

Skills and training in the building and construction industry

**Findings from qualitative research
with BCITO's stakeholders**

Report to BCITO

May 2006



Preface

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Executive Summary

Introduction

This report presents NZIER's findings from a qualitative study which aimed to examine the current and future skill needs of the building and construction industry, and to understand how well the training system is meeting those needs. The study was conducted for BCITO in the context of BCITO's legislated leadership role in matters of skills and training – specifically, to assist the development of a skills strategy and strategic training plan for the industry. The study follows on from some desk research which NZIER conducted for BCITO in December 2005.

Fieldwork was conducted in April 2006 and consisted of focus groups and depth interviews with a sample of BCITO's stakeholders. The sample comprised major stakeholders of the current training system - employers, BCITO apprentices, industry association staff and staff at relevant polytechnics and PTEs.

Recent and current skills issues

The cyclical nature of the construction industry presents challenges for the training system. However, in general, the industry appears to be *reasonably comfortable* with the training system. Employers are either working within the constraints of the existing system, or coming up with their own solutions. Apprenticeship training in particular is well supported.

The *perceived poor calibre of entrants* to the industry, and the *missing cohort* of apprentices in the 1990s are key concerns. However, many of the skills-related issues identified by respondents are contextual issues – they apply equally to other industries or are a continuation of existing trends. Having said this, the recent upswing in construction activity, combined with an overall tight labour market, has brought into sharp relief some issues for the industry's training system. In particular, they have emphasised possible inter-generational problems in the industry's workforce, and created concerns that in some instances quality has given way to quantity.

Future skill needs

The forthcoming occupational licensing regime is seen as a key driver of change in relation to skills, and presents some opportunities and some challenges, both to the industry and to the training system. One common theme is a *desire for certainty*. There is also an expectation that national qualifications will align with the licensing structure.

A greater degree of *specialisation and in-depth knowledge* is likely to result from the licensing regime, and also from new product developments and

techniques. *Generic skills* such as supervision, project management and problem solving are anticipated to become even more important than they are now.

However, there will always be a need for craft skills such as carpentry. In addition, there is a *desire for flexibility in skill sets*, and for some workers to understand the *entire* construction process, not just part of it. This means that employers are reluctant to relinquish an apprenticeship which provides a broad range of skills.

BCITO and apprenticeship training

There is *significant support for BCITO*, especially in its standard setting role - a greater emphasis on qualification development and quality assurance is seen as important. BCITO's efforts in promoting the industry are appreciated. There is also an opportunity for BCITO to capitalise on its legislated leadership role, as there is a desire for someone to take a more active role in the long term planning of the industry.

Apprentices and employers accessing BCITO-facilitated apprenticeships appear to be fairly happy with the services they receive. A BCITO apprenticeship is seen as working best for motivated apprentices, with good study disciplines, who have strong support from their employers.

There are, however, some opportunities for improvement:

- *More structure and support in the apprenticeship.* The key concern is with outcomes relative to intake – that the apprenticeship is completed
- *Awareness and selection of the most suitable off-job training option.* The “box of books” works well for some, but for others night classes and block courses are more appropriate. Apprentices and employers do not always seem to be aware of the options available in their area
- *Greater consistency in practical training.* Whilst on-job training is generally working well, there are concerns around varying standards, the time commitment required of employers, and the currency of some employers' skills. In addition, employers are keen for their role in the apprenticeship to be acknowledged
- *Appropriate role of ITO.* Some believe BCITO has stepped over the line into training provision with its self-paced learning package – the “box of books”.

Other parts of the training system

There is a wide range of construction-related training options currently available, mainly offered by polytechnics. However, most courses relate to *carpentry skills*; there are worries about the availability of training delivery for some of the categories of the forthcoming occupational licensing regime.

The apprenticeship-style training offered by polytechnics and ITaB generally works well for employers and apprentices who require a more structured approach than that offered by the BCITO model.

There are, however, concerns with some of the full-time training courses available (offered by polytechnics and PTEs), primarily in relation to the suitability of the students to the industry, and the outcomes achieved.

Changes to the training system

There is not a tremendous appetite for wholesale changes to the training system – either to BCITO-facilitated training or other parts of the system.

However, the research has identified some clear preferences, such as increased promotion of the industry (both by BCITO and others) to improve the calibre of entrants, and greater clarity around roles in different parts of the training system so that better informed decisions can be made.

The research has also identified some areas where views are divided:

- *One apprenticeship model v range of models.* Some stakeholders appreciate the range of apprenticeship options currently available, whilst others would prefer a more standardised approach
- *Training on specialist skills v broad range of skills.* Whilst some stakeholders believe that training should reflect the increasing specialisation taking place in the industry, others are keen for training to continue to cover a wide range of skills.

Strategy development

A summary of our suggestions for strategy development are:

- BCITO should *place an even greater emphasis* on qualification development, quality assurance and promoting the industry
- BCITO *may wish to consider*, in relation to its apprenticeship model:
 - Increasing the support provided to apprentices and their employers
 - Increasing the information on off-job training options
 - Reviewing (the continuation of) its self-paced learning package
- BCITO, *in collaboration with its stakeholders, may want to:*
 - Review the range of apprenticeship models available
 - Influence the training offered at full-time courses.

BCITO will therefore need to differentiate - in the skills strategy and strategic training plan for the industry - between those strategies which are directly within its control, and those which are not.

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1. Introduction

1.1 Strategic drivers

This report presents the findings from the second phase of a programme of research which NZIER is conducting for the Building and Construction Industry Training Organisation (BCITO).

The research has been commissioned by BCITO in the context of its legislated strategic leadership role in matters of skills and training. Each ITO must understand the current and future skill needs of the industry/ies it serves, develop strategic training plans to assist industry meet those needs and promote training.

In relation to the ITO leadership role, the Tertiary Education Commission (TEC) has stated that it expects the following outcomes from ITOs:

- Informing decision making at the level of the enterprise about current and future skill development and training for the enterprise's workforce
- Informing industry about current and future skill development and training for the industry workforce
- Facilitating industry to address current and future skill development issues whilst recognising the particular interests of the firm
- Informing TEC's assessment of strategic relevance of programmes within the tertiary sector
- Informing and influencing tertiary education providers such as polytechnics and Private Training Establishments (PTEs)
- Informing government and key policy/decision makers.

Given the breadth of these anticipated outcomes, the research we have conducted for BCITO has been relatively wide in its scope. In particular, we have adopted a "whole-of-training-system" approach. In other words, the scope has included training other than that facilitated by BCITO; for example, that provided by polytechnics, private training establishments (PTEs) and specialist providers, as well as the apprenticeship offered by Industry Training Association Building (ITaB).

The combined findings of the various stages of the research programme will act as an input to the development of a strategic training plan(s) for the industry and an industry skills strategy.

1.2 Findings from previous desk research

In December 2005, NZIER completed the first phase of the research programme – a desk research study which comprised a literature review and analysis of data obtained from relevant websites eg NZQA, Ministry of Education. The purpose of the desk research was to “set the scene” and identify some of the key training and skills-related issues facing BCITO and the industry over the next five years.

Key findings from the desk research were:

- *The cyclical nature of the industry* and the importance of managing risk in the face of uncertainty
- *Flexible specialisation* being a key feature of the industry’s labour market
- *Women (especially) and non-European ethnicities being under-represented* in the industry’s workforce
- *Strong growth in training volumes* in recent years in response to the upswing in the business cycle
- *The training system being fairly complex* which means that employers and potential trainees may struggle to access the information they need to make informed choices
- *The forthcoming occupational licensing regime* presenting considerable challenges (and opportunities) for the training system.

1.3 Objectives

The prime objective of this (the second) research phase is to build on the desk research, fill in any gaps in understanding, and gain a rich stakeholder perspective of the key skills and training issues facing the industry.

Specifically, the objectives are to understand BCITO’s stakeholders’ perceptions of :

- Recent labour market trends – how employers manage labour and other aspects of the business given the cyclical nature of the industry
- Likely future changes in the industry, and what these mean for skill development
- How effectively the training system is working to meet industry’s skill needs, and what improvements are needed to that system.

1.4 Methodology

1.4.1 Overview

The research consisted of qualitative research:

- Six focus groups (two hours each)
- 15 depth interviews – both face-to-face and telephone (between 30 minutes and one-and-a half hours duration each).

Fieldwork was conducted in three main locations in New Zealand between 12 and 28 April 2006¹.

The fieldwork was conducted by two NZIER economists. A staff member from BCITO attended the focus groups.

The topic guides used by the interviewers are contained in the appendix.

1.4.2 Sample selection

The sample was a “purposive” sample ie not randomly selected. The selection criteria for participants was based on the *entire sample* providing:

- A good strategic understanding of skills and training issues (including industry associations and training providers eg polytechnics and PTEs)
- A coverage of the industry (by sub-industry, company size, urban/rural)
- Exposure to different parts of the training system (including employers who have accessed training other than that facilitated by BCITO)
- A range of “customers” of the training system (apprentices as well as employers).

The sample frame from which the sample was selected was BCITO’s own database of employers, apprentices and training organisations. This database was supplemented by the Yellow Pages.

1.4.3 Sample structure

The final sample achieved is outlined in Table 1 below, and comprised 52 respondents in total.

¹ Note that significant changes to the tertiary education system – with an increasing emphasis on quality and relevance as opposed to volumes - were announced during the course of the fieldwork period.

Table 1 Sample structure and method

Respondent type	Auckland	Wellington	Nelson	Other location
Employer	2 x focus group ¹ 3 x depth ²	1 x focus group	1 x focus group	
BCITO apprentice		1 x focus group	1 x focus group	
Industry association		2 x depth		1 x depth
Polytechnic	2 x depth	2 x depth	1 x depth	
PTE ³	2 x depth			1 x depth

Notes: (1) "Focus group" = focus group comprising between four and twelve respondents each
(2) "Depth" = depth interview (face-to-face or telephone) with one respondent
(3) Includes BRANZ

1.5 Report structure and logic

The report starts off with the findings in relation to broad skills-related issues, before considering how well the training system as a whole, and then each part of the training system, is working. The final sections of the report are action-focused, covering the implications and what they mean for BCITO.

2. Recent and current skills issues

In this section we examine respondents' perceptions of labour market trends in the building and construction industry, and the key skills-related issues experienced by the industry in recent times. This provides a backdrop for respondents' perceptions of the training system, which are covered in subsequent sections.

2.1 Managing labour through cycles in activity

The desk research we conducted for BCITO at the end of 2005 identified the importance of managing labour and other aspects of the business in the face of uncertainty, given the cyclical nature of the industry. Understanding how firms meet their labour and skill needs during upswings and downturns in the business cycle is a prime objective of this qualitative research phase, as the strategies adopted by firms may have important implications for the training system. For example, in the desk research we suggested that a three- to four-year apprenticeship, on the face of it, appears to be a big commitment for some employers, given fluctuating demand for labour.

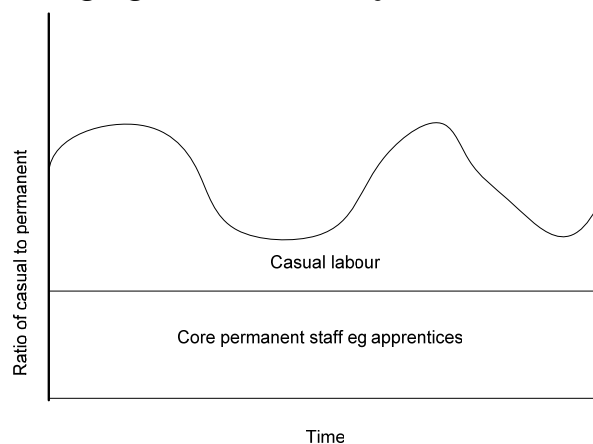
2.1.1 Permanent employees v casual labour

The use of casual labour is the main strategy adopted by firms to manage the cyclical nature of construction activity. The term "casual labour" can mean different things to different people, and includes the use of sub-contractors, labour-only contracts and staff from temporary agencies. But for some people it can also refer to some permanent staff - those employees which the firm is likely to let go in a downturn, because their job tenure or skill base makes them more marginal (than others) to the firm's activities.

The use of casual labour varies from one firm to another, and from one part of the industry (ie residential v commercial construction) to another. For example, some large firms are highly dependent on the use of labour-only gangs (on a contract basis), whilst others have a relatively high ratio of permanent staff.

Most firms, however, have a core of permanent staff, supplemented by casual labour to cope with the fluctuations in activity. One respondent depicted graphically the use of core staff/casual labour, which we have attempted to reproduce in Figure 1 below.

The key point here is that firms employing apprentices are making a medium term commitment to their apprentices, and view their apprentices as core staff. In other words, these firms will attempt to retain their apprentices in a downturn. So most employers are committed to employing their apprentices for the duration of the apprenticeship, and do not appear to be overly perturbed by the time commitment required.

Figure 1 Managing labour in the cycles

Source: NZIER

2.1.2 Other strategies

Whilst the use of casual labour is the main way in which firms manage cyclical construction activity, other strategies are also used:

- *Pricing of jobs.* Firms raise their prices in an upswing, and “sharpen their pencils” in a downturn. Many respondents noted the corresponding increase in pay rates in the recent boom in construction activity
- *Turning down jobs,* which was prevalent in the recent upswing
- *Adjusting hours worked.* Overtime is used extensively in busy periods, and reduced at other times
- *Migration.* Views on migration, both in terms of how much it is actually used, and as a solution to fluctuations in labour demand, were mixed. Some respondents have employed recent migrants but had encountered some difficulties in terms of language. Others noted that the use of migrants (mainly from English-speaking countries) is more prevalent in certain occupations, such as quantity surveyors and architects
- *Training.* Many employers who have tried to recruit skilled labour in the recent upswing have resorted to “growing their own”. In other words, they either train existing staff members, or recruit people lacking in some of the specific skills required and upskill them

“We’ve actually taken a reverse, we’re not looking for skilled labour any more. We just look for attributes – they’re keen, they’re motivated, they’ll turn up, they’re reliable, they’ll stay at work. That’s the way we’ve been through it, we’re training them as we go.” (Employer)
- *Use of equipment.* Whilst the use of new technology is clearly important to the industry (see section 3.2), the substitution of capital for labour does not appear to play a major role in managing the demand for skills and labour during peaks of activity.

2.2 Current skills issues

Respondents were able to identify a range of skill “gaps” or “shortages”² in the industry, which we discuss in this section. Two key themes emerge: concerns around the calibre of entrants to the industry; the “demise” of apprenticeships in the 1990s.

2.2.1 Calibre of entrants

A key concern for many respondents is the calibre of entrants to the industry. The partly relates to graduates of full-time pre-entry courses (see section 6.2) and partly to school leavers in general.

Many of the factors identified as causing the perceived poor calibre of entrants are contextual issues. In other words, and as noted by some respondents, these factors apply equally to other trades, or in some instances across all industries, as well as to the building and construction industry. They include:

- *Social factors* - changes in family structure, increased use of drugs, changes in lifestyle (eg pursuit of leisure), “young people today...”
- *Trades not attractive*. The trades are not seen as being promoted as a worthwhile career option by schools/parents
- *Changes in tertiary education*. The increase in young people attending full-time study (IT in particular was mentioned) at university and other institutions was noted by many respondents
- *Perceived decline in literacy and numeracy standards*.

Whilst these factors apply to other industries, the upswing in construction activity in recent years has brought these issues into sharp relief, as the demand for new entrants has been especially strong.

Some respondents stated that some specific features of the building and construction industry have contributed to problems in attracting higher quality entrants. These factors include the long hours and hard working conditions (eg outdoors), relatively low wage rates and lack of entry criteria or restrictions on who can become a builder. Some respondents drew comparisons with plumbers and electricians; these occupations are seen as being “cleaner”, with better pay rates, due in part to licensing. Many feel that the building and construction industry has not been very good at promoting itself, and in particular the benefits of working in the industry. Having said this, some respondents were more positive – they believe that the increase in pay rates resulting from the recent boom, combined with the forthcoming occupational licensing regime, may raise the industry’s profile.

² Note that the terms “skill gaps” and “skill shortages” have specific meanings, but that definitions were not discussed in detail with the respondents due to time constraints

2.2.2 Missing cohort

Many respondents noted the decline in apprenticeship numbers in the 1990s. This decline was due to changes in the structure of apprenticeships (which affected *all* industries engaged in industry training), compounded by a concurrent downturn in construction activity. It has resulted in a missing “generation” of qualified tradespeople in the industry.

More recently, the problem of “leaky buildings”, combined with very strong growth in construction activity, has led to a catch-up of industry training, with large increases in the volume of apprentices.

“There was little work in the ‘90s. Training was seen as an expense, you didn’t need it. In the late ‘90s, they realised there were no kids in the system. Then in the early 2000s, leaky buildings hit. Plus work volumes increased. It changed the mindset – now training is top of mind.” (Industry association CEO)

However, the missing cohort has significant repercussions for the industry. It means that there is a limited supply of *qualified* people in supervisory positions - leading hand/supervisors etc - in the industry. It also means that there is a lack of qualified trainers for the current generation of apprentices.

Some respondents have concerns around what this missing cohort means for the future of the industry in the light of the forthcoming occupational licensing regime (see section 3.1 for a further discussion).

2.2.3 Other skills issues

Other skills-related issues, some of which relate to apprentices and some of which apply more generally, are:

- *Overall decline in skill level.* A number of factors (increasing specialisation in the industry, increased use of pre-fabrication techniques, use of labour-only gangs) has led to what some perceive as an overall decline in skill levels. Of most concern is a loss of flexibility – a falling proportion of employees being able to turn their hands to a range of jobs on building sites
- *Poor business and management skills.* Some respondents noted that there is a need to improve the business and management skills in the industry. There are many small businesses in the industry, and some employers struggle when they seek to expand their business. Some respondents were concerned with a lack of planning in the industry, both by employers and by other parts of the industry such as government agencies, for example in response to the leaky building issue

“There’s a capability issue. They won’t grow the business unless they’re sure it’s sustainable. The key issue is moving from a small to a medium business – lots crash and burn. They need business management skills. Some get around it by buying a franchise.” (Industry association CEO)

- *Lack of training skills.* Some employers have limited coaching and mentoring skills, as well as the time to train their staff. In particular, training apprentices is not seen as a core business activity. Some apprentices are worried about their employer’s ability to train them (see section 5.4.1). A further concern is around polytechnic tutors, many of whom are likely to retire in the next few years. The recent upturn in construction activity, combined with the demands of the Building Act, has led to strong competition for people in the industry with similar skill sets - polytechnic tutors, building inspectors and BCITO field staff
- *People working beyond their ability.* There is a concern that the increasing complexity of house design, and the wide range of products available, means that people are sometimes working beyond their ability. Whilst many of the operators in the industry are of a very high calibre, there is perceived to be a long tail of poor practitioners
- *Turnover of apprentices.* Whilst staff retention does not appear to be a major issue in general, there are concerns around apprentices being poached or going overseas. Employers are clearly keen to receive a return on their investment, which is usually towards the end of the apprenticeship, and afterwards, if the apprentices stay around
- *Formal qualifications not always a good indicator.* Some employers noted that the attainment of formal qualifications is not always a good indicator of a potential recruit’s overall attributes and value to an employer. Attitude and motivation are seen as vital
- *Limited supply of training in non-traditional areas.* Whilst the apprenticeship model has a strong history and standing in the industry, there is a lack of training in other roles (eg office roles, older workers, specific sub-industries eg those affected by the licensing regime).

2.3 Summary and implications

Respondents have identified a number of skills-related issues - at first sight it appears to be rather a daunting list of “problems”. However, it is important to put these issues into context. Many of the points raised apply equally to a number of other industries, especially those comprised mainly of small and medium enterprises (SMEs). In addition, the current tight labour market, with especially strong growth in construction activity, has brought many of the issues to the forefront of people’s minds.

The important point is whether or not there are systemic problems in the labour market (and training system), or an absence of responses to such problems. We consider these questions later in the report.

3. Future skill needs

In this section we examine the key drivers of change, and how the demand for skills is likely to change as a consequence. Note that we are primarily concerned with the *type of skill set*, as opposed to the *number of employees* likely to be required to meet future demand.

In general, skill needs are not anticipated to change dramatically over the next five years, as many of the recent trends (increasing specialisation, cyclical activity etc) will continue into the future. However, there will be an increasing *emphasis* on certain skills, and a relative decline in others.

3.1 Occupational licensing

The forthcoming occupational licensing regime was identified as the key driver of change in relation to future skill needs. Not surprisingly, respondents had varying levels of understanding of the new regime.

Many respondents view the changes in a positive light. There is an expectation that “the bar will be raised”, and that “cowboys” will be squeezed out of the industry. The new regime will lift the margin for skill, and provide an incentive to invest in training. It will raise the calibre of entrants to the industry, and in turn provide the opportunity for the industry to promote itself more effectively. In addition, the effects in the DIY market resulting from the regime may lead to an increase in demand for services.

Some respondents are less enthusiastic, however. They are concerned with a possible lack of appropriately licensed people (ie supply problems), as the increased liability/responsibility puts employers/workers off attaining the licence. Small firms or customers in particular may not be willing to pay the cost premium required by the new regime. Older (unqualified) workers are concerned about the qualification requirements, and younger workers by the experience requirements of the proposed licensing system.

“Getting people certified is going to put a lot of pressure on the industry that the industry at the moment is not catered for, and it will take a long time to actually get things running. It is going to put a lot of pressure on a very small group of people – the ones that are going to sign-off, progressively sign off the construction.” (Employer)

However, one common theme is a desire for certainty – around what the requirements will actually be. A further common expectation is that (ultimately) the licensing classes will align with qualifications in the industry. In other words, it is anticipated that each of the “boxes” in the licensing class structure will have its own national qualification, and that the qualifications are integrated - the structure makes sense as a whole.

3.2 Other trends

Other changes which are anticipated to affect future skill needs are:

- *New products.* Many respondents noted that building design is becoming more complex, with new developments such as data technology and new heating and ventilation systems. There is an increasingly wide range of building products and materials available
- *New techniques.* Pre-fabrication off-site and the increasing use of modular materials is an ongoing trend
- *Increasing customer expectations.* The leaky building issue in particular has made consumers wary and more demanding in their requirements – but are they willing to pay the price premium?
- *Increasing compliance,* primarily due to the Building Act 2004.

3.2.1 What it means for skills

The changes noted above are likely to *increase* the demand for the following types of skill:

- *Specialist skills* such as gibbing, frames etc
 - the occupational licensing regime will compound the increasing specialisation already taking place in the industry. It is envisaged that most people already working in the industry will only apply for a licence in those categories (in most cases only one category) with which they have the most experience and/or qualifications, and where their likely business uptake justifies the costs of acquiring the licence. Occupational licensing may therefore discourage the acquisition of new skills, as people will be reluctant to undertake work outside their “box”
 - increasing customer expectations and new product developments and techniques are also likely to increase the degree of specialisation, as a greater depth of specialist knowledge will be required
- *Supervisory skills* - the occupational licensing supervisory sign-off category is seen as a lynch-pin of the new requirements, and the category which is likely to come under most pressure once the regime comes into effect
- *Project management skills* - due to the use of pre-fabricated materials, and the increasing use of specialist sub-contractors
- *Quality assurance* - due to increasing compliance requirements
- *Problem solving* - to understand the new technologies and interpret the appropriate product/solution. The building codes are outcome-focused, so there is a need to interpret the codes and manufacturers’ instructions etc

- *Literacy* – due to increasing compliance and the need to read product specifications
- *Assembly/finishing* – due to increasing pre-fabrication
- *Training* – the occupational licensing regime will create a need for Recognition of Prior Learning, and to upskill people in the industry who do not meet the requirements.

“It will go one of two ways. More sub-contracting will lead to more contract management, and so co-ordination skills will become more important. As people become more specialised, you’ll need someone who understands a bit about everything. OR qualifications will focus on narrow skill sets. You still need some broad skill sets, though, especially in rural areas.”
(Industry association CEO)

3.3 Summary and implications

Increasingly narrow and specialist skill sets are likely to result from many of the anticipated changes in the industry. In other words, for industry-specific skills, a greater depth of understanding will be required in technical areas. At the other end of the spectrum, foundation skills (eg literacy) and generic skills (eg problem solving and project management) are also expected to become more important.

In combination, the above suggests a relative decline in traditional craft skills such as carpentry. However, many respondents pointed out that there will always be a need for such skills. Many are also reluctant to relinquish the flexibility and breadth of understanding which comes with a traditional “apprenticeship” – see section 7.1.1. Probably a key point here is to understand the core set of skills which constitutes an acceptable breadth of knowledge/competencies. It is also important to recognise, as pointed out by some respondents, that there are different requirements in different settings – urban v rural, for example.

4. How well is the training system working?

Here we consider perceptions of how well the *entire* training system is working, in terms of meeting industry's skill needs; specific aspects of the system are examined in subsequent sections. Note that when we refer to the training system, we mean *all* types of (primarily formal) training, not just BCITO-facilitated training. Also note that, whilst we mainly focus on construction-related training, there is a wide range of training available in a wider context, for example in relation to plumbing, painting and joinery³.

We start off with a description of (our understanding of) how the training system actually works - the sample included a number of training providers actively engaged in the training system. This provides some context for the remainder of the section.

4.1 The training system

Key features of the training system are:

- *Apprenticeships are prominent.* Whilst BCITO-facilitated apprenticeships have the largest market share (in terms of enrolments), a number of polytechnics also offer their own apprenticeship equivalents. In addition, Industry Training Association Building (ITaB) has been set up by the Certified Builders Association of New Zealand and Franchised Polytechnics, and offers its own apprenticeship. All the apprenticeships relate to the Level 4 National Certificate in Carpentry, with the exception of some offered by BCITO (such as the National Certificate in Cement and Concrete, but the take-up of these is relatively low)
- *Polytechnics play a key role.* Polytechnics are offering a number of courses, mainly in relation to carpentry. Some polytechnics wear a number of "hats" within the training system (as does BCITO). For example, one provides off-job training for BCITO, is franchised to the ITaB apprenticeship, and offers its own apprenticeship as well as a variety of other full-time construction-related courses
- *Employers play a key role.* Employers play a vital role in the apprenticeship system – providing the practical on-site learning. In addition, many respondents were keen to point out the role that employers play in the ongoing skill development of their staff. This ranges from day-to-day mentoring and coaching, to in some cases setting up in-house "cadetships" (leadership development programmes).

In Table 2 and Table 3 below we outline some of the main types of construction-related training programmes available, and which organisation provides them.

³ Qualifications and apprenticeships in relation to these skills are offered by a number of other ITOs

Table 2 Training available by organisation type

Organisation	Broad type of training	Key features
BCITO	Apprenticeship (mainly Level 4 NC ¹ Carpentry, but others as well)	<p>Practical skills taught and assessed on the job by employer</p> <p>Theory skills learnt by self-paced learning package - "box of books" (assessed by BCITO TA²) or night classes, day release or block courses provided by polytechnic (assessed by course tutor)</p> <p>Apprentice/employer supported by TA who visits 2-4 times pa</p> <p>Fee of \$450pa</p> <p>Funded via STM funding pool³</p>
ITaB (Industry Training Association Building)	Apprenticeship (Level 4 NC Carpentry)	<p>Practical skills taught on the job by employer, but assessed by polytechnic tutor</p> <p>Theory skills learnt by night classes, day release or block courses provided by polytechnic (assessed by course tutor). NB tends to be more off-job training than BCITO equivalent</p> <p>Apprentice/employer supported by poly tutor who visits 4 times pa</p> <p>Retained some features of the "old" system – 8,000 hours, theory exam, "Completion of apprenticeship" certificate</p> <p>Fee of \$850pa</p> <p>Funded via EFTS⁴</p>
Polytechnics	Apprenticeship (Level 4 NC Carpentry)	<p>Similar to ITAB, but without the features of the "old system", and fees vary by institution</p> <p>One polytechnic operates a group apprenticeship scheme (which employs the apprentice, who is seconded to firms in the industry)</p>
	Full-time course (Level 4 NC Carpentry and Level 1 or 2 NC Elementary Construction Skills)	<p>Varies depending on polytechnic. Some offer most of the level 4 NC, with some of the practical skills being learnt on-the-job via work experience. Others offer the Level 2 NC only. Others offer both</p> <p>Fees vary (usually several \$000)</p> <p>Funded via EFTS</p>
	Other full-time courses	<p>City and Guilds</p> <p>Local courses/certificates (often based on unit standards in the Level 4 NC Carpentry)</p> <p>Diploma/bachelor Construction Management</p>

- Notes: (1) Level 4 National Certificate in Carpentry
(2) BCITO Training Adviser (local rep)
(3) Standard Trainee Measure (industry training funding)
(4) Equivalent Full-Time Students (student component funding)

Source: NZIER

Table 3 Training available by organisation type (continued)

Organisation	Broad type of training	Key features
PTEs (inc BRANZ)	Full-time course (Level 4 NC Carpentry and Level 1 or 2 NC Elementary Construction Skills)	Mainly theory skills of Level 4 NC Fees vary (usually several \$000) Funded via EFTS
	Full-time pre-employment courses	Mainly employment skills rather than industry-specific skills Fees vary Funded via EFTS, TOPs ¹
	Specialist courses	Seminars on topical issues Range of courses (not currently based on unit standards) aimed at building officials, architects etc Fees vary
Universities	Full-time courses (degrees and diplomas in architecture, quantity surveying etc)	Courses developed by individual institutions Fees vary (usually several \$000) Funded via EFTS
Wananga	Full-time pre-employment courses	Mainly employment skills rather than industry-specific skills Fees vary Funded via EFTS, TOPs ¹
Other providers (eg Cement and Concrete Association, Sitesafe)	Specialist courses	Varies

Notes: (1) Training Opportunities Programme (targeted funding)

Source: NZIER

4.2 Perceptions of the training system as a whole

The overriding impression given by respondents is that, in general, the training system is viewed reasonably favourably by the industry. Whilst the recent upturn in construction activity has put pressure on the training system, and the system is not as responsive as the industry would like, there appears to be general acceptance (by employers) of the constraints within the system. A few are concerned with a possible over-supply of training if activity levels slow down.

Apprenticeships in particular, with their long history in the industry, are well supported. This has been especially true in recent years, when the take-up of apprenticeships has been high, partly due to the increase in construction activity, and partly as a reaction to the previous “demise” of apprenticeships.

4.3 Range of apprenticeship models

A key concern for many respondents is the range of different apprenticeship “models” available (BCITO v ITaB v polytechnic). Some respondents would like to see a standardised approach, whilst others appreciate the current range of options available. In Table 4 we summarise respondents’ perceptions of the advantages and disadvantages of the two approaches. (Note that the sample included training providers and other respondents offering the various “models”, who could be seen as having a vested interest. Having said that, employers also had a range of opinions on the relative merits of “one model” v “several models”, often based on their personal experiences of the training system.)

Table 4 One apprenticeship “model” v several “models”

	Positive	Negative
One model	<p>Simpler</p> <p>Easier (for employers and potential apprentices) to understand</p> <p>Likely to be more consistency in standards</p> <p>Better use of government funding</p>	<p>“One size fits all’ approach</p> <p>Reduces choice</p> <p>Monopoly</p>
Variety of models (ie status quo)	<p>More competition should improve standards</p> <p>No different to, say, a university trying to differentiate itself in the market</p> <p>Provides more flexibility/options, given industry’s varying needs (by urban/rural, size of enterprise etc)</p>	<p>Causes confusion</p> <p>Wastes resources</p>

Source: NZIER

4.4 Other issues with the training system

In addition to the range of apprenticeship models available, some other comments were made in relation to the training system as a whole:

- *Competition.* Many respondents feel that there is too much competition/patch protection between the various parts of the system, to the detriment of the system as a whole. Having said that, some consider competition to be a good thing. Some also noted that the different parts of the system (BCITO, training providers, industry associations), although having different interests, are engaged in positive dialogue

“All these people are competing against each other. It’s a political minefield where they’re just looking for bums on seats. So each of these parties all have their own agendas, and it’s lost its focus in terms of providing good training.” (Employer)
- *Confusion on roles of different parts of the training system.* This was particularly evident amongst the apprentice respondents, but is also true of some employers
- *Variety in standards* across the entire training system. Employers are keen to know what they are buying when they recruit someone from a full-time course, or recruit a fully qualified apprentice. There is a widespread desire for consistency of standards across all training types, modes of delivery, parts of the country. However, there is also a desire to keep compliance to a minimum and avoid “red tape”
- *Concerns re competency training.* Some employers and training providers (the latter group being particularly vocal) expressed concerns with unit standards: that they compartmentalise learning into “sound bites” and so are not pedagogically sound; that they focus on assessment rather than learning; that they generate mediocrity. However, some respondents seem quite comfortable with unit standards
- *Concerns re funding.* A number of points were raised, mainly, but not exclusively, by training providers: the funding regime has encouraged participation/“bums on seats” (both by training providers and BCITO) rather than quality; the funding regime encourages training to focus on areas (eg carpentry) where there is a large market size, to the detriment of smaller sectors/industries; that there is not a level playing field (eg PTE funding); that the overlapping provision between polytechnics/ITOs is a problem
- *Focus on carpentry.* As noted above, there is a concern that the training system does not cover all parts of the industry; this could cause problems in the light of the forthcoming occupational licensing regime
- *Lack of integration of practical and theory learning.* Regardless of the apprenticeship “model” or specific full-time course being considered, there is a concern that the theory learning is not being put into practice straight away in a practical context.

4.5 Summary and implications

There is a range of training options available for the industry, but most of them relate to (high volume) carpentry skills, which may present difficulties for training to support the forthcoming occupational licensing regime. The wide range of options available can, in some instances, make it challenging for employers and learners to understand the most appropriate selection for them.

Users of the training system - employers and apprentices - appear to be reasonably comfortable with the training system as a whole. There seems to be a level of acceptance that it is difficult to “steer” the system in response to the industry’s (cyclical) demands. The recent strong growth in construction activity has put pressure on the system and resulted in a lagged response.

It is important to note that the focus of many of the comments on the training system (eg re funding, competency-based training) may be influenced by the time at which the fieldwork was undertaken. Significant changes to the tertiary education system – an increasing emphasis on quality and relevance – were announced over the period of the fieldwork, and so may have been “top of mind”. Having said this, it is still an issue for BCITO that many of the training providers expressed a range of concerns around unit standards/competency-based training.

There was a concordance of opinions amongst certain groups of respondents, and different respondent groups in certain parts of the country, which supports the view that the different parts of the system are communicating effectively with each other.

5. Perceptions of BCITO

In this section we examine respondents' perceptions of how well BCITO is meeting industry's needs. We have grouped the comments under various headings, based on the ITO's legislated role.

5.1 Overview

In general, there is a lot of support for BCITO, especially in its standard setting role. BCITO's current apprenticeship model is viewed as one which requires discipline on the part of the apprentice and employer, but works well for some. Having said that, there are some concerns that the recent growth in apprenticeship number has put pressure on the ITO.

"My view is that I think the BCITO has worked very hard to achieve the level of support that it has at the moment. I think it's going to struggle with its expansion and I guess they'll just have to manage that." (Employer)

5.2 Qualification development

Respondents of all groups were unanimous in the view that qualification development is a key role for BCITO, and support BCITO placing emphasis on this activity.

"I think it's important that the ITO sets the skill standards for the industry and the polys carry that out under the standards set by the ITO. I think it works best when you've got somebody separate and you have an answerability for the theory delivery." (Employer)

In general, respondents appear to be reasonably happy with the qualifications available. Both training providers and other types of respondents made some general favourable comments on the Level 4 National Certificate in Carpentry, and the Level 1 or 2 National Certificate in Elementary Construction Skills.

The only issue that was mentioned by a number of respondents is challenges around completing the qualifications. In other words, some apprentices are not exposed in their workplace to the range of skills required to complete the qualification. In some instances, this has been addressed via secondments to other firms. However, some respondents feel that it can be a barrier to completion. A few respondents suggested that the compulsory/elective mix in the qualification needs to be reviewed.

Specific comments (usually made by one respondent only, and mainly by training providers) in relation to qualifications and their development were:

- Carpentry qual does not cover commercial construction very well
- Level 2 and level 4 quals do not overlap, which means that students attending full-time courses (for the level 2 qual) do not get a head start on their apprenticeship
- The theory components of the level 4 qual are at too high a level, which creates difficulties for training providers who design courses for them
- Cement and concrete qual too broad/does not cover industry needs
- Suspended ceiling/plastering qual not very good
- BCITO is considering developing a supervisors' qual (for the licensing regime), but is it their role, and have they got the capability to do it?
- Importance of feedback loop from industry – ensure that advisory committee members are up-to-date in industry practices.

5.3 Quality assurance

This is seen as another core role for BCITO.

The key issue here is perceived variations in standards (across all parts of the system - between training providers, and amongst employers, for example). This has been a particular concern in recent years, when training participation and volumes have increased dramatically; some respondents are concerned that standards may have slipped.

A range of issues was mentioned:

- Employers signing off inappropriately/at different “standards”
- Variety in standards at full-time courses at training providers. As noted previously, employers are not always sure what they are buying when they recruit a graduate from a full-time course
- The lack of supervision for the learning package worksheet (in the apprenticeship), so that it is not possible to tell that it is the apprentice's own work.

There were some positive comments made, however. For example, a training provider noted that BCITO's long-term moderation plan is good.

5.4 Apprenticeships facilitated by BCITO

Views are somewhat mixed on how well BCITO-facilitated apprenticeships are working. In general, employers and apprentices engaged in the process are reasonably happy with the BCITO-facilitated apprenticeship. This is evidenced by the recent growth in enrolments.

However, the BCITO apprenticeship is seen as one requiring a lot of discipline, both on the part of the apprentice, and of the employer. In some instances employers have opted for alternative – more structured – approaches (in-house training or an apprenticeship offered by a polytechnic/ITaB). Also, it is important to note that apprentices often have little points of comparison.

“BCITO works well, it complements our system well, but we have a very stringent control over boys getting together. They meet together at x amount of weeks or days, whatever they want, whatever suits them, and we have one of our guys who’s an assessor who is the overseer. If you didn’t have that, yeah, it wouldn’t work.” (Employer)

5.4.1 Practical training

Apprentices enjoy their practical training, and in most cases are well supported by their employer. However, some apprentices are concerned with the currency of their employer’s knowledge and practices. As noted previously, a number of respondents expressed some concerns around the consistency of employers “ticking off” the apprentice’s skills.

“I’m sometimes a bit worried that my supervisor is not up-to-date with the latest techniques. I just want to make sure I’m doing the right thing.” (Apprentice)

Employers in general are clearly committed to the apprenticeship. However, as was pointed out by a number of respondents from different groups, training is not the employer’s core business. In some instances the paperwork etc is seen as onerous, especially in the recent very busy period for the industry.

5.4.2 Theory training

The self-paced learning package (often referred to as the “box of books”) is working well for some apprentices – in general the more motivated ones. Some employers like this model, as the apprentice is not out of the workplace for long periods, as is the case with block courses. However, there are a few concerns about the currency/accuracy of the material. In addition, apprentices would like to receive updated versions throughout their apprenticeship (which does not appear to be the case currently).

Training providers are much less comfortable with the “box of books”. In particular, some respondents (mainly training providers but also some others) feel that BCITO has overstepped the mark in *providing* – as opposed to *facilitating* – training. In addition, some consider that distance learning is a poor match to the learning style of (building) apprentices, who tend to be kinaesthetic learners.

“The box of books is errant nonsense. I’m gobsmacked they’ve been allowed to get away with it. The students don’t like it – it’s isolated and unsupported. They’re trades people, not academics.” (Polytechnic Head of Department)

The evening classes and block courses offered as part of the BCITO apprenticeship (and provided by polytechnics) as an alternative to the self-paced learning are generally very highly regarded by both employers and the apprentices who access them. In particular, the opportunity for peer review and contact with other apprentices is valued, as is the more structured approach. Some respondents believe that BCITO is moving away from the self-paced learning package, back to the “old system”, and generally this is welcomed. However, it was not always evident from our discussions with some employers and apprentices that they knew what theory options are available in their area, and, where evening classes/block courses are available, that apprentices can necessarily access them.

5.4.3 Support

The support provided by BCITO’s Training Advisers (TAs) is appreciated both by the employer and the apprentice. Apprentices in particular are keen to have someone they can turn to outside their employment relationship. Having said that, in some instances apprentices appear to be a little confused on the TA’s role, especially when the apprentice is attending off-job training at a polytechnic (ie role of BCITO TA v polytechnic tutor).

There is generally a desire for more support and more regular visits from TAs, although there is a recognition of the size of the TA’s case load. Also, there seems to be some variation at an individual level - some employers and apprentices are very satisfied with their TA and some are not. Turnover of TAs is perceived as an issue in some areas.

“I’ve had a different BCITO guy turn up on site just about every time. My apprentice doesn’t even know who’s looking after him. I mean, the whole thing is driven by (apprentice name) and I, and BCITO has got diddily squat to do with making him any better as an apprentice.” (Employer)

5.4.4 Other aspects of the apprenticeship

A number of respondents expressed some concerns with regard to outcomes from the apprenticeship ie the proportion of apprentices who complete their apprenticeship. This concern stems in part from the self-paced nature of the learning (especially where the learning package as opposed to evening classes or block courses is used for theory learning), in part from the sheer growth in volumes in recent years, in part from the qualification structure/content, and in part from BCITO not (perceived as) taking a firm enough line on apprentices who are not progressing in their apprenticeship.

5.5 Leadership role

There is little awareness of the ITO's legislated leadership role, other than amongst training providers, who are generally supportive of the role. Having said that, some respondents are aware of BCITO's work in promoting the industry, especially within schools, and appreciate the efforts in this area.

Many respondents see an opportunity for someone in the industry (possibly BCITO) taking a leadership role with regard to some of the significant changes taking place eg occupational licensing. In particular, there is a desire by some for more long-term planning, and for a greater understanding of the future skill needs of the industry. In other words, although respondents may not be aware of the ITO's legislated leadership role, they see a need for the type of activity encompassed by that role.

5.6 Other

A few respondents (mainly training providers) are uncomfortable with the ITO's role as a funder. They do not believe that BCITO should be commissioning off-job training, as they consider that the organisation's decisions are based on financial considerations as opposed to pedagogy.

5.7 Summary and implications

In general there is a lot of support for BCITO – especially in its standard setting capacity.

The BCITO apprenticeship is working well for many. However, some employers and apprentices prefer a more structured approach. The implication from this is that, under the current system of multiple apprenticeship models being available, access to information is vital so that employers and potential apprentices can make informed choices and select the model that best suits their needs. A further implication is that, if there is a change to a single (BCITO) apprenticeship model, this model will need to provide more structure and support for some.

Some of the issues identified by respondents are likely to result from the very rapid growth in BCITO apprenticeship numbers in recent years, and may well disappear now that the “growing pains” are hopefully over.

However, one issue which BCITO may wish to address is that of the “box of books”, which may be a hindrance to them in further developing their relationship with training providers. Some respondents expressed strong views that BCITO has moved into training provision, as opposed to training facilitation, with the development of the self-paced learning package.

6. Perceptions of other parts of the training system

In this section we outline respondents' views on training provided by the wider training system - polytechnics and PTEs etc. The rationale for this is in relation to TEC's expectations from the ITOs' leadership role, which includes informing and influencing training providers, and informing TEC's assessment of strategic relevance of programmes within the tertiary sector (see section 1.1).

6.1 Apprenticeship training

Those employers who have exposure to apprenticeship models other than that offered by BCITO (which appears to be primarily those provided directly by polytechnics rather than the ITaB model) are generally very happy with the service provided. In particular, they like the structured approach ie structured off-job training via block courses/evening classes. Other perceived benefits include: reduced workload for employers; the provision of someone (tutor) outside the employment agreement to assess the apprentice; more likely to achieve better outcomes ie completions. However, some respondents note that this is a more expensive option than a BCITO apprenticeship (both for the employer and the government), and that there is also a cost involved in the lost time of apprentices attending block courses.

"I don't have any problem with the polytechnics, we do everything through (polytechnic name) and we've been getting very good service from them. They ask for our input on a regular basis and I think generally speaking they do pretty well." (Employer)

Some employers utilising these apprenticeships have previously used BCITO's services and moved to an alternative model; a few are accessing both models concurrently, depending on the needs of the individual apprentice.

6.2 Full-time courses

As noted in section 4.1, there are a variety of full-time training courses available at polytechnics and PTEs, mainly in relation to carpentry.

Views on these courses were somewhat mixed. Only a few apprentices in the sample had attended these full-time courses: for some it had helped secure them a job; others found that the purely theory-based learning did not work for them.

Whilst some employers are happy with the courses in their area, and have employed course graduates, in general there are concerns:

- Numbers driven by “bums on seats” as opposed to industry’s needs
- Lack of screening of students/calibre of students poor
- Lack of outcomes ie placements into industry

“Maybe 50% of the people get an apprenticeship...for \$5,000...It’s more now because of the buoyant industry. It used to be 25% or so. But there were always full classes because the polytechs didn’t care whether they got jobs or not.” (Employer)

- Lack of practical skills of course graduates.

6.3 Other specialist training

Although not mentioned by many, there was generally positive feedback on the seminars and courses provided by BRANZ:

- Some respondents noted the important place of specialist training, given that most of the training system is focused on carpentry
- Some apprentices had heard of the courses, and are keen to attend such courses to be updated on the latest issues (eg occupational licensing).

6.4 Summary and implications

The apprenticeship training offered by organisations other than BCITO appears to be working well for those who access it. Assuming that employers and potential apprentices are aware of the options available in their area, it is essentially a question of “horses for courses” when deciding between this type of apprenticeship and the BCITO-facilitated one. In other words, the BCITO model appears to work well for more motivated apprentices and where employers can play an active role in the apprenticeship, whereas the other models may suit apprentices who require a more structured approach and employers who have less time.

The availability of the alternative apprenticeship models does, however, possibly raise some questions with regard to the most appropriate use of government funding, as essentially (arguably) similar outcomes are being funded by different funding pools.

There are some concerns around full-time courses at polytechnics and PTEs. However, it is important to put these comments into context. Many of the issues raised do not apply exclusively to the building and construction industry, but across the entire training system. Some may be addressed by the proposed changes to the tertiary education system. Having said this, and as noted by several respondents, it is important to retain what is working well in the current system, for example course innovation and participation.

7. Changes to meet industry's future skill needs

Here we consider respondents' suggested changes to the training system, as well as a broader range of strategies, to meet industry's future skill needs.

7.1 The training system

In general, there is not a huge appetite for wholesale changes. Whilst most respondents were able to identify some potential improvements, these were considered to be "tweaks" as opposed to significant shifts.

7.1.1 Suggestions for BCITO

The suggested changes for BCITO are largely (with the exception of the latter point below) around emphasis rather than substantive change:

- *Ensure qualifications meet industry's needs.* Respondents from all groups are keen for BCITO to better understand the changes taking place in the industry, and to ensure that qualifications meet industry's needs. In particular, there is an expectation that national qualifications will align with the forthcoming licensing regime; this is viewed as an activity which will require a lot of energy and resources. Other (usually one-off) suggestions made in relation to the qualifications were: better integrate the practical and the theory learning; have 120 theory credits in the carpentry qualification so it can be a one-year course; develop a trans-Tasman qualification; review compulsory/elective mix in carpentry qualification (so it can be completed more easily); develop small packages of unit standards for staff at temp agencies; more linkage/overlap between level 2 and level 4 qualification; review members of advisory committees for currency
- *Ensure consistency of standards.* As with qualification development, respondents want BCITO to place an even greater emphasis on its quality assurance role, so that standards are more consistent
- *Promote the industry.* This is a strategy that applies not exclusively to BCITO (see below), but BCITO is seen as having a key role
- *More support and structure in the apprenticeship.* Although it is recognised that the current BCITO apprenticeship model is working well for some, in general there is a desire for more support, both for the apprentice and his/her employer. One issue here is to ensure that those apprentices for whom night classes and/or block courses may be more suitable have access to such courses. Progression in the apprenticeship, and a focus on outcomes - completions - is viewed as paramount
- *ITO's role.* Some respondents (mainly but not exclusively training providers) are keen to have a clearer separation between the ITO's standard setting role and the delivery of training. Some would also prefer the ITO not to be a funder (ie arrange and fund off-job training).

7.1.2 Suggestions for other parts of the system

Other themes for changes to the training system, some of which apply across the whole system and others to specific parts of the system, are:

- *Better recognition of the role of employers.* Employers play a key role in the training system, and there is a desire to see more recognition for this role. Some respondents would like training subsidies to be provided by employers who recruit an apprentice

“It’s the first two to three years, you know. There is down time, you’ve got a qualified carpenter or a very good hammer hand, standing alongside and explaining. I mean that comes with the territory, but I think at the end of the day there needs to be some sort of training relief, tax-wise or whatever, for companies employing apprentices to be recognised.” (Employer)
- *More clarity around roles.* Some respondents would like clearer delineation around the different parts of the system. Some would also like to see only one apprenticeship model available (although others would not – see section 4.3)
- *Changes to full-time courses.* These included: improved screening of students; ensure outcomes ie entry into industry; improve the practical skills of students on the courses
- *Training delivery.* Suggestions included: accessing new technologies eg on-site real-time delivery of theory via palm-tops etc; courses which meet employer’s business needs ie short courses early AM or late PM; delivery which better reflects the learning styles of the audience ie kinaesthetic
- *Funding-related suggestions.* A range of suggestions was made including: the government taking the funding cap off modern apprenticeships; focusing funding on priority areas - building and construction having a strong case; current lack of funding for short courses, which are likely to become more important for the industry; BCITO’s industry skills strategy should be used to influence funding decisions; the proposed funding focus on quality/relevance is OK now (industry is currently in a down-turn), but participation will be important again in an upswing.

7.2 Other strategies

Respondents were asked what additional strategies are required to assist industry meet its skill needs, over and above those relating to training.

Promotion of the industry was by far the most common suggestion. Schools are seen as a key target audience - school students, their parents, and school career advisers. Some respondents would like to see more emphasis placed on woodwork/technology classes in schools. As noted previously, the forthcoming licensing regime is seen as an opportunity to profile the

standards in the industry. In addition, many respondents feel that the benefits/rewards of working in the industry (for example the opportunity to own a business and potential for high remuneration) could be better capitalised upon. In terms of whose role it is to promote the industry, BCITO is seen as having a key role, as are training providers. Employers also recognise their own role.

“It’s got to start at the schools - with parents saying ‘Well, you know, you can go to university, but have you ever thought of the building industry’ ... The reason the IT industry does very well is that there’s a tremendous amount of funding goes from the sector into schools... It’s a matter of pushing the trades a bit harder and assisting with funding. Now, whether that comes from industry or is subsidised by the government, but we’ve talked about it for bloody years.” (Employer)

Occupational licensing was the trigger for a number of other suggested strategies. Respondents are keen to have some certainty around what it all means, for example in relation to the training system. There is a desire for more long term planning within the industry, especially to understand the likely number of people in each of the licensing “boxes”.

Immigration was mentioned by a couple of respondents, but in different contexts. Some believe that the growth in the Asian population represents a significant opportunity for future labour supply. Others would like to see more stable immigration numbers, to try and level out peaks and troughs in construction activity (as migration is a key driver of activity).

7.3 Summary and implications

For BCITO, the overall impression given by respondents is wanting BCITO to “stick to the knitting”. As one respondent expressed it, BCITO should continue to do what they do now, but do it better, rather than spend a lot of time developing new things. Qualification development and quality assurance are seen as key areas for focus.

Whilst most respondents stated that they do not want to see wholesale changes to the training system, some of the suggestions made (especially in relation to funding) would have widespread repercussions. A key challenge for BCITO when developing its industry skills strategy and strategic training plan(s) will therefore be differentiating between those strategies which are directly within its control, and those which are not – where it might take more of an influencing role.

It is interesting to note that, despite the labour supply constraints experienced by the industry in recent years, strategies to target the most under-represented group in the industry – women – was rarely mentioned.

8. Conclusions and strategy development

In this section we bring together the key findings from the research, and what they might mean for strategy development.

8.1 Conclusions

8.1.1 Recent and current skills issues

The building and construction industry is a cyclical industry. This presents challenges for the training system, as there can be significant time lags in the system responding to changes in the industry.

The industry appears to be reasonably comfortable in general with the training system, and seems to have worked around any possible limitations in the system. Employers are either working with the existing system, or coming up with their own solutions. Apprenticeship training, which has a long history in the industry, is well supported, despite the significant time commitment required by both the apprentice and the employer.

Many of the skills-related “problems” facing the industry are contextual issues – they apply equally to other industries. Particular concerns for the industry are the perceived poor calibre of entrants, and the missing cohort of apprentices in the 1990s. However, a number of industries face comparable challenges. Similarly, some of the concerns expressed with regard to the training system, such as those in relation to full-time courses at polytechnics and PTES, or aspects of the role of ITOs, are relevant in other settings. It is also important to recognise that many of these are not new matters for the industry, but a continuation of existing trends.

However, the recent upswing in construction activity, combined with an overall tight labour market, has brought into sharp relief some issues for the industry’s training system. In particular, they have emphasised possible inter-generational problems in the industry, and created concerns that in some instances quality has given way to quantity, both in terms of training provision and the calibre of recruits to the industry.

8.1.2 Future skill needs

The forthcoming occupational licensing regime is seen as a key driver of change. This presents some opportunities – to raise standards and to promote the industry. It also presents challenges – an increase in compliance costs, and a possible under-supply of people applying for certain licensing categories (in particular the supervisory class, due to the lack of qualified supervisors resulting from the missing generation of apprentices in the 1990s). There is a desire for certainty. There is also an expectation that national qualifications will align with the licensing structure.

Changes in the industry, such as the occupational licensing regime, but also new product developments and techniques, are likely to lead to a greater degree of specialisation and in-depth knowledge of (industry-specific) technical skills. They are also expected to lead to increased demand for more generic skills such as supervisory skills, project management and problem solving.

However, there will always be a need for craft skills such as carpentry. In addition, there is a desire for flexibility in skill sets, and for some workers to understand the *entire* construction process, not just part of it. This means that, whilst acknowledging changes in the industry, employers are reluctant to relinquish an apprenticeship which provides a breadth of skills.

8.1.3 BCITO and apprenticeship training

There is significant support for BCITO, especially in its standard setting role. BCITO's efforts in promoting the industry, especially to schools, is appreciated. There is also an opportunity for BCITO to capitalise on its legislated leadership role, as there is a desire for someone to take a more active role in the long term planning of the industry.

A greater emphasis on qualification development (to ensure qualifications reflect industry's changing needs), and quality assurance (to ensure consistency of standards) is seen as important.

In terms of apprenticeship training, in general those apprentices and employers accessing BCITO-facilitated apprenticeships appear to be fairly happy with the services they receive. A BCITO apprenticeship is seen as working best for motivated apprentices who have strong support from their employer.

However, more structure and support, for example from BCITO's TAs, is desired by many. The key concern is with outcomes – that the apprenticeship is completed. The current model relies on a certain amount of discipline from both apprentices and their employers.

It is important that the off-job training offered to an apprentice suits his/her learning style. The self-paced learning package - the "box of books" – works well for some, but for others night classes and block courses are more appropriate. The peer interaction and exposure to new skills that comes with night classes and block courses is particularly appreciated, as sometimes apprentices can feel isolated. However, it is vital that employers and apprentices understand what off-job training options are available in their location, which does not always appear to be the case at the moment. In addition, training providers are very uncomfortable with the "box of books", as they consider that BCITO has stepped over the line into training provision, as opposed to training facilitation.

On-job training is a key component of the apprenticeship, and in general appears to be working well. Employers are keen for their role in the apprenticeship to be acknowledged, as it can take some time for them to receive a return on their investment. There are, however, worries around varying standards and the currency of some employers' skills.

8.1.4 Other parts of the training system

There is a wide range of construction-related training options currently available. However, most courses relate to carpentry skills, so there is a concern around the availability of training delivery in relation to some of the categories in the forthcoming occupational licensing regime.

The apprenticeship-style training offered by polytechnics and ITaB generally works well for employers and apprentices who require a more structured approach than that offered by the BCITO model, and have reasonable access to a local polytechnic.

There is, however, uneasiness with some of the full-time training courses available – primarily in relation to the suitability of the students for the industry, and the outcomes achieved.

8.1.5 Changes to the training system

There is not a tremendous appetite for wholesale changes to the training system – either BCITO-facilitated training or other parts of the system. However, the research has identified some clear preferences:

- *Promotion of the industry* (both by BCITO and others) to improve the calibre of entrants
- *Greater clarity around roles* in different parts of the training system, so that informed decisions can be made.

The research has also identified some areas where views are divided:

- *One apprenticeship model v range of models.* Some employers appreciate the current choice in options available, whilst others would like to see a standardised approach. Probably a key point here is that, assuming the status quo is maintained, employers and potential apprentices have access to information so they can make informed choices
- *Increased specialisation in the industry v breadth of skills.* Increasing specialisation suggests that qualifications may need to be of a shorter duration and focus on these specific skill sets. However, many in the industry are reluctant to relinquish the breadth of skills and flexibility associated with the current apprenticeship. Probably a key point here is to understand the core set of skills which constitutes an acceptable breadth of knowledge/competencies.

8.2 Strategy development

Presenting unequivocal recommendations is challenging, given that the research has, in some instances, identified a diverse range of opinions. In addition, it is important to note that many of the issues raised are contextual ones. It will therefore be important for BCITO to differentiate - in the skills strategy and the strategic training plan for the industry - between strategies directly within its control, and those where it will have an influencing role.

Our suggestions for strategy development, many of which may either be a continuation of BCITO's existing strategies, or which BCITO may already be addressing, are outlined below.

BCITO should place an *even greater emphasis* than is currently the case on:

- Qualification development
 - Understanding future skill needs
 - Working with stakeholders so that, if appropriate, qualifications align with the occupational licensing regime
- Quality assurance, to ensure consistency of standards
- Promotion of the industry, to improve the calibre of entrants.

BCITO *may wish to consider*, in relation to its apprenticeship model:

- Increasing the support provided (for example, monitoring of apprentices' progress by BCITO's TAs) to its apprentices and their employers, to improve outcomes ie the proportion of apprenticeships completed
- Increasing the information on off-job training options given to apprentices and their employers, so that the option which best suits their needs can be selected
- Reviewing (the continuation of) its self-paced learning package, in the context of BCITO's role as facilitator of training. If the package is retained, review the content for currency, and ensure that apprentices receive updated versions throughout their apprenticeship.

BCITO, *in collaboration with its stakeholders*, may want to:

- Review the appropriateness of the current range of apprenticeship models available. If the status quo is maintained, provide comprehensive and consistent information to employers and potential apprentices on the options available
- Influence training providers to ensure that full-time training courses in the construction industry better reflect industry's needs.

Appendix A Topic guides

A.1 Employer

Introduction

Thank, explain taping session, confidentiality (key quotes – subject to prior agreement from individual).

Brief presentation (by NZIER) on objectives etc.

Warm up

Introduce person next to them – type of business, experience of/involvement with the training system

Recent and current skill issues

1. Brief presentation from each participant on their experience managing labour and other aspects of the business in a cyclical and project driven business. (Probes – pricing of jobs, turning down jobs, adjusting hours worked, training, migrant labour, recruiting staff from other industries, greater use of equipment, labour hoarding)
2. What **causes** skill gaps/shortages in the industry? What specific **types of skills/positions** are most scarce?

Impending workforce issues

3. What are the **main changes** taking place in the industry that will influence future skill needs?
4. Thinking about the type of **skills/positions in your business, how will these change** over the next five years?
5. What are **the key strategies** that need to be adopted to ensure that industry has the workforce it needs in the future? **Whose role** is it to develop and implement them?

The role and form of training

6. **(HAND OUT DIAGRAM ON ROLES WITHIN THE FORMAL TRAINING SYSTEM)** Does this fit with your understanding of the roles within the training system? What's missing? What should be changed?
7. Thinking about the different parts of the training system, **how flexible** have they been to industry requirements in recent years?

How well placed are they to respond to the **future needs** of industry?

8. What **changes would you make to the training system** in terms of meeting future industry needs? (Probes – training content, delivery methods, length of course, location)
9. Any other comments in relation to these topics?

Thanks and close

A.2 Apprentice)

Introduction

Thank, explain objectives, taping of session, confidentiality

Brief presentation (by NZIER).

Warm up

Introduce person next to them – experience of/involvement with the training system

Entering and working in the industry

1. How did you get into the industry?
2. Write down on a sheet of paper some words describing your views of working in the industry:
 - a. Things you like
 - b. Things you dislike

The role and form of training

3. **(HAND OUT DIAGRAM ON ROLES WITHIN THE FORMAL TRAINING SYSTEM)** Does this fit with your understanding of the roles within the training system? What's missing? What should be changed?
4. Thinking about the different parts of the training system, **how well have they met your needs?**

5. What **changes would you make to the training system** in terms of meeting your needs? (Probes – training content, delivery methods, length of course, location)
6. Any other comments in relation to these topics?

Thank and close

A.3 Other stakeholders

Introduction

Thank, explain objectives, taking notes, confidentiality (key quotes – subject to prior agreement from individual).

Brief presentation (by NZIER).

Warm up

Role of organisation in the industry, experience of/involvement with the training system

Recent and current workforce issues

10. What are the main ways in which firms in the industry manage labour and other aspects of the business in a cyclical and project driven business. (Probes – pricing of jobs, turning down jobs, adjusting hours worked, training, migrant labour, recruiting staff from other industries, greater use of equipment, labour hoarding)
11. What **causes** skill gaps/shortages in the industry? What specific **types of skills/positions** are most scarce?

Impending workforce issues

12. What are the **main changes** taking place in the industry that will influence future skill needs?
13. Thinking about the type of **skills/positions in the industry, how will these change** over the next five years?
14. What are the **key strategies** that need to be adopted to ensure that industry has the workforce it needs in the future? **Whose role** is it to develop and implement them?

The role and form of training

15. **(HAND OUT DIAGRAM ON ROLES WITHIN THE FORMAL TRAINING SYSTEM)** Does this fit with your understanding of the roles within the training system? What's missing? What should be changed?
16. Thinking about the different parts of the training system, **how flexible** have they been to industry requirements in recent years? How well placed are they to respond to the **future needs** of industry?
17. What **changes would you make to the training system** in terms of meeting future industry needs? (Probes – training content, delivery methods, length of course, location)
18. Any other comments in relation to these topics?

Thanks and close