits for the LCP must be at levels 1 to 4 on the NZQF, unless the LCP is approved at a higher level.
- The LCP must be for a minimum of 20 credits and a maximum of 70 credits.
- At least 50 percent of trainees previously enrolled in an LCP must have progressed to and completed a full national qualification within five years of enrolling in the LCP for that LCP to be funded. This applies on an annual basis. The Tertiary Education Commission may grant an exception to this requirement.
- Trainees must not be enrolled concurrently in a National Certificate and an LCP that leads to that same National Certificate.
- An LCP that is at level 5 or above may be approved for funding if the ITO can show that there is an identifiable training need to be met within the relevant industry.
- LCPs at level 5 and above must not exceed 10 percent of the ITOs total volume of LCPs.

2.3 Delivering national qualifications in the workplace

Industry training takes place in a classroom, in a workplace, or in a combination of these locations. The delivery of industry training and subsequent completion of credits and qualifications therefore needs to be flexible to succeed in a variety of work environments, and across a broad range of occupations and sectors.

Industry training in the workplace involves trainees and apprentices gaining practical skills and knowledge from their employer, supervisor or co-workers. Trainees and apprentices receive training packages from the ITO they have a training agreement with. This training package can include workbooks and study guides, and guidance on the assessment of unit standards or any off-the-job training that may need to be undertaken. Off-the job training involves short, practical courses that are delivered by tertiary training providers.

Trainees and apprentices, and their workplace assessors, are also supported by training advisors and Modern Apprenticeship Co-ordinators. These people visit workplaces to set study goals and check on the progress of industry trainees. Overall, their role is to provide support to trainees or apprentices, and their employers.

Principally, the role of ITOs in arranging the delivery of industry training is to ensure that vocational learning meets the needs of industry, employers and employees. ITOs monitor the quality and effectiveness of training delivered in a classroom by training providers. They

also work with employers to undertake assessment and moderation of training that occurs on-the-job.

In theory the model of industry training is relatively simple. In practise, however, industry training is part of the work environment and is delivered in a variety of ways to meet the needs of industry and employers. The following examples illustrate how ITOs have developed various approaches to delivering industry training to ensure that it meets the needs of industry. Overall, these examples illustrate that a one-size-fits-all approach is not applicable in industry training.

In the motor industry, NZ Motor Industry Training Organisation (Inc) arranges training in the workplace, practical assessments, training packages, and off-the-job training. Training advisors from MITO visit the workplaces of apprentices or trainees quarterly to check on their progress and to set study goals.⁶

The Plumbing, Gasfitting, Drainlaying, and Roofing ITO (PGDR ITO) and Electricity Supply Industry Training Organisation (ESITO) employ a model of industry training similar to that of MITO. In these sectors, industry trainees enter an apprenticeship and complete block courses at Institutes of Technology and Polytechnics. Unit standard assessments occur at the block courses.

Prior to attendance at a block course, ITO training advisors and Modern Apprenticeship Coordinators work with training providers, employers and apprentices. Training providers provide feedback on what tasks apprentices need to undertake to meet the unit standards requirements on a block course; and what practical experience and evidence is required prior to its commencement.⁷ This means the employer is aware of what work experience the apprentice needs to undertake prior to the block course, and the apprentice understands what will happen on the block course.

In contrast, on-the-job training for EMQUAL trainees involves simulations and collecting evidence through logbooks and attestations. EMQUAL is the Industry Training Organisation for fire and search and rescue and their trainees often use computer simulations and undertake exercises. The simulations can be from situations overseas as well as in New

⁶ NZ Motor Industry Organisation (Inc). *Get Qualified! Light Vehicle Technician*. NZ Motor Industry Organisation (Inc): Wellington.

⁷ Interviews with Jason Hazelwood, General Manager of Construction, Counties Power. 30 August 2011; Jerome Cudmore, Group Human Resources Manager, Electrix. 30 August 2011; Interview with Craig Cochrane, National Operations Manager, PGDR ITO. 22 August 2011.

Zealand, as people are deployed to a variety of places and need to be able to use international standards correctly.⁸

In service industries such as hairdressing, security, hospitality, and aged-care, apprentices and trainees work on and with real clients in a commercial setting.⁹ In these industries, on-the-job training occurs during work hours. For example, in the hairdressing sector salon owners undertake in-salon training with their apprentices during the day. However, some training occurs outside of work hours or through distance learning. An example of this in the security sector is first aid and fire extinguisher training, which is completed outside of work hours.¹⁰

Industry training in the public sector is delivered by Learning State using what the ITO terms a blended learning model. This learning model is different again from our previous examples. Here, the focus is on blending coaching, knowledge and skills. It involves communication skills, problem-solving, and conflict management.¹¹ Some local and central government agencies use technology, such as online learning and intranets, to undertake this industry training. This is then complemented with face-to-face coaching. The focus in this type of training environment is on recognising current competency, and coaching people to help fill in the gaps in their skills and knowledge.¹²

As the previous examples have illustrated ITOs understand how industry 'works' and how training can be made part of this work environment. This is a unique feature of industry training that again emphasises the conduit role that ITOs play in tertiary education and the labour market.

2.3.1 Working with employers

ITOs arrange the delivery of training in collaboration with employers. This is important because industry training needs to be delivered in such a way that it allows apprentices and trainees to fit training in around their work. Again, each ITO develops their own approach to doing this and the following discussion illustrates the various ways this occurs.

⁸ Interview with Bill Robertson, Chief Executive, and Liz Hamilton, Development Manager, EMQUAL. 7 September 2011.

⁹ New Zealand Hairdressing Industry Training Organisation. *Strategic Training Plan 2010-2020*. (www.hito.org.nz/about-hito/corporate/stp/).

¹⁰ Interviews with Wayne Black, Matrix Security. 31 August 2011; Tony Robinson, Venue Security International. 31 August 2011; NZIER. (2010). *Making the most of a HITO apprenticeship*. NZIER: Wellington.

¹¹ Interview with Karen Moses, Senior Advisor, Learning State Limited. 18 August 2011.

¹² Interview with Karen Moses, Senior Advisor, Learning State Limited. 18 August 2011.

In the seafood industry, the Seafood ITO (SITO) works with large employers to provide whole of company training plans. These companies include, for example, Aotearoa Fisheries Limited, Talleys, Sealords and Sanfords. Here, SITO works with the company to see how they run their business, and how industry training can lead to improvements. These improvements can include training in areas such as front line management or supervision. The culture of training differs between companies, and with a seasonal industry, it is important for SITO to work with employers to provide qualifications and training that can be directly applied in the workplace.

Working with large employers and a seasonal workforce, New Zealand Industry Training Organisation (NZITO) provides training in the meat processing, and dairy and leather manufacturing sectors. Similar to SITO, NZITO also works closely with large employers to focus on training in areas such as lean manufacturing, food safety and supply chains, and project management. Large export companies such as Fonterra have their own internal training programmes; however, these programmes draw on qualifications and training pathways developed by NZITO in conjunction with industry advisory groups.¹³

Our approach to working with employers is very collaborative - NZITO has expertise in qualification development, and our training coordinators have a good insight into their sectors because they have all worked in industry - but we still work closely with our sectors. Even our board is composed of industry representations, employers and union representatives.

*Blair Morgans, Training Research Analyst,
New Zealand Industry Training Organisation*

In mechanical engineering, Competenz offers employers two options in regards to arranging workplace training and employing apprentices. These programmes are called the Elev8 scheme and the ATNZ scheme.

The ATNZ scheme is for companies that want to employ an apprentice but do not want to be actively involved in the recruitment process or administration tasks involved in employing an apprentice. Under ATNZ, Competenz advertises for people to fill Modern Apprenticeship roles, and administers the apprenticeship on behalf of the employer

Competenz wants to add value to the standard that already exists in the industry. To do this, we need to demonstrate to businesses the connection between improvements in productivity, and qualifications and learning.

*Jim MacBride-Stewart,
General Manager Traineeships, Competenz*

¹³ Interview with Blair Morgans, Training Research Analyst, New Zealand Industry Training Organisation. 16 September 2011.

including arranging the off-job training, training materials and equipment the apprentice may require. The Elev8 scheme is for companies that employ the apprentice themselves, and Competenz assists the company through assessment, moderation, coaching or mentoring.¹⁴

In the agriculture sector, the Agriculture ITO (AgITO) has introduced the Farm Training Plan to help farm managers and owners assess the training needs of their business, identify skills gaps, and create individual training plans tailored to meet their business needs.

Programmes such as this again illustrate the various ways that ITOs work with employers and industry to arrange the delivery of industry training. Under the Farm Training Plan, farm managers and owners work with AgITO training advisers to rate the skill levels of each team member. This information is then used to develop individual and team training plans for the next 12 months. Then, at the end of the 12 month period, the Farm Training Plan is used to reassess individual and team skill levels.¹⁵

2.3.2 Practical assessments in the workplace

On-the-job, skills are tested through practical assessments by workplace assessors. Workplace assessors may be employed by the business that the apprentice or trainee works for, or may be employed by an ITO and visit the company to undertake the assessment. Practical assessments can involve the apprentice or trainee providing evidence that they have competently completed particular tasks. Alternatively, the apprentice or trainee completes a series of tasks while an assessor observes and asks questions.

In the agriculture industry, employers can be workplace assessors. This is because employers do not want their trainees to spend a lot of time off-farm, so they undertake the workplace assessment themselves. In this situation, AgITO training advisors work closely with the employer to help them understand what industry training and assessment will involve, and the moderation and quality assurance process.¹⁶

Silver Fern Farms is an example of a large employer that has registered workplace assessors. These assessors are employees at each of their 23 meat processing plants. However, even within a company of this size, there is variety in the way that workplace assessors work. For example, some small plants use the assessors from a neighbouring large plant, while within large plants there may be assessors who specialise in a particular area.¹⁷ In this sector being a workplace assessor can provide people with variety in their

¹⁴ Interview with Jim MacBride-Stewart, General Manager Traineeships, Competenz. 31 August 2011.

¹⁵ Agriculture Industry Training Organisation. (2010). *Annual Report*. Wellington: 2010.

¹⁶ Meeting between AgITO, Ministry of Education, and BERL representatives. 26 August 2011.

¹⁷ Interview with Mike Rutherford, National Manager ACC, Health & Safety, and Training, Silver Fern Farms. 15 September 2011.

work, the opportunity to learn new skills, and contribute to the development of their colleagues and their industry.

Being a workplace assessor can also provide people with networking opportunities. In some sectors, workplace assessors attend forums where they meet with people who are in a similar position to themselves, and can provide feedback on training, qualifications and unit standards.¹⁸ In the fire and search and rescue sector for example, approximately 200 people nationwide are registered workplace assessors, and EMQUAL meets with these assessors twice a year to undertake professional development exercises.¹⁹

2.4 Maintaining industry standards

To set standards within the sectors they represent ITOs work with employers and training providers to develop qualifications, and embed literacy and numeracy skills in industry training. They also assist current industry workers and skilled migrants gain recognition for their skills, knowledge and experiences through recognised national qualifications.

The following sections provide examples of how ITOs consider labour market needs, including migration, and the supply of and demand for qualifications at various levels.

2.4.1 Revising, amending and developing qualifications

To set skill standards within the sectors they represent, ITOs work closely with employers, industry, tertiary education providers and the Government to maintain the currency of qualifications. To do this, ITOs work with people who are credible and recognised as being at the forefront of their industry. These people provide the ITO with advice and information, and act as industry champions. One of the best illustrations of industry champions is the composition of ITO boards, are industry representatives.

The following discussion focuses on how ITOs work with industry to revise, amend or develop qualifications. It illustrates the conduit role that ITOs play in this sphere rather than the specific steps involved in qualifications development.

The Communications and Media ITO (CMITO) has a good relationship with the sectors they represent because their board consists of people who are running businesses in these sectors. Relationships such as these again illustrate the conduit role of ITOs in working with employers, industry, tertiary education providers, and the Government.

¹⁸ Interviews with Kaye Kennedy, Contact Centre Manager, Fujifilm. 6 September 2011; Kirsty Walker, Contact Centre Manager, Amway New Zealand. 31 August 2011.

¹⁹ Interview with Bill Robertson, Chief Executive, and Liz Hamilton, Development Manager, EMQUAL. 7 September 2011.

To develop qualifications it is important for ITOs to keep up to date with advances in technology. Again, drawing on the example of CMITO and their gazetted areas of print media, journalism and sign-making, this ITO keeps up to date with technology through attending forums , and their relationships with equipment suppliers and international industry players.²⁰

CMITO leads the standard setting, but we make a point of talking to industry stakeholders and have close contact with them to ensure we know what is happening in industry. Our unit standards are very industry focused as a result.

*Anne Benson, Manager,
Communications and Media Industry
Training Organisation*

In addition to having their own advisory groups and sector committees, ITOs can sit on advisory groups, boards or committees. EMQUAL, for example, has representatives on the New Zealand Fire Service national training advisory group and the Telford and Tai Poutini polytechnic boards.²¹

EMQUAL trains people who manage, lead and supervise teams, who are undertaking international deployments, or who have a specialist function within their organisation. This training is at level 4 and above. As part of this, EMQUAL and the people they are training, need to be able to interface and work with a large number of countries. For example, New Zealand has a large rescue zone, and EMQUAL is involved in training people for the rescue coordination centre. EMQUAL therefore has links with International Aviation and Maritime Search and Rescue, which is mandated through the United Nations. EMQUAL is also a member of the Australasian Fire and Emergency Services Authority Council (AFAC) and has strong links with their international equivalents such as the Federal Emergency Management Agency in the United States.²²

In emergency management people need to keep their skills current, and they need to be able to measure and monitor that. As the “middle man”, EMQUAL understands that the qualifications undertaken in this sector are not necessarily qualifications for life. It is therefore important that the qualifications EMQUAL develops reflect this evolving training need.

As such EMQUAL works with technical advisory groups to develop appropriate unit standards. They then work with government agencies to ensure that what industry needs is translated into unit standards and qualifications that are recognised on the National

²⁰ Interview with Anne Benson, Manager, Communications and Media ITO. 14 September 2011.

²¹ Interview with Bill Robertson, Chief Executive, and Liz Hamilton, Development Manager, EMQUAL. 7 September 2011.

²² Interview with Bill Robertson, Chief Executive, and Liz Hamilton, Development Manager, EMQUAL. 7 September 2011.

Qualifications Framework through the New Zealand Qualifications Authority. EMQUAL therefore plays an advocacy role on behalf of its members, but also acts as an interpreter between industry, the tertiary education system, and government.

The Electrotechnology Industry Training Organisation (ETITO) also works closely with industry when they are developing qualifications. As the ITO for seven sectors, ETITO works with industry consultation groups. These groups provide a “check” on qualifications to ensure that they are practical, meet the needs of industry, and will work in the world of work.²³ ETITO also keeps an eye out for changes that impact on qualifications relevant to their sectors through membership on various boards and associations, including Standards New Zealand. They also receive feedback from their field staff such as training advisors, and industry regulators such as the Electrical Workers Registration Board.²⁴

2.4.2 Language, literacy and numeracy

Another area of qualifications development that ITOs are involved in is language, literacy and numeracy. Here, ITOs work with training providers and employers to embed literacy and numeracy skills in industry training. This multi-faceted approach again illustrates the conduit role that ITOs play with industry and training providers, and their standards setting role.

Language, literacy and numeracy is wide ranging and includes speaking, listening, maths, using technology, reading, writing, problem-solving, and critical thinking. Education theory argues that adult learners develop expertise by building on their existing knowledge, skills and experience. So it is unsurprising that industry trainees also develop their literacy and numeracy skills most effectively in contexts that have meaning to them – such as on-the-job. This approach is termed embedded, and in the case of industry training, it involves incorporating aspects of language, numeracy and literacy learning with vocational skills.

An example of embedded learning that is benefitting industry trainees and their employers is the work the AgITO is doing to assist their trainees achieve NCEA Level 1. Gloria McGirr, project leader and AgITO literacy advisor, argues that helping trainees achieve their missing literacy and numeracy credits is important. “These young people are in charge of large herds, some milking 1,000 cows worth \$1,000,000 twice a day. They have big responsibilities and deserve to have their skills recognised. Our young people work incredibly long hours. They don’t have the time or inclination to study at night. But young

²³ Interview with Tracey Cook, Qualifications Advisor, Electrotechnology Industry Training Organisation. 24 August 2011.

²⁴ Interview with Tracey Cook, Qualifications Advisor, Electrotechnology Industry Training Organisation. 24 August 2011.

farm workers are relatively mobile, and they recognise that having NCEA on their CV is valuable.”

Mike Styles, a literacy and numeracy advisor at AglITO, also argues this programme is important because “[q]ualifications are becoming increasingly important in the agriculture sector.” Programmes such as this illustrate how helping trainees to gain language, literacy and numeracy skills provides them with confidence in their own learning ability. It also enables people to staircase into other areas of training such as national certificates and national diplomas, and encourages them to participate in ongoing training.

2.4.3 Recognition of prior learning

ITOs are actively involved in recognising the skills, knowledge and experience of people who have worked in an industry but do not have a recognised qualification. Here, people may have the skills and experience required through working within an industry, but do not have the qualification that recognises this. There is a variety of evidence required to prove current knowledge and if the candidate has the necessary practical skills. Some evidence is compulsory, while other documents may supplement the compulsory paperwork.²⁵

In the public sector, for example, recognition of prior learning involves focusing on competency as a benchmark. In this situation, Learning State works with the trainee to gather evidence from up to two years ago. Here, the focus is on how competent the person is in completing their existing tasks, and what gaps they may have in their skills or experiences due to changing technology, or systems or process changes.²⁶

The PGDR ITO has developed a similar system to this in the plumbing industry. This system is called the skills recognition process. This process is for people working in the plumbing industry that are close to National Certificate level. This process allows people to fill in the gaps in their knowledge and apply to have their skills, knowledge and plumbing experience recognised.²⁷

PGDR ITO argues that this type of assessment is also suitable for skilled migrant workers who have a qualification similar to that required in New Zealand, and would like to have it recognised.²⁸ As part of developing qualifications and meeting the needs of industry, ITOs

²⁵ See for example, Competenz. (2010). *Assessment of Prior Learning: Application Handbook for Trades Qualifications*. Competenz: Auckland.

²⁶ Interview with Karen Moses, Senior Advisor, Learning State Limited. 18 August 2011

²⁷ Plumbing Gasfitting Drainlaying Roofing ITO. 'Recognition of Skills'. Training Focus. August 2011. (www.ito.co.nz).

²⁸ Plumbing Gasfitting Drainlaying Roofing ITO. 'Recognition of Skills'. Training Focus. August 2011. (www.ito.co.nz).

also assist skilled migrants attain recognition of their current competencies and qualifications.

2.4.4 Skilled migrants and industry training

Emigration can reduce the number of skilled and experienced New Zealanders in the labour force. To overcome this, and maintain the capacity of the skilled labour force, industry can recruit skilled people from overseas or provide untrained New Zealanders with training and experience. This means migrant flows - the rate of emigration and immigration – can drive the need for different types of industry training.

ITOs work with skilled migrants because the New Zealand work environment has a degree of specificity to it. This means various skills, knowledge and experiences are required to work in New Zealand, and skilled migrants require transition training to operate effectively. In many professions, trades, and technician roles this is fairly apparent; however, transition training also occurs in sectors such as hospitality and transport.

As mentioned above, ITOs assist skilled migrants attain recognition of their current competencies and overseas qualifications. In this situation, migrant workers have a qualification similar to that required in New Zealand and ITOs work with them and the New Zealand Qualifications Authority to have it recognised.²⁹

Migration and employment data indicates that between 2009 and 2011, 64,400 skilled migrants could have required training to effectively transition into the New Zealand labour force.

- The main need for this type of training would have come from the 25,507 professionals and 10,095 technical and trades workers who were part of this cohort.
- This is equivalent to 3 percent of the labour force in October 2009, and implies an annual turnover across the labour force of 1.5 percent per annum due to migration.

Also during this period there was a net loss of 5,435 skilled workers from the New Zealand labour force.

- There was a net gain in the number of professionals, by 2,525, which means the capacity of professionals increased.

²⁹ Plumbing Gasfitting Drainlaying Roofing ITO. 'Recognition of Skills'. Training Focus. August 2011. (www.ito.co.nz).

- There was a net loss in the number of trades and technician workers, by 2,220. This means that even if the 10,095 technical and trades workers who were part of the skilled migrant cohort had effectively transitioned into the New Zealand labour force, there would be a need to train 2,220 New Zealand residents to replace those skilled workers who left.
- The overall net loss of skilled workers between 2009 and 2011 was 0.3 percent, or 0.15 percent per year.
- However, for some occupations the net losses were higher. For example, the emigrant outflow of bricklayers, carpenters and joiners during this period was over 8 percent of the workforce per annum, and the net loss was approximately 2.3 percent per annum.

Table 2.4 Training needs generated by migrant flows, 2009-11

Occupation Groups		Two years to September quarter 2010					
		Trained NZ residents emigrated		Migrants arrived: need training to transition to NZ skills		Net loss of skills: need full training of replacement NZers	
		Number	% of skilled at beginning	Number	% of skilled at beginning	Number	% of skilled at beginning
Managers	Business	5,567	2.7%	4,860	2.4%	707	0.3%
	Farmers	810	1.2%	753	1.1%	57	0.1%
	Retail and hospitality	1,092	1.5%	1,023	1.4%	69	0.1%
	Managers	7,469	2.2%	6,636	1.9%	833	0.2%
Professionals	Business-related incl. legal	6,571	4.1%	7,041	4.4%	-470	-0.3%
	Technical professionals	5,559	7.7%	5,999	8.3%	-440	-0.6%
	Social, cultural	10,852	4.6%	12,467	5.3%	-1,615	-0.7%
	Professionals	22,982	4.9%	25,507	5.5%	-2,525	-0.5%
Technical and Trades	Primary industry trades	997	2.7%	1,041	2.8%	-44	-0.1%
	Engineering, auto, electronic	2,586	2.5%	1,906	1.9%	680	0.7%
	Building	4,581	6.7%	3,276	4.8%	1,305	1.9%
	Processing food, wood textile	2,545	6.2%	2,595	6.3%	-50	-0.1%
	Other	1,606	5.4%	1,277	4.3%	329	1.1%
		Technical and Trades	12,315	4.4%	10,095	3.6%	2,220
Support workers	Social and hospitality	8,382	5.2%	8,103	5.0%	279	0.2%
	Business and security	1,685	1.5%	1,489	1.3%	196	0.2%
	Clerks	4,159	2.0%	3,908	1.9%	251	0.1%
	Sales people	5,421	2.8%	4,027	2.1%	1,394	0.7%
	Support workers	19,647	2.9%	17,527	2.6%	2,120	0.3%
Operators, labourers	Plant operators and drivers	2,566	2.5%	1,306	1.3%	1,260	1.2%
	Other cleaners, labourers etc	4,092	1.9%	2,633	1.2%	1,459	0.7%
	Farm forest garden	770	1.5%	702	1.3%	68	0.1%
		Operators, labourers	7,428	2.0%	4,641	1.3%	2,787
Total Identified occupations		69,841	3.3%	64,406	3.0%	5,435	0.3%

Source: Statistics NZ: International migration, Household Labour Force Survey, by ANZSCO occupations; BERL.

Migration research completed by BERL has found that, over the past three decades when GDP growth has been relatively high, net inward migration has also been high. Unfortunately, the contra is also the case. Thus when the New Zealand economy is not growing, there is net outward migration and New Zealand loses the skills needed to maintain and expand the economy. This means it is particularly important during times of low

economic growth, such as the present situation, that industry training is lifted to a higher level to include net inward migrants and the replacement of skilled and experienced workers.

2.5 Achieving national standards through qualifications

The opportunity to have a career, earn a wage while learning, and complete a nationally recognised qualification motivates many people to undertake industry training.³⁰ In addition, people that enter industry training are aware that their nationally recognised qualification is often recognised overseas, which means they can take their skills, knowledge and competencies anywhere in the world. National qualifications provide industry recognition that the role people are in is a career with a career pathway.

In service industries where there are a lot of casual and temporary employees, nationally recognised qualifications are one way to develop professional standards and advance the industry.³¹ Retail trade is an industry where store managers are often between the ages of 25 and 32 years old, and a large proportion of potential trainees are school leavers with NCEA level 1 or 2.³² The Retail Institute, as the ITO for the retail trade industry, is well aware of the demographics of their trainees. This ITO therefore works with large employers to illustrate the value of retail career pathways, nationally recognised qualifications, transferable skills, and self-confident employees.³³

Businesses in the service sector want to maintain a standard and undertaking industry training is one way of doing this. Letting customers know that your staff are competent, and have had their skills recognised through participating in training and achieving units standards and nationally recognised qualifications, is another means of doing this.

The New Zealand Hairdressing Industry Training Organisation (HITO) provides qualifications in an industry where qualifications are non-mandatory. Despite this, HITO has a high qualification completion rate and the ITO argues that this demonstrates that although obtaining HITO national certificates are not an industry regulation, businesses and trainees recognise it as essential for demonstrating the standard required to operate in this profession.

³⁰ For further information on benefits from the point of view of apprentices and trainees, see Motor Industry Training Organisation Inc. *Get Qualified! Light Vehicle Technician*. Motor Industry Training Organisation Inc.: Wellington.

³¹ Agriculture Services Limited (2010). *Identifying and Reporting the Value-added from Training: Services Sector*. Agriculture Services Limited: Palmerston North.

³² Interview with Desleigh Jameson, Chief Executive Officer, Retail Institute. 30 August 2011.

³³ Interview with Desleigh Jameson, Chief Executive Officer, Retail Institute. 30 August 2011.

For those in the emergency management sector, industry training has provided volunteers with a connection to the National Qualifications Framework. For example, fire-fighters can now undertake industry training and acquire National Certificates, similar to other industries. Having unit standards and National Certificates also provides the National Rural Fire Authority with a measure that defines the requirements rural fire-fighters have to achieve in order to be competent.³⁴ Being part of EMQUAL provides the New Zealand Fire Service with further recognition that they are meeting industry standards and are successfully providing a service to the community.³⁵

2.5.1 Targeted Review of Qualifications

While ITOs are required to design national qualifications and run moderation systems to ensure fair, valid and consistent assessment against national standards, they do not do this in a vacuum. In 2008, the New Zealand Qualifications Authority began a targeted review of qualifications. This review was put in place due to concerns raised by employers, employees and unions about the clarity and relevance of qualifications, particularly vocational qualifications.³⁶

The review itself was completed in 2009 but the outcomes are still ongoing. This is because the review revealed that the current qualifications system is generally poorly understood, lacks relevance to employers and industries, lacks coherence, user-friendliness and clarity, has allowed the proliferation of qualifications that are generally the same, and is confusing because the National Qualifications Framework is a subset of the Register of Qualifications.³⁷

To address these concerns, seven major changes were developed by NZQA with input from the Industry Training Federation, Institutes of Technology and Polytechnics, Business New Zealand, and the New Zealand Council of Trade Unions. These changes aim to create a qualifications system that is simple and straightway, which will make it more useful and easily understood by learners, employers and education providers.

The changes are:

1. Develop a unified New Zealand qualifications framework.

³⁴ Interview with Don Scott, Principal Rural Fire Officer and EMQUAL Assessor, Hastings District Council. 14 September 2011.

³⁵ Interview with Bruce Stubbs, Manager GTE System, New Zealand Fire Service. 21 September 2011.

³⁶ New Zealand Qualifications Authority. *Targeted review of qualifications*. (www.nzqa.govt.nz/studying-in-new-zealand/nzqf/targeted-review-of-qualifications/).

³⁷ New Zealand Qualifications Authority (2009). *Targeted Review of the Qualifications System*. New Zealand Qualifications Authority: Wellington.

2. Use existing quality assured qualifications and change the design rules for national and New Zealand qualifications to allow for more inclusion of local components.
3. Require mandatory periodic reviews of qualifications to determine whether they are still fit-for-purpose.
4. Strengthen and standardise the requirements for qualification outcome statements.
5. Introduce a mandatory pre-development assessment stage for qualification developers.
6. Strengthen recognised industry involvement in qualification development.
7. Provide the public with clear information about whether a qualification is active, inactive or closed.³⁸

The implementation of these changes started in early 2010 and apart from number three, was completed by the end of the 2010-2011 financial year.

The mandatory review of qualifications began in 2011, and will continue through to 2014. The aim of the review is to address any duplication in existing qualifications and develop new qualifications that can be delivered in different contexts to the national standard. This means that all parties who have an interest in the qualification need to work together to get the endorsement of the proposed qualification. It also means the qualification focuses on the wider workforce requirements of the industry, sector, or community. Overall, the aim of the review is to ensure that qualifications remain relevant, current and fit for purpose.

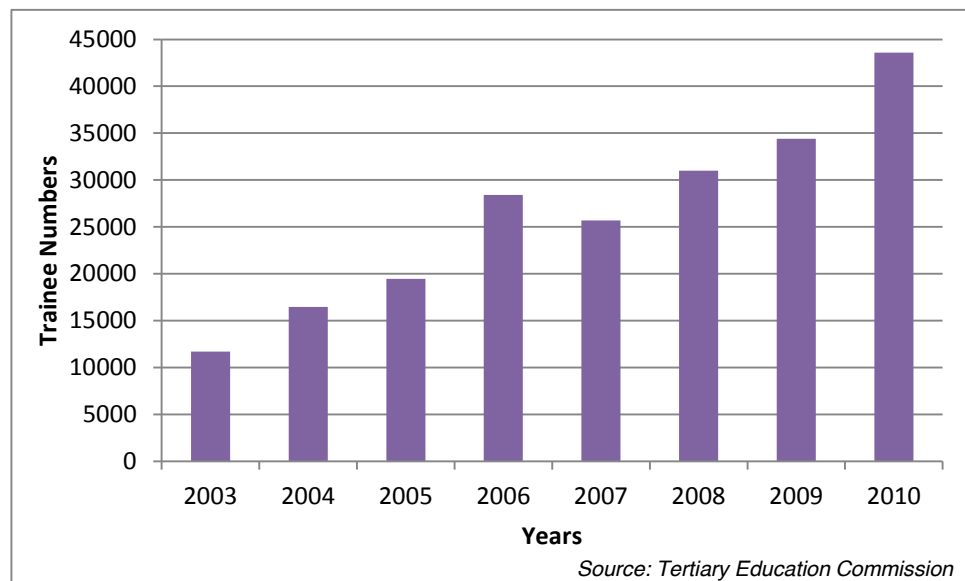
In total over 4,000 qualifications will be reviewed. The qualifications will be reviewed in clusters of similar qualifications, and include all non-university level 1 to 6 qualifications, except NCEA. Over time the use of the term 'National' will be phased out and the qualification will have 'New Zealand' in the title instead. This will distinguish non-university level qualifications from secondary school qualifications at Levels 1 to 3, namely NCEA.

2.5.2 A snapshot of qualification completions

In 2010, 41,300 industry trainees completed or gained a National Certificate, National Diploma, or Limited Credit Programme. This figure, as shown in Figure 2.4, is significantly higher than the number of people who completed a qualification in 2009, which was 34,400.

³⁸ New Zealand Qualifications Authority (2009). *Targeted Review of the Qualifications System*. New Zealand Qualifications Authority: Wellington.

Figure 2.4 Total number of completed qualifications, industry trainees, 2003-2010

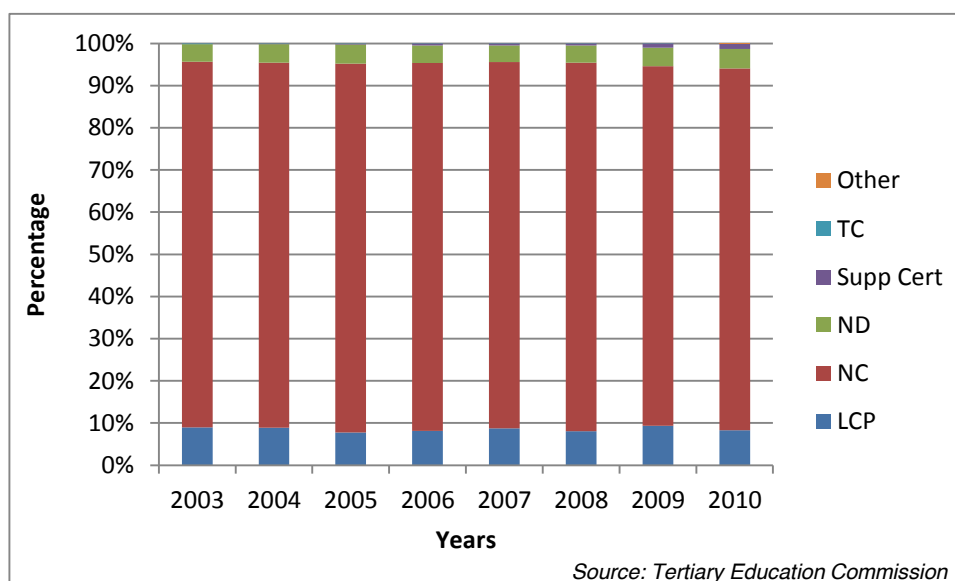


This increase in completion rates may be due a larger number of people entering industry training as part of an earlier cohort and completing their qualification. It may also be due to an increased focus by ITOs on credit completion and programme completion rates to meet Performance Linked Funding requirements, and the Tertiary Education Strategy.

As shown in Figure 2.4, the number of qualifications completed each year has increased over the period, with the exception of 2007. In 2007 the number of industry trainees and Modern Apprentices completing a qualification fell by around 3,000, before recovering in 2008. Overall, the percentage of industry trainees completing qualifications compared to the number signing training agreements has risen between 2003 and 2010.

During the same period, the majority of qualifications completed by industry trainees were National Certificates, as shown in Figure 2.5. The second largest area of completed qualifications was Limited Credit Programmes followed by National Diplomas. Small numbers of industry trainees completed Supplementary Credit programmes or Trade Certificate qualifications between 2003 and 2010.

Figure 2.5 Percentage of completed qualifications, by type, 2003-2010



National Certificates and National Diplomas cover a range of vocational qualifications, and more than a third of the New Zealand population aged between 25 and 39 has one of these qualifications as their highest qualification.³⁹ Qualifications at this level also provide a pathway to higher levels of learning. In 2009, there were 290,000 people studying at this level at a tertiary provider, and a further 195,000 people were participating in work-based learning through industry training.⁴⁰

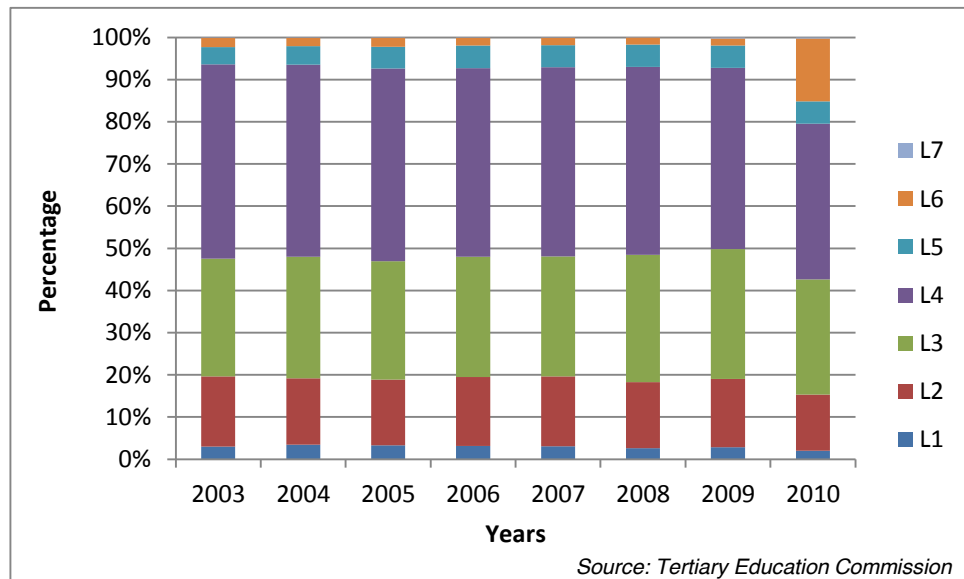
People who enter tertiary education often move up through qualifications. While we are unable to determine this from industry trainee data, if people who have undertaken Limited Credit Programmes have gone on to complete National Certificates or National Diplomas, it is feasible that this is occurring.

Another aspect of qualifications completion is the level of the qualification. Each qualification can be completed by an industry trainee at a different level. For example, there is a National Certificate in Electrical Engineering level 2 and a National Certificate in Electrical Engineering level 3. Figure 2.6 shows the percentage breakdown of completed qualifications by level between 2003 and 2010.

³⁹ Earle, D. (2010). *Benefits of tertiary certificates and diplomas*. Ministry of Education: Wellington.

⁴⁰ Earle, D. (2010). *Benefits of tertiary certificates and diplomas*. Ministry of Education: Wellington.

Figure 2.6 Percentage of complete qualifications, by level, 2003-2010



The majority of qualifications completed by industry trainees during this period were at level 4, followed by levels 3 and 2. Very few qualifications were completed at levels 5 to 7. This pattern is unsurprising given the large number of trades and technician qualifications that require level 3 or level 4 national certificates.

This section of the report has illustrated how industry training in New Zealand is learner-centred training that responds to the needs of trainees, employers and industry. It has also discussed how this type of training involves practical application and theory, and is competency-based. The next section will discuss how ITOs play a key role in identifying and responding to industry skill and training needs.

3 Guiding industry skill and training needs

This section of the report discusses how ITOs play a key role in identifying and responding to industry skill and training needs. These skill and training needs may be driven by demographic factors or behaviour changes in the labour market, or a combination of both. Here, we discuss how ITOs work with schools to encourage new entrants into industry training, and provide career information and advice to career influencers such as parents and secondary school teachers. This section illustrates that whatever the driver of change, ITOs work with industry and employers to identify current and future skill needs and how industry training can meet this

3.1 Demographic demand for industry training

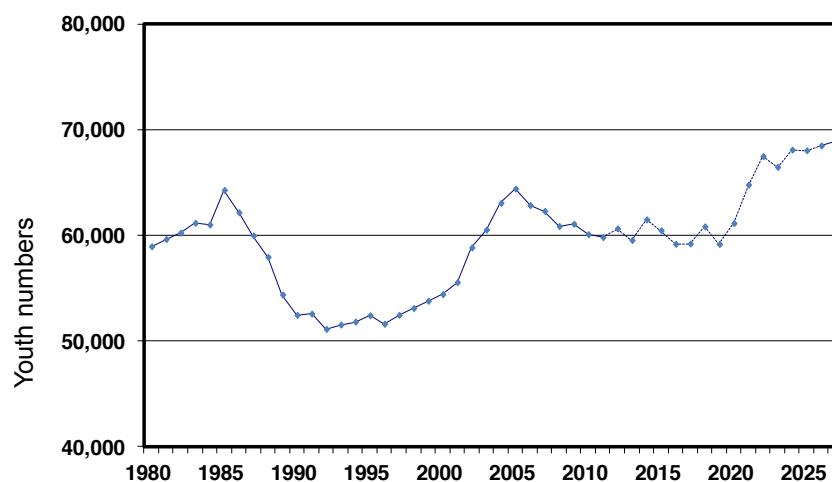
The underlying drivers of the need for industry training are demographic changes. In turn, the main drivers of demographic change are 15 year-olds joining the Working Age Population (WAP), and people ageing and moving from active occupations into areas that require soft skills such as team leadership.

Since 2002, two factors have positively impacted on New Zealand's working age population. These are:

- The birth rate in New Zealand has grown.
- Strong net inward migration to New Zealand between 2001 and 2007 included a large number of school-aged children.

The implication of this growth is that the number of 15 year-olds entering the working age population will increase from 2017/18 onwards. Currently, the number of people turning 15-years old is about 60,000 and this number is expected to remain unchanged until 2017/18. From this point, the number of people in this age cohort is expected to lift to close to 70,000 per year.

Figure 3.1 New Zealand 15 year-olds joining the Working Age Population



This is important because, as our discussion on skilled migrants and industry training illustrated, the New Zealand labour market needs to respond to migrant flows and demographics. As well as training skilled migrants, industry training needs to provide untrained New Zealanders with training and experience.

Looking ahead, this means that the role ITOs play in working with schools, providing career information and advice, and assisting labour market entrants with their initial skills training will become even more important as the number of people entering the working age population grows.

3.1.1 ITOs working with schools

Working with schools is an example of the leadership role that ITOs take in terms of ensuring vocational education offered at schools is relevant and meets the needs of industry. It is also part of their leadership role in regards to ensuring the demand for skills is met by new entrants into the labour market.

Many ITOs work closely with schools and careers advisors to promote their industry or trade, and to encourage people to choose and develop a career in industry. For example, several ITOs are involved in Gateway. Gateway is a programme that allows secondary school students to gain work experience and undertake specifically designed unit standards while at school. The following discussion focuses on the work that three ITOs are doing with schools to help students successfully transition into vocational learning.

For secondary school students interested in developing a career in the hair and beauty industries, HITO offers specifically designed HITO unit standards. These unit standards are

a pathway into qualifications such as the National Certificate in Salon Support, the National Certificate in Barbering, or the National Certificate in Hairdressing.

The National Certificate in Salon Support is the industry's introductory qualification. It covers skills such as customer service, product sales and basin skills, as well as providing people with knowledge of reception duties.⁴¹

If students are interested in electrotechnology or the telecommunications industries, ETITO offers a variety of school-to-work transition programmes. Similar to HITO, students can undertake unit standards as part of the ETITO gateway programme. This programme provides students with the chance to spend a day each week getting work experience with local employers. If they perform well in the Gateway programme and achieve good marks in relevant school subjects, students can also apply to be awarded ETITO's Electrotechnology 101 foundation certificate which demonstrates to employers their potential as an apprentice.

In addition to Gateway, students can participate in Bright Sparks. This programme includes an online club and an annual national competition. The programme is designed to encourage students interested in electrotechnology or telecommunications, and provides them with the chance to interact with others who share a similar interest.⁴²

The National Certificate in Electronics Technology programme is taught to more than 2,000 students in approximately 200 schools. This qualification has practical and theory components, and students can use it to pathway into an apprenticeship.

ETITO also works with career advisers and technology teachers, and provides them with various resources to encourage students to consider a career in the trades. In 2010, ETITO held a forum to allow teachers to gain first-hand information from employers about the opportunities for their students and the attributes these students need to succeed.

The Building and Construction Industry Training Organisation (BCITO) also works closely with industry bodies, employers, schools, and careers advisors to promote the building and construction trade, and to encourage people to choose and develop a career in the industry. This includes initiatives such as the Build-Ability Challenge, and the BConstructive programme.

The Build-Ability Challenge is an annual, nationwide, school-based initiative where students construct a building project. The theory behind this programme is that it gives students a

⁴¹ For more information visit www.hito.org.nz.

⁴² For more information visit www.brightsparks.org.nz.

taste of working in the building industry, and the opportunity to experience the real-life demands of working on a building project. The results of this project are donated to a local community group.⁴³

The BConstructive programme is linked to NCEA and the technology curriculum. It offers Level 1 and 2 qualifications to Year 11 and 12 students, as well as students interested in pre-trades courses at Institutes of Technology and Polytechnics or Private Training Establishments.⁴⁴ Working with schools encourages school leavers to consider industry training and provides them with career information and advice in regards to what to expect, i.e. what it involves, and the various career pathways and opportunities that industry training provides.

3.1.2 Vocational pathways

A priority of the current Tertiary Education Strategy is to increase the number of young people successfully transitioning from secondary to tertiary education. To meet this priority, and in response to industry concerns, the Government has worked with ITOs to establish vocational pathways.

The aim of vocational pathways is to provide secondary school students looking to work in industry with a clear pathway of what they need to study in secondary school to successful transition into higher education and work.⁴⁵ The vocational pathways programme is in addition to the work that ITOs already undertake with schools, and other programmes such as trade academies, trades in schools, and the Youth Guarantees scheme.

The five initial groups of industries covered by vocational pathways are:

- Manufacturing and technology
- Construction and infrastructure
- Primary industries
- Social and community
- Service industries.

⁴³ BCITO. (2010). *Annual Report 2010*. BCITO: Wellington.

⁴⁴ The BConstructive programme is one of the initiatives of the BETA group of ITOs. For more information visit BConstructive, www.bconstructive.co.nz.

⁴⁵ ITF. (2011). *What are Vocational Pathways*. (www.itf.org.nz/assets/ITF-Policy-Papers/Sector-pathways/Voc-Pathways.pdf).

Vocational pathways describe the learning and assessment standards valued by sectors within these industries. They also include a career and study map, which shows young people potential occupations and future study options.⁴⁶

Overall, vocational pathways:

- Identify the skills, knowledge and competencies required by groups of industries and what strengths and abilities students need to work in an industry.
- Identify how students need to meet the curriculum achievement objectives, the New Zealand Qualifications Framework assessment standards, and demonstrate the attitudes, values and key competencies valued by industry.
- Contain a shared set of standards in foundation skills, equivalent literacy and numeracy requirements for NCEA, and require students to achieve existing curriculum and industry-based standards.

3.1.3 Trades Academies and Trades in Schools

Another initiative to increase successful youth transitions from school to work is trades academies and trades in schools. The purpose of trades academies is to:

- Motivate students to stay engaged in learning by providing them with a greater number of study options.
- Provide students with clear pathways post-school by giving them a head start on training for vocational qualifications and access to employment.
- Improve the responsiveness of schools to business and economic needs.⁴⁷

Trades academies are a partnership involving schools, tertiary education providers, ITOs and employers. Students who participate in trades academies are in years 11 to 13, and can combine study towards NCEA with a tertiary qualification at level 1, 2 or 3. The focus of these academies is in providing a pathway between school and work, and ensuring that people have relevant qualifications.

⁴⁶ Minister Tolley. *Good Progress on career pathways for students*. (www.beehive.govt.nz/release/good-progress-career-pathways-students). Media Release 07/09/2011.

⁴⁷ Ministry of Education. *Trades academies*. (www.minedu.govt.nz/NZEducation/EducationPolicies/Schools/Initiatives/TradesAcademies).

The New Zealand Trade Academy is a joint agriculture, horticulture and forestry initiative for Year 11 to 13 students. This initiative involves AgITO, FITEC and the New Zealand Horticulture Industry Training Organisation (NZ Hort ITO). At the trade academy, students can undertake the New Zealand Certificate in Primary Industries, Level 1 and gain all three NCEA qualifications.

The idea behind the academy is that students will receive a qualification, gain experience in the workplace, and that this workplace experience will help them choose what industry they would like to enter when they leave school. The New Zealand Trade Academy illustrates how ITOs collaborate to meet the skill and training needs of the industries they represent, and can provide a connection between school, vocational education, and industry.

The number of fees-free places for 16 and 17 year olds will increase to 2,000 from 2011, and by 2014, 12,500 places will be available in trades academies, service academies and the wider youth guarantee scheme. This means the work ITOs do with schools and in the area of youth transitions will have a growing number of people entering the working age population and an increase in government funding in this area.

3.1.4 The youth guarantee scheme

The youth guarantee scheme was set up by the Government in 2009 to increase the educational achievement of 16 and 17 year olds, and improve their transition into further education or employment. Overall, the initiative provides targeted 16 and 17 year olds with the opportunity to participate in a range of vocational courses for free. This training is provided through Institutes of Technology and Polytechnics, Private Training Establishments, and Wānanga.⁴⁸ However, this training is vocationally focussed and it could be argued the building block for industry training.

The youth guarantee scheme guaranteed in the 2009 Budget 2,000 fees-free places for 16 and 17 year olds at levels 1 to 3, and in the 2010 budget this number increased to 2,500 places.⁴⁹ From 1 January 2012, youth training will be combined with the youth guarantee scheme. Combined, this new programme will focus on all students achieving a tertiary qualification equivalent to NCEA level 2.

⁴⁸ Tertiary Education Commission. *Purpose: Youth Guarantee*. (www.tec.govt.nz/Funding/Fund-finder/Youth-Guarantee/Purpose/).

⁴⁹ Tertiary Education Commission. *Youth Guarantee*. (www.tec.govt.nz/Funding/Fund-finder/Youth-Guarantee/).

The difference between these schemes is that the youth guarantee scheme is for students who have left school, while trades academies and trades in schools are for secondary school students who are still in school.⁵⁰

Our previous discussion has highlighted how ITOs connect new industry entrants to industry training, the workplace, and the tertiary education system. The following discussion illustrates how ITOs work with industry to identify the current and future skill needs of their gazetted areas.

This section draws on projects undertaken by ITOs, with employers and employees, to ensure that vocational learning meets industry needs. This discussion touches on how ITOs establish workforce development plans in conjunction with industry, as part of their roles as standard setting bodies, and can therefore influence the supply and demand for industry training. Information provided here was gathered from interviews with ITOs.

3.2 Maintaining the conversation about industry training

Taking a leadership role in regards to skill and training needs also involves regularly consulting with industry to be representative, and to address any issues. All of the ITOs spoken to as part of this research run annual seminars, meetings and workshops for their sector, where they discuss issues and strategic direction. To share information and expertise on the latest developments in industry, and to maintain conversations with and between key industry players, ITOs are also involved in forum and conference planning.

EMQUAL, for example, runs a bi-annual conference. This ITO has a close Trans-Tasman relationship – in terms of sharing skills, people, and training personnel in the emergency management sector – and this conference is the result of this relationship. The focus of the conferences is on best practise, and incorporating new and emerging research into operational practise. It usually includes a mixture of international and New Zealand speakers.⁵¹

While the Joinery Industry Training Organisation (JITO) does not run conferences, they do attend the conferences of the sectors they represent as well trade association awards ceremonies.⁵² This allows the ITO to meet with trainees, apprentices, employers and sector representatives to share information and data, and to discuss training and workforce issues.

⁵⁰ Tertiary Education Commission. *FAQ: Youth Guarantee*. (www.tec.govt.nz/Funding/Fund-finder/Youth-Guarantee/).

⁵¹ Interview with Bill Robertson, Chief Executive, and Liz Hamilton, Development Manager, EMQUAL. 7 September 2011.

⁵² Interview with Deb Paul, Chief Executive, Joinery Industry Training Organisation. 19 August 2011.

In addition, JITO has strategic training advisory groups for each of the sectors in their gazetted area. These sectors include timber joinery, aluminium joinery, glass and glazing, glass processing, kitchen design and automotive reglazing. With the strategic training advisory groups, the focus is on trends, developments and the future strategic focus of the sector.⁵³

3.2.1 *Research, data and information gathering*

A further example of regularly consulting with industry is research that is undertaken by ITOs. These research projects predominantly focus on skill and training needs, and workforce planning.

The Joinery Industry Training Organisation (JITO), for example, undertook research in 2009 to explore the skill and training needs of the sectors they represent. Overall, the research concluded that there is an ongoing requirement for basic technical skills, and that JITO should focus on supporting the adoption of new processes and techniques – through training and the completion of unit standards – to improve productivity.⁵⁴

The employer needs to know what the apprentice is learning at their block course so when the apprentice goes back to their workplace they can use those skills immediately, and apply them to the advantage of the company. It also means the apprentice is applying what they have just learnt and reinforcing their learning.

The employer also needs to be part of the training plan; they need to understand what unit standards are, what the qualification is about and how it will be completed, and who will help if things go wrong.

*Deb Paul, Chief Executive,
Joinery Industry Training Organisation*

This research found:

- The increased use of machinery is having an impact on skill needs, and machine programming and design are key development areas for joiners.
- Traditional technical skills still need to be taught, including problem-solving and understanding the production process.⁵⁵

⁵³ Interview with Deb Paul, Chief Executive, Joinery Industry Training Organisation. 19 August 2011.

⁵⁴ NZIER. (2009). *Strategic training plan for the industries covered by JITO: Understanding skill and training needs*. NZIER: Wellington.

⁵⁵ NZIER. (2009). *Strategic training plan for the industries covered by JITO: Understanding skill and training needs*. NZIER: Wellington.

Further, feedback on block courses indicated that employers were interested in having information on their apprentice's progress – both prior to and following the block course – and having the block courses broken down into smaller chunks.⁵⁶ JITO responded to this feedback, making changes to the delivery of block courses and embedding unit standards.

This feedback to JITO from employers fits with theory on improving productivity and business performance. Training on its own is likely to have a limited impact on improving productivity. To take advantage of the benefits of training, businesses need to be able to link the skills gained through training to business practice and processes.⁵⁷

A survey commissioned by Competenz in 2010 found that businesses believe there is more than one way to improve productivity. However, while investment in business processes is important, an investment in people – their skills, knowledge and qualifications – is needed to reap the full benefits of investing in business processes.⁵⁸

A total of 200 businesses employing between 20 and 50 people were surveyed as part of this study. Of the companies surveyed, 53 percent were in manufacturing, 30 percent were in engineering, and 17 percent were food processing companies. These business owners believed that better trained staff was the number one way to improve productivity. However, in practise, training staff only ranked fourth in terms of what the businesses actually did to improve productivity.⁵⁹

As the ITO for the electricity supply sector, ESITO is also aware of the need to link the skills gained through training to business practice and processes. Further, this ITO is conscious of how workforce demographics impacts on training requirements, as well as business practice. This ITO represents

ESITO is interested in skills demands, and has used an industry-based group to look at forecasting in regards to various areas of the sector, and the potential demand for further employment/training needs.

ESITO also uses asset management plans and looks at infrastructure build programmes that the Government puts out to help with this forecasting.

Doug Pouwhare, Industry Standards and Development Manager, Electricity Supply Industry Training Organisation

⁵⁶ NZIER. (2009). *Strategic training plan for the industries covered by JITO: Understanding skill and training needs*. NZIER: Wellington.

⁵⁷ Innovation & Systems Ltd. (2008). *The Skills-Productivity Nexus: Connecting Industry Training and Business Performance*. Department of Labour: Wellington: 2008.

⁵⁸ Competenz. (2011) *Perceptions of productivity: How medium-sized businesses approach productivity*. Competenz: Auckland.

⁵⁹ Competenz. (2011). *Perceptions of productivity: How medium-sized businesses approach productivity*. Competenz: Auckland

an industry that includes a large number of people in the 45 to 60 year old age group. This group is ageing and retiring, but not necessarily being replaced by new industry entrants. To address this skill gaps ESITO has undertaken research on targeted cohorts such as skilled migrants, Māori, Pasifika and women to encourage people from within these groups to consider entering industry training.⁶⁰

ESITO also regularly keeps in contact with the sector it represents. The ITO holds annual skills forums, draws on industry advisory groups, and undertakes labour market forecasting. To further assist with labour market forecasting, ESITO uses the asset management plans created by their sector, and government infrastructure programmes. ESITO therefore plays a key role in linking relevant training and qualifications to the current and future skill needs of the electricity supply sector.

ESITO and other ITOs such as the Retail Institute also hold Chief Executive Forums to encourage engagement between large industry players, and to gather data and information. Employers who engage in these types of forums with the Retail Institute include, for example, the Warehouse, Placemakers, Bunnings and Briscoes. The focus of the latest forum was on staff development, and aligning qualifications and training to meet these needs.⁶¹

The sharing of research, data and information is a key part of the relationship the Retail Institute has with the retailers they represent. This is further strengthened through representation on boards such as the New Zealand Retailers Association.

Another example of sharing research, data and information is the research AgITO has recently completed with collectively owned Māori land-based businesses. This research focused on human capability building and the provision of appropriate training programmes. In particular, the goal of this project was to assess what training and skills development is currently available to these businesses, and looking ahead, what training will be required to ensure they can meet and manage climate-change related challenges.⁶²

⁶⁰ Interview with Doug Pouwhare, Industry Standards and Development Manager, ESITO, 24 August 2011.

⁶¹ Interview with Desleigh Jameson, Chief Executive Officer, Retail Institute, 30 August 2011.

⁶² AgITO. (2011). *MAF POL 0910-11728 Evaluate the Current Skills Development and Training Provided for Iwi/Māori*. AgITO: Wellington.

As part of their leadership role, AgITO produces a number of resources that identify current and future skill needs, and sit on projects committees, and industry and education forums.⁶³

Examples of projects that AgITO are involved in include:

- The Futures Research project. This is an ongoing project that seeks to identify key trends and drivers in New Zealand's water and agriculture industries over the next 20 years. The focus of this research is on emerging or future issues, or areas of potential concern or risk that could impact on skills, knowledge or training needs.
- The MAF climate change technical transfer work plan. The AgITO was the lead contractor for two projects and a partner in two others.
- The Pipeline project. This was initiated by New Zealand Young Farmers, is part of a larger DairyNZ project that aims to promote agriculture in schools. This project is focused on career pathways, leadership development, mentoring, and the linking of experience and qualifications. Beef+Lamb NZ, Lincoln University, Massey University and Federated Farmers are also involved in this project.⁶⁴

Acting in a similar capacity but in a different industry, the Built Environment Training Alliance (BETA) is a collaboration between the BCITO, the Building Service Contractors ITO (BSCITO), DecorateNZ and FloorNZ, ETITO, InfraTrain, JITO and PGDR ITO. BETA closely monitors the outlook for residential and non-residential construction, and the demand for infrastructure. This monitoring principally takes the form of economic forecasting that is used in strategic planning, investment plans, and training plans. In addition, this alliance closely monitors total employment in the building and construction industry, as well as the demand for skills and labour by sector.⁶⁵ They do this through gathering macroeconomic data and observing trends.

BETA, and the data and information this alliance gathers, is an example of the leadership role that ITOs play in industry. These ITOs are actively undertaking research to identify current and future skill needs, and potential shortages in the labour market. For example, data gathered by BETA illustrates that in the period 2000 to 2010, the volume of building work put in place in New Zealand increased from \$1.5 million per quarter in 2000, to \$2.5

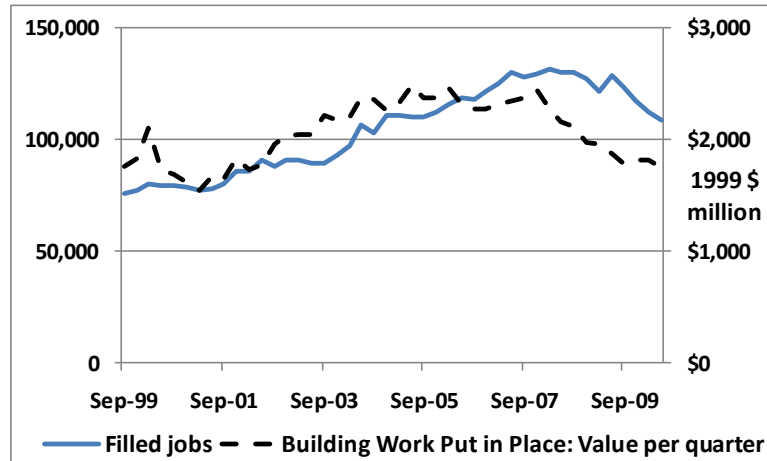
⁶³ Interview with Fiona Beardslee, Senior Policy Analyst, and Ruth McLennan, Strategic Business Development Adviser, The Agriculture Industry Training Organisation. 15 August 2011.

⁶⁴ AgITO. (2010). *Annual Report 2010*. AgITO: Wellington; Interview with Fiona Beardslee, Senior Policy Analyst, and Ruth McLennan, Strategic Business Development Adviser, The Agriculture Industry Training Organisation. 15 August 2011.

⁶⁵ See for example, Infometrics. (2011). *Outlook for the Construction Industry July 2011 Monitoring Report*. Infometrics: Wellington.

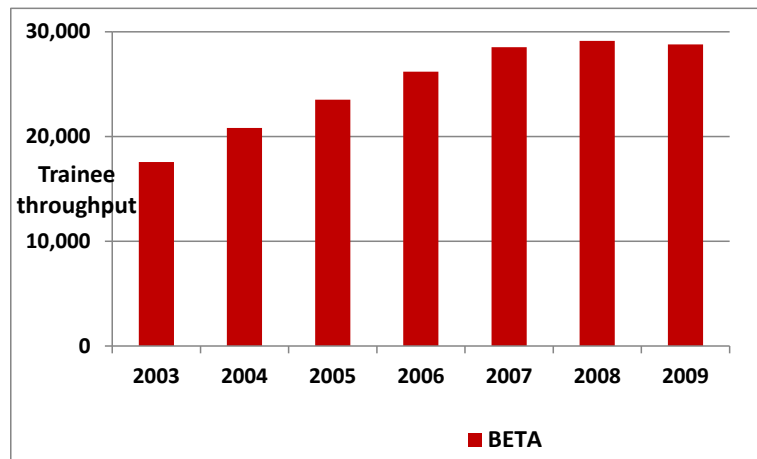
million per quarter in 2005, before dropping back to \$1.7 million per quarter in 2010.⁶⁶ This expansion in the volume of building work put in place, and the response of the labour market to meet this demand, is illustrated in Figure 3.2 below.

Figure 3.2 Building work put in place and filled jobs, 1999-2009



In terms of the labour market response, in 2000 76,000 jobs were filled in this industry. This number rapidly increased to 131,000 jobs by 2005; before falling back to 115,000 jobs by 2010.⁶⁷

Figure 3.3 Trainee throughput, BETA group of ITOs, 2003-2009⁶⁸



At the same time, the number of trainees signing training agreements with BETA followed a similar path of rapid expansion - from a throughput of 17,600 trainees a year in 2003 to over

⁶⁶ The figures are deflated to all be expressed in Sept 1999 \$s, so reflect the volume not the inflated value.

⁶⁷ These measures of filled jobs is from the Statistics NZ Quarterly Employment Survey.

⁶⁸ Although the BETA alliance was not formed in 2003, for the purposes of this analysis the annual number of trainees in each of the BETA ITOs has been added together.

29,000 trainees a year in 2008, before declining to around 28,800 in 2009. The industry is now concerned that it faces a shortage of apprentices. And, given the time it takes to complete an apprenticeship and the relevant qualifications, there are concerns that in the longer-term a skills shortage will re-emerge.

Issues surrounding skill shortages and productivity improvements in the building construction industry have also lead BETA to be involved in developing a skills strategy for the built environment sector.⁶⁹ In addition, working as an alliance has meant that BETA has been able to proactively and positively respond to the Christchurch rebuild after the February 2011 earthquake. The BETA Skills for Canterbury initiative is a collaborative project that BETA argues will provide good opportunities for new trainees to enter industry training.⁷⁰

3.3 Identifying current and future skill needs

As well as undertaking research to identify current and future skill needs, and potential shortages in the labour market, ITOs gather and analyse data on existing industry trainees. This data includes demographic information as well as information on the number of people enrolled in a unit standard or qualification. This allows ITOs to determine if enough people are entering the industry, whether they are undertaking training at an appropriate level, and if training is tailored to the needs of industry trainees.

This is particularly relevant given that the most influential impact on the New Zealand labour market since 1991 has been the strong increase in the labour force participation rates of people in the older age groups.

The following discussion shows how increased labour force participation among older age groups has positively impacted on the economy and created a demand for industry training. Overall, these demographic changes illustrate that industry training, and re-training, benefits people of all age groups.

3.3.1 Training an ageing workforce with a high participation rate

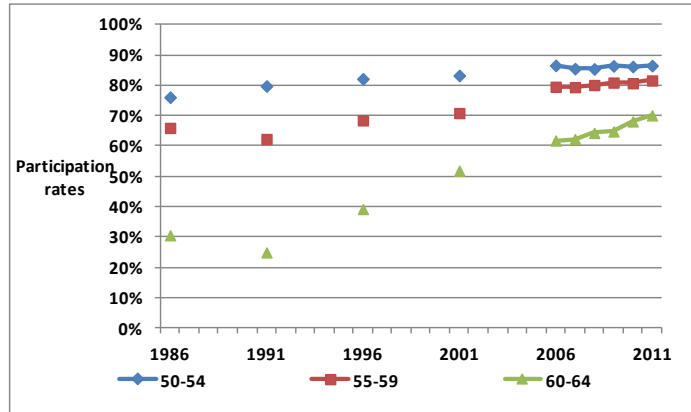
Between 1991 and 2011, the labour force participation rate of 50 to 54 year olds increased from 79.8 to 86.5 percent. Among 55 to 59 year olds, the increase was from 62.3 to 81.6 percent. These labour force participation rates undoubtedly reflect that people are now able to re-train to less physically demanding roles, while still significantly contributing to productivity increases. People aged between 50 and 59 years old have increased their

⁶⁹ For further information see, BETA. *Built Environment Skills Strategy*. (www.beta.org.nz/beta-projects/built-environment-skills-strategy/).

⁷⁰ For further information see, the Built Environment Training Alliance, (www.beta.org.nz).

labour force participation mainly because of the higher labour force participation of women in these age groups.

Figure 3.4 Labour force participation, 50 to 64 years, 1986-2011

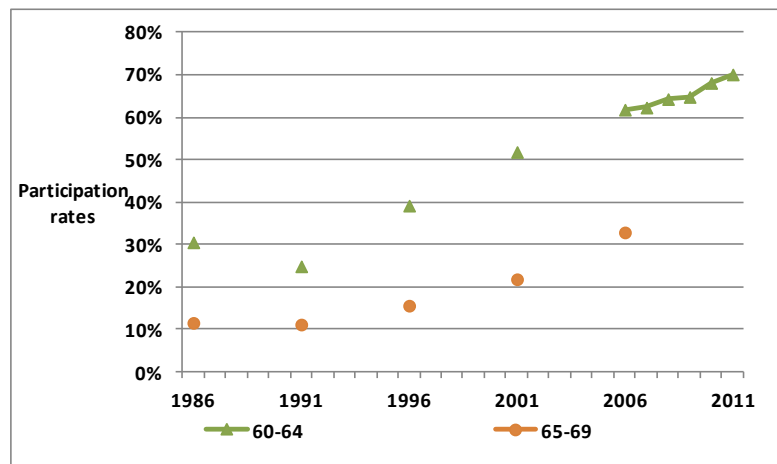


If a person aged 50 receives industry re-training now, than at a national level there is a 70 percent probability that they will still be working in 10 to 14 years time and a 40 percent probability that they will still be working in 15 to 19 years time.

This is important from the point of view of increasing the productivity of the labour force. The amount of goods and services produced, or the productivity of an employed person, depends on two main factors - the capital equipment and resources available to them and their individual skills. By obtaining more skills, people can produce a higher value good or service by using the resources available to them and capital equipment. This is why the skills and experiences of people are often referred to as human capital.

Since 1991, the labour force participation rate among the 60 to 64 year old age group has increased from 24.9 percent in March 1991, to 70.1 percent in March 2011. This increase in labour force participation was also prevalent in the 65 to 69 year old age cohort. People in this age group increased their labour force participation rate from 11.2 percent in March 1991, to 32.9 percent in March 2011.

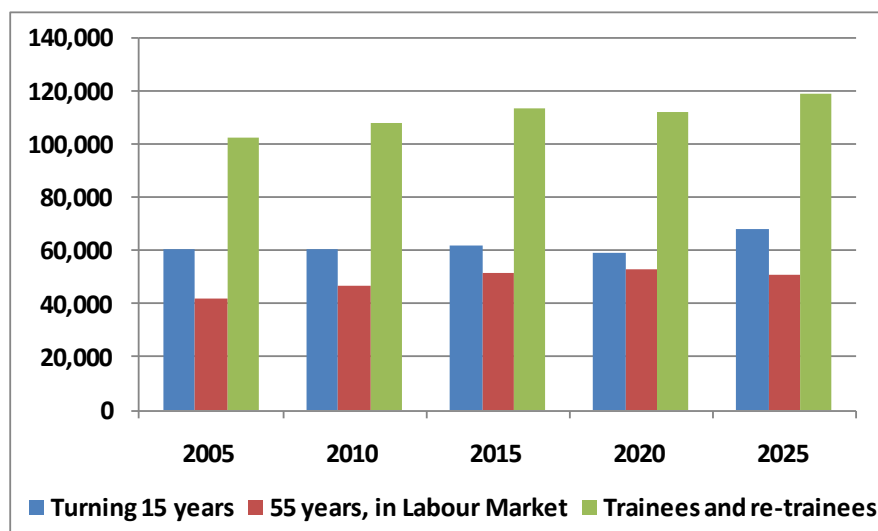
Figure 3.5 Labour force participation rate, 60 to 69 years, 1986-2011



While industry training is very beneficial to those entering the labour force, the previous section has shown that it is increasingly beneficial to provide re-training to enable and encourage people over the age of 50 to continue in the workforce.

Moreover, if projections on the number of people turning 15 and entering the working age population are added to the number of people aged 55 and over who are in the labour force, then a picture begins to emerge on future industry training requirements. This is the additional industry training required to keep pace with demographic and behaviour changes in the labour force.

Figure 3.6 Training required to maintain skilled labour force, 2005-2025



The data on the working age population was discussed earlier in this section of the report, while the data on the projected number of 55 year olds in the labour force is from labour

force projections completed by the Treasury.⁷¹ These numbers indicate that to just keep pace with demographic and behaviour changes in the labour force, industry training levels should be above 100,000 people per year now, and should increase to at least 120,000 people by 2025.

Looking ahead, this means the demand for industry training will grow due to labour market changes, and that the role of ITOs as conduits within this market will also increase in importance. Leadership in regards to successful youth transitions will continue to be important; but employers and employees will potentially reap the benefits of investing in industry training over a longer period as labour market behaviour and the world of work continues to evolve and change.

As this section has illustrated, ITOs will continue to be at the forefront of this change due to their regular consultation with industry, employers and potential new entrants. Further, research projects undertaken by the ITOs on skill and training needs, and workforce planning will allow them to continue to work closely with training providers and government agencies to develop relevant, current and fit-for-purpose national qualifications.

The next section will now turn to discuss the economic rationale for public sector investment in industry training and how employers are influenced to invest in industry training due to productivity improvements and various positive externalities gained through training.

⁷¹ The projections from the Treasury could be conservative as their participation rates reflect little increase from those at present.

4 Measuring the value of industry training

This section of the report discusses the economic rationale for government investment in industry training. Here, the discussion focuses on how government invests in industry training and vocational education to reduce market failure and improve efficiency. The situation in other countries is briefly touched on, in terms of the provision of vocational education and training, before a more in-depth discussion is developed on how ITOs in New Zealand rectify the potential for market failure.

As well as looking at government investment in industry training, this section of the report explores why employers invest in industry training and how productivity improvements are only one part of the equation. Here, examples are drawn from two international studies as well as interviews with employers and ITOs.

4.1 The economic rationale for government investment

Governments invest in industry training and vocational education to reduce market failure and improve efficiency. There are many factors that cause market failure either from the demand-side of training, such as employers reluctance to invest in industry training because of its perceived cost (time, supervision and assessment requirements, employee leaving once trained) or from the supply-side of labour, such as trainees not being aware of industry training or the training needed. To reduce this market failure and improve efficiency, various industry training systems have been implemented internationally.

4.1.1 *International comparisons*

Germany is considered a benchmark for industry training. It has strong employer engagement, is highly regulated, undertakes vocational education and training at secondary school level, and industry engagement with the system is largely voluntary. Training within secondary schools is very industry-oriented and to date there has been high engagement by industry, employers and students with this system.

In contrast, New Zealand, Canada, Australia and the United Kingdom have implemented sector skill organisations or councils to bridge the gap between the provision of education, vocational training and the labour market. The design, implementation and funding of these sector skill organisations differ markedly. In the United Kingdom, the system is funded, regulated and controlled by the Government. In Australia and Canada, government funding is limited, and in New Zealand industry funding complements that provided by the Government.

4.1.2 Investment in industry training in New Zealand

In New Zealand the market for industry training exhibits imperfections, in particular relating to information asymmetry. This provides a strong rationale for government investment in industry training through ITOs.

ITOs rectify the potential for market failure by minimising the impact of information asymmetry. They do this through the development of national qualifications and the standards required to achieve these qualifications; through the arrangement of industry training in a classroom, in a workplace, or in a combination of these locations; and through their leadership on skill and training matters, particularly in regards to identifying current and future skill needs, and their work with employees, employers and industry to meet these needs.

ITOs also reduce transaction costs through arranging the delivering of industry training, and through their development of national qualifications that meet industry standards and labour market needs. A reduction in variety, through the development of national qualifications, can lower costs as employers and employees know what to expect from industry training and the quality of the output. Gaining a nationally recognised qualification may decrease frictional unemployment and lower costs as employees spent less time explaining what their skills, training and qualifications are to prospective employers, and employers are able to successfully recruit skilled, trained staff.

However, economic benefits are not the only key driver behind government investment in industry training. This is despite the resources devoted to industry training, and the ways in which industry training changes people's behaviour, inevitably having an economic effect. Similarly, many unit standards and qualifications are not designed with a specific economic outcome in mind, but to increase safety or manage risk. To the extent that accidents or risks lead to economic costs then their prevention through industry training has an economic effect.

At a macroeconomic level, the provision of industry training contributes to economic growth by increasing the volume of trade, and promoting innovation through the dissemination of research and technology. Industry training helps companies to reduce costs and increase the quality of goods they produce and services they provide. Industry training can also allow firms to develop new markets for existing goods and services, as well as create new goods and services as employees increase their skills and competencies, and their training and qualifications respond to the changing skill needs of the business and industry they are employed in. Further, industry training can prepare trainees and employees with the skills

they need for a successful career, as per the priorities outlined in the Tertiary Education Strategy.

4.1.3 The Tertiary Education Strategy and industry training in New Zealand

From the point of view of the New Zealand government, education increases employment opportunities and helps to build a productive skills base to drive economic growth.⁷² This perspective is based on three widely accepted theories on how education influences economic growth:

- Human capital – education improves the overall skill and ability of the workforce, leading to greater productivity and improved ability to use existing and new technology.
- Innovation – education improves people's capacity (and that of the economy) to develop new ideas and technology.
- Knowledge transfer – education is a means of spreading the knowledge needed to apply these new ideas and technologies.

It is for reasons such as these that the Government invests in education, sets the direction of and priorities for education, and monitors the outputs and outcomes of this investment. The main public policy document that the Government uses to do this for the tertiary education sector is the Tertiary Education Strategy. This strategy outlines the direction and priorities for all Tertiary Education Organisations and ITOs for the next five years.⁷³ The current Tertiary Education Strategy is for the period 2010 to 2015.⁷⁴

Under this strategy, ITOs are expected to contribute to the following priorities:

- Increasing the number of young people (aged under 25) achieving qualifications at level four and above, particularly degrees.
- Increasing the number of Māori students enjoying success at higher levels.
- Increasing the number of Pasifika students achieving at higher levels.

⁷² Tertiary Education Commission. (2010). *Tertiary Education Strategy*. (www.tec.govt.nz/Tertiary-Sector/Tertiary-Education-Strategy/).

⁷³ For further information see Tertiary Education Commission. (2010). *Tertiary Education Strategy*. (www.tec.govt.nz/Tertiary-Sector/Tertiary-Education-Strategy/).

⁷⁴ For further information see, Ministry of Education. (2010). *Tertiary Education Strategy 2010-15*. Ministry of Education: Wellington.

- Increasing the number of young people moving successfully from school into tertiary education.
- Improving literacy, language, numeracy, and skills outcomes from level one to three study.

In addition, there are three key areas that ITOs are required to focus on:

- Aligning training provision to support the Tertiary Education Strategy priorities.
- Raising achievement rates for trainees.
- Enabling employees to contribute to the local and national economy.

ITOs do not deliver training themselves and are not allowed to have ownership stakes in an organisation that delivers training. Despite this, ITOs are accountable for effectively monitoring the training arrangements of industry trainees, both in terms of ensuring effective learning takes place in the workplace, and the level of provision purchased from Institutes of Technology and Polytechnics, Wānanga, and Private Training Establishments.

4.2 Return on investment – a government perspective

The Tertiary Education Strategy indicates how the Government would like the tertiary education system to deliver returns on investment to taxpayers' and the economy. Currently, this return on investment in ITOs and industry training is measured through Performance Linked Funding and Educational Performance Indicators.⁷⁵

There are five Education Performance Indicators (EPIs) that the Tertiary Education Commission uses to monitor and measure the performance of ITOs. These are:

- Credit completion rate (achieved versus expected credit rate). This is the number of credits achieved by trainees at an ITO as a proportion of the total number of credits in which trainees were enrolled in a given year.
- Programme completion rate (credit-weighted programme completion rate). This is the number of programmes completed by trainees as a proportion of the total number of credits in which trainees were enrolled in at each ITO. This is weighted by the number of credits associated with each of the completed programmes to take into account the 'size' of the programme.

⁷⁵ Tertiary Education Commission. (2010). *Performance linked funding*. (www.tec.govt.nz/Funding/Policies-and-processes/Performance-linked-funding/#ito).

- Trainee progression. This is a measure of the number of trainees who, within 12 months of completing a programme, are enrolled in further training at a higher level.
- Participation of Māori, Pasifika, and young people in industry training compared to industry demographics. This indicator measures the proportion of Māori and Pasifika trainees at an ITO in a given year and compares this to industry demographics.
- Industry cash contribution received by an ITO as a proportion of the total funding received.⁷⁶

Since 2009, the Tertiary Education Commission has made information on the performance of tertiary education organisations publicly available. The TEC argues this information provides, “prospective students, and employees with another source of information to help them decide where to study or be trained.”⁷⁷ The information is published as a short report, and in the case of ITOs, it illustrates how ITOs have achieved against their performance linked funding indicators of credit completion and programme completion rates.

In 2009, across the ITO sector the average credit completion rate was 50 percent while the average programme completion rate was 41 percent. Looking beyond averages, across the sector the credit completion rate varied from 15 to 100 percent, and the programme completion rate went from one to 89 percent.

These completion rates improved significantly in 2010 with the ITO sector averaging 65 percent in credit completions and 55 percent in programme completions. However, variability has continued, with credit completion rates ranging from 15 to 100 percent, and programme completion rates ranging from 16 to 100 percent. Despite this variability, the ITO sector as a whole had a good credit and programme completion rate in 2010, which was similar to that of the ITP sector.⁷⁸

The Tertiary Education Commission argues education performance indicators have been selected as they are “a good indication of how ITOs support trainees to achieve.”⁷⁹ Further, the TEC argues successful credit completion is important in terms of gaining skills and knowledge, and because it contributes towards programme completion. Programme

⁷⁶ Tertiary Education Commission. (2010). *Performance linked funding*. (www.tec.govt.nz/Funding/Policies-and-processes/Performance-linked-funding/#ito).

⁷⁷ Tertiary Education Commission. (2011). *Report card on tertiary education organisations now available*. (www.tec.govt.nz/About-us/News/Updates/Report-card-on-tertiary-education-organisations-now-available/).

⁷⁸ Tertiary Education Commission. (2010). *Educational Performance at individual tertiary providers*. (www.tec.govt.nz/Learners-Organisations/Learners/performance-in-tertiary-education/Educational-performance-at-individual-tertiary-providers/)

⁷⁹ Tertiary Education Commission. (2010). *Performance linked funding*. (www.tec.govt.nz/Funding/Policies-and-processes/Performance-linked-funding/#ito).

completion, in turn, is important because people who complete a qualification tend to earn significantly more than those who complete a number of credits but do not complete a qualification.⁸⁰

A focus on linking improvements in performance to qualification completion and progression rates may not be well suited for this sector of tertiary education, and may not be the best measure for return on investment. Industry training is not a simple framework; it does not fit easily within the box of the tertiary education system. For this reason it is difficult to match return on investment through education performance indicators with the role that ITOs play in setting standards and arranging the delivery of training, and the contribution industry training makes to the economy.

In addition, a focus on short-term return on investment or direct value for money is not appropriate as it does not acknowledge the market failure discussed earlier. If the market mechanism fails, and resources are not efficiently allocated, then in the case of industry training the skills demanded by the labour market and the economy will not be matched by the supply of new entrants.

Further, the industry training system in New Zealand is competency-based and learning often does not have well-defined start and end dates. This means there can be a lag between trainees and apprentices commencing their learning, and the reporting of credit achievements. In some industries this also means a large number of credits are reported at the end of training, which can affect credit achievement and programme completion rates.⁸¹ Despite this, in 2012 up to five percent of an ITO's funding will be based on the ITO's performance in 2011 against credit and programme completion rates.

4.3 Return on investment - an employer perspective

Employers are influenced to invest in industry training due to the productivity improvements gained by their employees, and their business, through training. In general, the benefits to employers of engaging in industry training are twofold.

- Firstly, there are benefits in regards to efficiency gains, and improved planning and work processes. These benefits are focused on improvements in productivity and the workplace.

⁸⁰ Tertiary Education Commission. *Completion of qualifications*. (www.tec.govt.nz/Learners-Organisations/Learners).

⁸¹ BCITO. (2010). *ITO educational performance information available*. (www.bcito.org.nz).

- Secondly, there are benefits in regards to the culture of the workplace and the motivation of employees. These benefits are focused on improvements in self-esteem, motivation and team morale, but they also cross over into productivity gains as employees work better as a team, communication between team members improves, and there is a decrease in absenteeism.

The following discussion uses examples from various industries to illustrate why employers engage in industry training.

In the electricity supply sector, employers argue that industry trainees become more capable and are able to deal with real world situations through learning skills and using tools and equipment in the work environment. If an occupation involves working outside in all weather conditions or on undulating terrain, it is difficult to simulate that situation in a classroom. It is also important for people to understand how site safety processes work on-site and how to communicate with multiple teams of people including other contractors and the public.⁸² Employers in this industry therefore invest in industry training so their trainees learn how to competently work in their future work environment.

In the agriculture industry the benefits of industry training from the point of view of employers include a better understanding of farming systems, better communication through a common understanding and shared terminology, and better transfer of knowledge and technology.⁸³ It is a big commitment to undertake training in this industry due to the intense periods of work involved in farming and having to take time away from the farm. Training therefore needs to coincide with what is happening on the farm, and deliver current industry messages and best practice to be beneficial to employees and encourage employers to engage.⁸⁴

Many employers engage in industry training as part of succession planning. They want to employ someone and train them for a role. In industries that already

Training does help with retention in the sense that people gain a greater understanding of the industry and how it works. But in this industry reputation is very important and good employers are able to attract and retain staff because they encourage their staff to participate in training, progress their careers, and become part of networks.

*John Troutbeck, Dairy Training Manager,
Dairy Training Limited*

⁸² Interview with John Goodenough, Operations Manager, Connectics, 13 September 2011; Interview with Jerome Cudmore, Group Human Resources Manager, Electrix, 30 August 2011.

⁸³ Interviews with Kaye Kennedy, Contact Centre Manager, Fujifilm, 6 September 2011; Wayne Black, Matrix Security, 31 August 2011; Desleigh Jameson, Chief Executive Officer, Retail Institute, 30 August 2011.

⁸⁴ Interview with John Troutbeck, Dairy Training Manager, Dairy Training Limited, 8 September 2011.

have a 'culture of training' such as the building and construction trades, motor industry, and hairdressing, small to medium-sized enterprises (SMEs) employ people and put them through an apprenticeship because this is the system that they were trained under.

Other employers engage in industry training because they want to employ people who have the required skills and provide their staff with recognised qualifications. For some of these employers on-the-job training arranged by ITOs has reduced their employee turnover and improved their staff retention, and as a result lowered their recruitment costs. In these businesses, training was offered as a recognition, or reward, for meeting performance indicators.⁸⁵

Also, investment in training can make employees want to work for a company, as investing in training is a highly visible means of showing that a company values its employees. Some employers spoken to argued that this was a benefit of investing in industry training as people approached them for work. This is because people want to work for a good employer who values people and shows this value through investing in them.⁸⁶

Throughout the industry the turnover is about 38%, but here the turnover is 4%. The reason why turnover is so low is because of the opportunities to gain a qualification through ETITO, and some of the recognised benefits of having a national qualification.

*Kirsty Walker, Contact Centre Manager,
Amway New Zealand*

These interview findings are supported by recent research completed by InfraTrain. This research found that the value of training is not specifically measured in dollars by the New Zealand infrastructure industry. While almost all companies in this industry see at least some impact on their bottom line due to training, these same companies also see other benefits in terms of skills retention, new work opportunities for their company, and competitive advantages. For example, skilled workers are able to complete the work faster and at a lower cost. For many companies, this is impacting on their bottom line as they are increasing the percentage of tenders they are winning.⁸⁷

So if the value of training is not being measured specifically in dollars than what do infrastructure companies consider as the main benefits of training? InfraTrain found that all

⁸⁵ Interview with Kirsty Walker, Contact Centre Manager, Amway New Zealand, 31 August 2011.

⁸⁶ Interview with Kirsty Walker, Contact Centre Manager, Amway New Zealand, 31 August 2011; Interview with Kaye Kennedy, Contact Centre Manager, Fujifilm, 6 September 2011; Interview with Wayne Black, Matrix Security 31 August 2011.

⁸⁷ InfraTrain. (2011) Value of Training. Unpublished resource.

companies listed increased self-esteem or self-worth as one of the most positive impacts of staff training, followed by improved communication or interpersonal skills.⁸⁸

This finding was reiterated in interviews completed as part of this research and in interviews on successful workplace learning. Vaughan et al found that qualifications and industry training made people feel more recognised and valued, and improved individual and team morale. As well as building human capability, workplace learning also opened up the possibilities for learners “to be or do things that they value in their lives”.⁸⁹

A further example of this is in the security sector. Here, employers spoken to discussed how they had seen a noticeable change in those staff members who had undertaken industry training. These staff members were now mentoring and motivating others to undertake training, which added to the team culture. For these businesses, industry training has established a culture of training in their workplaces.⁹⁰

In this environment, industry training provided people with a recognised qualification and improved self-esteem and confidence as people perceived themselves as being a security professional.⁹¹ Although not a focus of industry training, the life skills that people learn as part of their training can also act as a motivator for trainees as they take their newly acquired skills and apply them in their daily life. This is beneficial to the individual and can manifest itself in improved teamwork.

Employers interviewed as part of this research argued that after undertaking industry training, and often during the training process, they noticed greater levels of professionalism among their staff, and as a result improvements in client outcomes and higher levels of quality assurance. These outcomes were often the result of better business flow and efficient operation of the business, as well as staff working together as a team.

Research undertaken by MITO and the Hairdressing ITO (HITO) found that apprentices and trainees can positively add to the culture of a workplace, and add value to the team environment. For example, in the hairdressing sector, salon owners noted that apprentices provided a young vibrancy to the workplace, brought to the salon new ideas and energy, a youthful outlook, and the ability to attract younger clientele.⁹² Employers spoken to as part

⁸⁸ InfraTrain. (2011). Value of Training. Unpublished resource.

⁸⁹ Vaughan, K., O'Neill, P., & Cameron, M. *Successful Workplace Learning: How Learning Happens at Work*. Industry Training Federation. Wellington: 2011.

⁹⁰ Interviews with Wayne Black, Matrix Security. 31 August 2011; Tony Robinson, Venue Security International. 31 August 2011.

⁹¹ Interview with Tony Robinson, Venue Security International. 31 August 2011.

⁹² NZIER. *Making the most of a HITO apprenticeship*. Wellington: 2010; NZIER. *Return on investment from MITO apprenticeship training in New Zealand*. Wellington: 2009.

of this research, supported this finding and further argued that training people on the job enabled the apprentice or trainee to be immersed in the culture and values of the company.

In line with improvements in communication and teamwork, there were also noticeable changes in regards to behaviour and workplace accidents or injuries. Employers spoken to noted that as communication improved, there was an increase in health and safety incident reporting as people became more aware of their work environment and injury prevention. This led to a decrease in the number of workplace accidents and injuries, as well as a decline in absenteeism and sick days.

In the infrastructure industry, injury prevention is another area of focus for employers, and many see this as a benefit of industry training. Some employers argue that employees are more aware of health and safety issues than in the past, that they undertake preventative measures to avoid injury, and recognise if there is a problem or risk in the workplace. This also extends to the prevention of hazardous workplace situations for their colleagues. This is a cost saving from the point of view of less workplace injuries, less downtime due to injury, and it decreases the amount of lost wages as people who are injured have to be covered by another paid employee.⁹³

Through industry training, employees gained a better understanding of the company and industry, and how their role fits within the business. While it could be argued that this type of training is usually undertaken by employees as part of their induction into a new role, employers argued that they completed their own company training with the employee prior to undertaking unit standards through an ITO. The unit standards provided the employee with further skills and knowledge, beyond what the company was able to provide. Further, for people who have no qualifications undertaking industry training and gaining a qualification is a motivating factor.

Industry training is important as it provides people with knowledge of the industry and it gives them more confidence in themselves. Overall, when people undertake industry training we see an improvement in their work and their work habits

Kaye Kennedy, Contact Centre Manager, Fujifilm

This discussion from New Zealand employers as to why the invest in industry training is not in isolation. The following is a discussion that focuses on two studies from Canada and the

⁹³ Interviews with Mike Rutherford, National Manager ACC, Health & Safety, and Training, Silver Fern Farms, 15 September 2011; Kirsty Walker, Contact Centre Manager, Amway New Zealand, 31 August 2011; Jason Hazelwood, General Manager of Construction, Counties Power Limited, 30 August 2011.

United Kingdom. These studies attempted to measure the return on investment in apprenticeship programmes. While the studies were able to allocate a dollar value to this investment, employers also spoke of some of the wider benefits of their investment in industry training.

4.3.1 Canada

The Canadian Apprenticeship Forum is one of 26 sector councils that operate as part of a partnership between government, industry and education providers in Canada. In 2009, the Canadian Apprenticeship Forum undertook a detailed cost benefit analysis to determine the return on investment of apprenticeship training from the point of view of employers. Almost 1,000 employers from 16 different trades were surveyed.

This analysis found that for every \$1.00 spent on apprenticeship training, an employer received, on average, a benefit of \$1.47 or a net return of \$0.47. These benefits were estimated using the revenue generated by an apprentice. This, in turn, was calculated using data on charge-out or mark-up rates, and the total annual chargeable hours of work.

Trades	Duration of Apprenticeship (Years)	Costs (\$)	Benefits (\$)	Net Benefit (\$)	Benefit-Cost Ratio
Automotive Service Technician	4	250,016	423,138	173,122	1.69
Boilermaker	4	246,889	473,696	226,807	1.92
Bricklayer	4	237,687	316,853	79,166	1.33
Cabinetmaker	4	180,369	247,298	66,929	1.37
Construction Electrician	4	196,811	293,048	96,237	1.49
Construction Millwright and Industrial Mechanic	4	254,287	403,272	148,985	1.59
Cook	4	125,344	164,868	39,524	1.32
Electrical Power Line and Cable Worker	4	336,770	319,759	- 17,011	0.95
Hairstylist	4	77,096	42,620	- 34,476	0.55
Heavy Duty Equipment Mechanic	4	252,371	497,636	245,264	1.97
Machinist	4	204,921	383,877	178,955	1.87
Motor Vehicle Body Repairer	4	210,088	362,237	152,149	1.72
Plumber	4	237,681	329,728	92,047	1.39
Refrigeration and Air Conditioning Mechanic	4	240,060	344,601	104,541	1.44
Sheet Metal Worker	4	258,160	322,022	63,862	1.25
Partsperson	4	215,323	361,276	145,954	1.68
Average	4	220,242	330,371	110,128	1.47

Source: Canadian Apprenticeship Forum, 2009

Moreover, this study also concluded that:

- The revenue generated by an apprentice increases throughout the apprenticeship.
- Wages and benefits paid to apprentices increase commensurately with training and experience.

- The cost in terms of a supervisor or co-worker's time declines through each year of the apprenticeship.
- Detailed analysis of three trades showed that there was a return on investment across all regions and all sizes of business.
- The benefits of apprenticeship training increased each year over the course of the apprenticeship.
- Additional benefits to hiring apprentices included having employees that were a better fit with the organisation, and that employing apprentices reduced the risk of skills shortages.

4.3.2 The United Kingdom

In 2008, IER undertook a study in the United Kingdom on the return on investment in apprenticeships. This study measured the return on investment for six industries - hospitality, social care, retail, business administration, construction and computing. This study was also used to create a return on investment calculator for employers to use.

The employer costs included in the IER study were wages/allowances paid to the trainee; supervision and administration costs of providing on-the-job training; fees for off-the-job training, any tool and travel allowances; and funding received by the employer from the Learning and Skills Council or other public funding.

The employer benefits were also calculated to provide a net cost of training i.e. the costs of training an apprentice after taking into account their productive contribution during training. To assess the longer term benefits of apprenticeship training, the study then used the time taken to pay back the investment as a way to measure these benefits, using net present values. The average costs to each industry and the pay-back periods are listed in the table below:

Industry	Duration of apprenticeship (Years)	Total net costs (£)	Duration to pay back costs (Years)
Engineering	4	28,762	3
Hospitality	1	4,236	2
Social Care	4	7,743	4
Retail	1	2,305	2
Business Administration	2 to 4	3,898	2
Construction	3	22,043	2

Source: IER, 2008

Other benefits from apprenticeships that the IER listed but could not quantify included:

- Allowing the business to secure a supply of people with the skills and qualities that the business required and which were often not available from the external job market.
- Apprenticeships helped secure a supply of skilled young people, which was especially important for the replacement of an ageing workforce.
- Even if external recruitment was possible, apprentices were less expensive to recruit and train than experienced workers because of high recruitment costs plus the costs of induction and any necessary training.
- Apprenticeships provided a pool from which future managers could be selected.
- Apprenticeships were more practical and job-related than other forms of learning, and could increase interest in training among other employees.
- Apprentices can bring new ideas and innovation to the business.
- A good apprenticeship scheme could be reflected in an enhanced reputation for the business both within the industry and in the local community as apprenticeships demonstrated a commitment to the employee.

4.4 Return on investment –an economy-wide perspective

The above discussion on returns on investment is from a relatively narrow perspective. There are further gains reflecting externality benefits beyond those to government and individual employers. These economy-wide benefits are investigated further in the previous sections of our report that discussed the results from the general equilibrium modelling experiments, and the analysis of the costs and benefits of industry training borne by the public and private sector.

5 Concluding comments

Overall, this report provides qualitative and quantitative information on the process of arranging and delivering industry training, establishing recognised national qualifications for different levels of skill and experience, and the leadership required to ensure that future industry skill needs will be available or addressed. Throughout, we draw on data and information provided in interviews with ITOs, industry representatives, training and Modern Apprenticeship Co-ordinators, and employers. We also refer to official data sources, BERL databases, and information and data provided by the ITOs.

ITOs develop the qualifications that industry trainees complete. In this role, ITOs draw on their leadership in the area of skill and training needs and work closely with the labour market, employers, industry, tertiary education providers and the Government.

Taking the lead on skill and training needs compliments the work of ITOs as standard setting bodies. This leadership includes sharing information and expertise across industry groupings – ensuring that vocational learning offered at schools, in the workplace, and by other tertiary providers, meets the needs of industry. It also involves monitoring demographic changes in the labour market to ensure that the supply of new entrants into industry matches the demand for skilled workers.

In summary, the discussion in this report illustrates the broad contribution industry training makes to the New Zealand economy. Further, it reinforces the argument that it is imperative to go beyond the narrow return on investment or value for money measures that are currently in place in regards to public and private sector investment in industry.

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