

Workforce
Requirements
Project

PGDR ITO SURVEY REPORT APRIL 2009



 ito
plumbing • gasfitting • drainlaying • roofing

EXECUTIVE SUMMARY

Introduction

In January 2008, the Plumbing, Gasfitting, Drainlaying and Roofing Industry Training Organisation (PGDR ITO) established the Workforce Requirements Project to identify the requirements of their industries in terms of short and long-term skills and training needs.

This report presents and discusses the findings from one phase of this project, which involved the surveying of more than 1,000 employers, employees and apprentices working in the plumbing, gasfitting and drainlaying (PGD) industries. The findings are supported by data included in the **Plumbing Services Industry Profile** report produced by the Industry Training Federation (ITF) in 2009.

It is important when reading this report to appreciate that the surveys were conducted from September to November 2008 – a period in which the full extent of the current economic recession was just beginning to come to light. It is likely that some views and opinions held by survey respondents at that time, particularly in relation to business growth, etc, may have changed during the last four months.

Key Findings From the Surveys

The following section presents a summary of key findings from the surveys. Each is explored in more detail in the main body of the report.

Industry Image

- The most common things that attracted employees and apprentices to the PGD industries were good career prospects in New Zealand and overseas, and recommendations from family or friends. However, the reason for choosing the PGD industries for almost 25% of apprentices and 17% of employees was 'I wasn't sure what else I wanted to do.'
- More than 75% of apprentices were very positive about their industries, stating that they were either 'very likely' or 'extremely likely' to recommend their industries to someone considering entering these fields.

Key Issues

- The most common issue impacting on PGD businesses, identified by 71% of employers, is economic uncertainty. Other common issues include attracting and recruiting suitable tradesmen; and retaining staff after their training is completed.
- 47% of employers reported their businesses were currently lacking craftsmen gasfitters, while 42.7% identified a lack of registered plumbers. Craftsmen plumbers were identified as in short supply by 38% of employers and registered gasfitters by around 37% of employers.
- While most employers surveyed have plans in place for their business during the next 12 months, around 18% appear to have no plans past one year and more than 33% appear to have no plans past the next five years.
- 24% of the apprentices surveyed are planning to travel overseas to further their careers during the next 12 months and 12% of employees and apprentices are planning to achieve a promotion in the same time.
- 24% of employees and apprentices are planning to become self-employed in the next five years.

The average age of employers is **46** years

The average age of apprentices is **26** years

The percentage of female employers is **6%**

The percentage of female apprentices is **0.3%**

There are **3,507** businesses in the PGD industries

88% of businesses are either sole traders or companies employing between one and five people

34% of employers have owned their current business for more than 20 years

Just less than **50%** of PGD industries' workers work more than 45 hours per week

The average income in 2007 was **\$43,130** (\$990 lower than the national average income)

There were **9,738** people working in the PGD industries in 2006

Recruitment and Retention

- The most common recruitment method used by employers is 'word of mouth' or 'asking around the industry' and most employers use a number of different methods to fill each vacancy.
- While 15% of employers advertised online, only 1.4% of employees and no apprentices surveyed had learned about their job through the internet.
- For the majority of employers surveyed, it takes from three to eight weeks to recruit a tradesman. However 73.2% of employers find it difficult or extremely difficult to find the right people for tradesman positions.
- In the year to September 2007, an average of 863 PGD workers started new jobs each quarter and 780 workers left their jobs each quarter. This turnover rate was consistent with the electrical industry and lower than both the carpentry industry and New Zealand workforce.
- Around 38% of employers surveyed had lost tradesmen in the last 12 months. Of the tradesmen who left, 55% are working for someone else in their industry and have remained in New Zealand, and 26% are working overseas but still in the industry.

The Training Environment

- The overwhelming training issue for employers is the costs associated with training – primarily the cost of having an apprentice off the job while they attend block courses.
- Just less than 50% of employers felt the block course learning experience for their apprentices was good to excellent while around 30% rated the experience as average. Apprentices were generally more satisfied with their experience than their employers.
- More than 80% of employers felt the PGDR ITO was important to their businesses overall, and 72.6% were satisfied with how well the PGDR ITO carries out its role in terms of trainees.
- The level of understanding in respect to the distinct roles performed by the PGDR ITO and the Plumbers Gasfitters and Drainlayers Board is of concern with more than 25% of respondents stating they were unsure what the main roles of each organisation were.

INTRODUCTION

In 2007 the Tertiary Education Commission (TEC) introduced a new tertiary education system based on a 'network of provision' model. The model is designed to ensure that the parties involved in tertiary education work together to provide a network of delivery across New Zealand. To achieve this, each party has their particular 'distinctive contribution' defined and is responsible for the delivery of that contribution.

The distinctive contribution for Industry Training Organisations (ITOs) includes:

- **Providing leadership within the industry on matters relating to skills and training needs;**
- **Designing national qualifications and setting and quality assuring national standards;**
- **Arranging for delivery of industry training.**

As part of the performance of its leadership role, the PGDR ITO established a project in January 2008 to identify their industries' requirements in terms of short and long-term skills and training needs.

The **Workforce Requirements Project** will operate for three years and is intended to provide the PGDR ITO with firstly an understanding of the skills and training needs of the plumbing, gasfitting, drainlaying and roofing (PGDR) industries and, secondly, assist them in identifying how these needs may best be met.

The Project has been broken into four stages:

- Stage 1: A review of relevant data available from current databases**
- Stage 2: Research into skills and training needs**
- Stage 3: More in-depth research into key findings from Stage 2**
- Stage 4: Establishment of an ongoing needs monitoring system**

Stage 1 was completed in August 2008 and confirmed that information directly related to skills and training needs was not (at that time) being collected. The identified information gaps formed the content of surveys conducted under Stage 2 of the project.

Stage 2 began in August 2008 and has involved the PGDR ITO surveying its industries' employers, employees² and apprentices. The first step in understanding an industry's requirements, in terms of training and skills needs, is to identify the distinctive characteristics of that industry. The surveys therefore focussed mainly on worker demographics, business characteristics and the training environment.

This report presents and discusses the findings from the surveying of more than 1,000 employers, employees and apprentices currently working in the plumbing, gasfitting and drainlaying (PGD) industries³, along with data from the Plumbing Services Industry Profile report produced by the ITF in 2009.

The Industry Profile report brings together data from the 2006 Census, Statistics New Zealand's Business Demography Dataset, and the Linked Employer-Employee Dataset.

**More than
1,000
employers,
employees &
apprentices
were surveyed**

² For the purposes of this report 'employees' means employees who work as tradesmen or Limited Licence (Non Apprentices) and who are not apprentices.

³ This report covers the PGD industries only. A separate report on Stage 2's survey findings for the Roofing industry will follow.

Guide to the Report

The report is broken into the following sections:

- **Worker Characteristics**
- **Business Characteristics**
- **The Training Environment**
- **Industry Image**
- **Key Issues**
- **Questions for Further Exploration**
- **Explanation of Data Sources**

The **Worker and Business Characteristics** sections focus primarily on quantitative (or numbers based) data and include information from the ITF Industry Profile report and the PGDR ITO Survey. The information from the Industry Profile report presents a high-level picture of the PGD industries, while the PGDR ITO Survey looks at a number of specific characteristics at a more detailed level.

The **Training Environment, Industry Image, and Key Issues** sections present findings specifically from the PGDR ITO Survey. These findings are more qualitative in nature, drawing on respondent's personal circumstances, experience and opinions.

The **Questions for Further Exploration** section lists a number of questions arising from particular key findings within the report. These questions (and others) will be explored in more detail during Stage 3 of the project via small focus groups and one-to-one interviews across the country.

The final section **Explanation of Data Sources** provides an explanation of the Statistics New Zealand data and the methodology supporting the PGDR ITO survey.

Please Note:

It is important when reading this report to appreciate that the surveys were conducted from September to November 2008 – a period in which the full extent of the current economic recession was just beginning to come to light. It is likely therefore, that some views and opinions held by survey respondents at that time, particularly in relation to business growth, etc, may have changed during the last four months.

WORKER CHARACTERISTICS

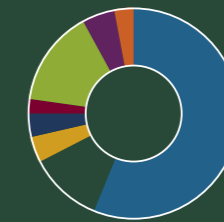
This section looks at the characteristics of workers in the PGD industries, including: occupations, age, gender, ethnicity, regional distribution, time spent in industry, hours worked, average income, qualifications, language. It includes data sourced from the 2006 Census and the 2008 PGDR ITO Survey.

Note: As the PGDR ITO Survey was conducted with employers, employees and apprentices only, the results exclude the more than 1,500 workers involved in the administration, office management, retail sales and services segments of each industry. For this reason, areas of the demographic data reported by the 2006 Census and the PGDR ITO Survey may vary.

Occupations

At the time of the 2006 Census, 9,738 people were working in the PGD industries⁴. The most common occupations included:

■ Plumber*	4,788 (49.2%)
□ Drainlayer*	960 (9.9%)
■ Gasfitter*	339 (3.5%)
■ Labourer/Assistant	306 (3.1%)
■ Roof Tiler/Plumber	189 (1.9%)
■ Admin/Office Managers	1,263 (13.0%)
■ Managers/Directors	426 (4.4%)
■ Retail Sales Managers/Reps	252 (2.6%)



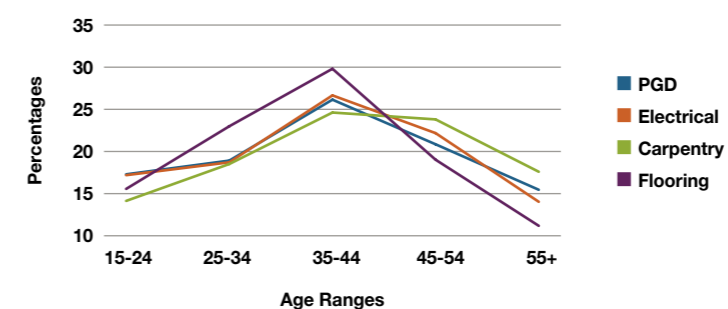
*It is important to note that the Census form requires just one occupation to be entered by each person. As many tradesmen in the PGD industries cover more than one occupation, it is highly likely that many of those identifying themselves as 'plumbers' are also gasfitters and /or drainlayers.

Age

The 2006 Census reported that the average age of PGD workers was 39 years, with 73 people over the age of 70 years (four of those over 80 years).

In order to provide some context for these results in terms of the wider construction industry, the following chart shows the age distribution (as a percentage) across three other aligned industries: electrical, carpentry, flooring.

Age Distribution across Aligned Industries



⁴This represents 0.49% of all people working in New Zealand.

“My father, grandfather and great-grandfather were all plumbers”

The age distribution for the PGD and electrical industries is almost identical, differing slightly from the carpentry industry with higher percentages aged between 15 and 44 years and lower percentages aged 45 years and over.

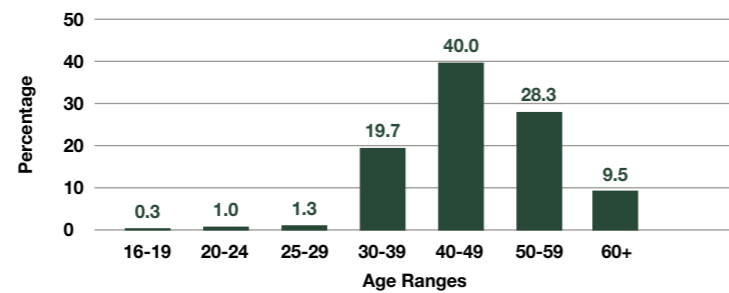
While the flooring industry is aligned in terms of trend, it is at the extreme of the age ranges from 25 years on, with 30% of their workforce aged between 35 and 44 years, dropping sharply to slightly more than 10% aged 55 years or older.

Looking at the results of the PGDR ITO Survey (which excludes office and retail workers), the average age for employees, apprentices and their employers was around 35 years. While an industry with an average age of 35 may not be considered as having an ageing workforce, it is important to look more closely at the make-up of this statistic – that is, the average age for:

- **Employers is around 46 years;**
- **Employees is around 36 years;**
- **Apprentices is around 26 years.**

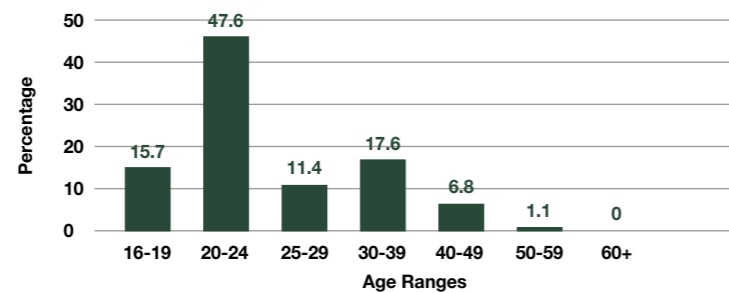
The chart below shows that 40% of employers are aged 40 to 49 years and the same percentage again are 50 years or older.

PGD Employers - Age Distribution



Predictably the age distribution for apprentices is converse to that of employers, although it is not as extreme as might be expected, given the typical stereotype of apprentices as young people commencing their working lives. Rather, the age distribution indicates a wider spread of training occurring across the industries.

PGD Apprentices - Age Distribution



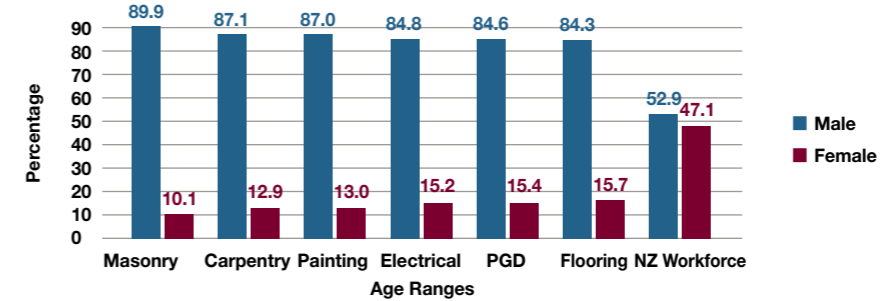
The highest percentage of apprentices completing the survey (47.6%) were aged between 20 and 24 years, while a quarter were aged 30 or older. Interestingly, there were more apprentices in the 30 to 39 age range than in the 16 to 19 range.

Gender

The 2006 Census reported that 84.6% of workers in the PGD industries were male and 15.4% were female. While this ratio is inconsistent with the New Zealand workforce (52.9% male and 47.1% female), it is closer to other aligned industries such as carpentry, electrical, flooring, painting and decorating, and masonry.

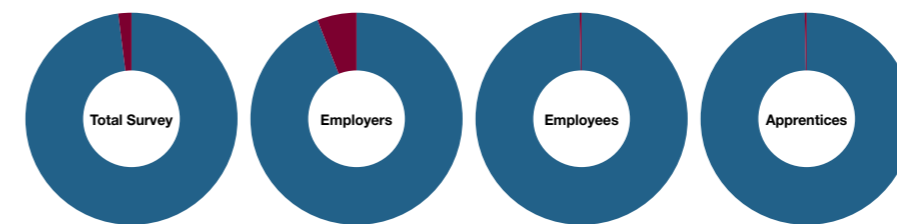
Ratios in these industries range from 89.9% male and 10.1% female for masonry to 84.3% and 15.7% for flooring.

Gender Representation Across Aligned Industries



Looking now at the results of the PGDR ITO Survey which, as noted earlier, does not include the approximate 15% of workers employed in administration and retail sales and services – the ratio for just employers, employees and apprentices is 98% male and 2% female. Of concern is the fact that the 2% female statistic is inflated by the employer's results (6% female), with both employees and apprentices at only 0.3%.

	Total Survey	Employers	Employees	Apprentices
Male	98%	94%	99.7%	99.7%
Female	2%	6%	0.3%	0.3%



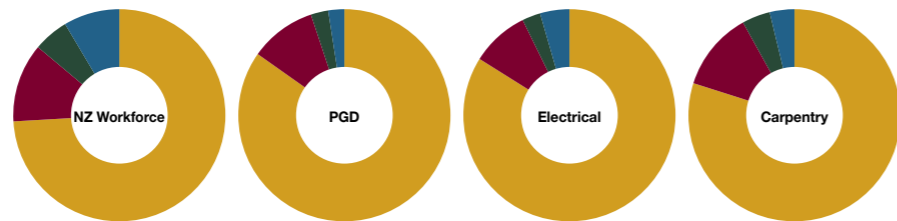
It is perhaps timely for the industries to consider whether they want to improve the participation of women in the PGD industries. If so, they will need to consider ways to make their industries more attractive for women at the apprentice and employee levels.

“My mother was the office lady at the firm and the boss told her to offer me an apprenticeship”

Ethnicity

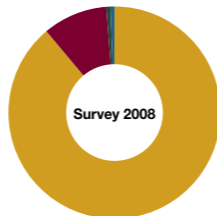
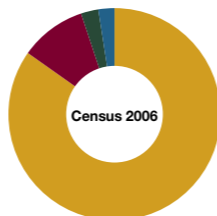
While the ethnicity of PGD workers in the 2006 Census was generally in line with the New Zealand workforce, the PGD industries had a higher percentage of workers identifying themselves as NZ European, and therefore lower percentages across all of the other ethnicities. While the PGD industries' percentages were closer to other construction-based industries, carpentry was better represented in the Maori and Pacific Peoples ethnicities - both officially recognised by Government as under-represented groups.

	NZ Workforce	PGD	Electrical	Carpentry
NZ European	70.3%	79.7%	75.1%	76.3%
Maori	11.4%	9.5%	7.9%	11.5%
Pacific Peoples	5.1%	2.5%	2.5%	4.1%
Asian	8.1%	2.3%	4.0%	3.6%



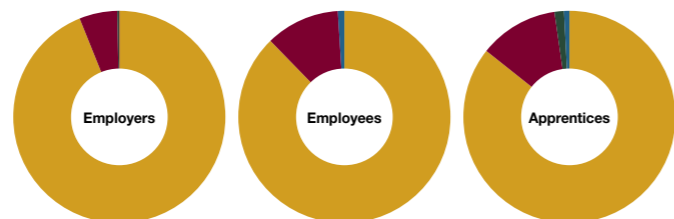
The results of the PGDR ITO Survey varied from the Census in that, while the percentage of workers identifying themselves as Maori was consistent, a higher percentage of survey respondents identified themselves as NZ European and a quarter fewer identified as either Pacific Peoples or Asian.

	Census 2006	Survey 2008
NZ European	79.7%	84.9%
Maori	9.5%	9.4%
Pacific Peoples	2.5%	0.6%
Asian	2.3%	0.6%



When the survey results are broken down into employers, employees and apprentices – employers have by far the highest NZ European ethnicity percentage and the lowest of each of the other ethnicities. However, the higher percentage of Maori and Pacific People representation across current apprentices could realise a long-term increase in participation across the industries for these under-represented groups.

	Employers	Employees	Apprentices
European	92.4%	80.0%	83.2%
Maori	5.7%	10.3%	11.7%
Pacific Peoples	0.3%	0.0%	1.4%
Asian	0.0%	0.9%	0.8%



Regional Distribution

The regional distribution of PGD workers in the 2006 Census showed the largest numbers were concentrated in the regions with high population density: Auckland (29.9%), Wellington (12.7%), Canterbury (11.1%), Waikato (10.5%).

Northland	3.9%
Auckland	29.9%
Bay of Plenty	6.1%
Waikato	10.5%
Taranaki	2.4%
East Coast	4.7%
Central North Island	6.0%
Wellington	12.7%
Nelson / Marlborough	3.9%
West Coast	0.6%
Canterbury	11.1%
Otago	6.2%
Southland	2.0%

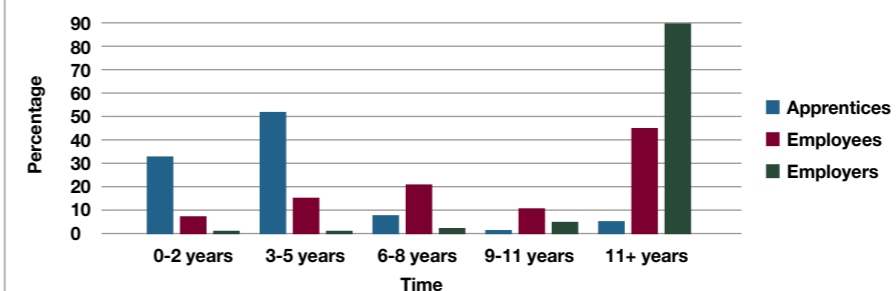


Time spent in the industry

The PGDR ITO Survey results for the average time employers, employees and apprentices have spent in their industries were reasonably predictable. The majority of apprentices have worked in their industries for less than six years, employees are reasonably well spread across the spectrum and the majority of employers (89%) have worked in their industries for more than 11 years.

Of note is the fact that more than 75% of those employers in the 11+ years range have worked in their industries for more than 20 years.

Time Spent in Industry



I advertised [for a job] in the paper and moved to the district

Looking at apprentices, it is interesting to note that 69% of the apprentices aged 30 years or older have only been in their industries a relatively short period of time - less than six years. Half of these have worked in their industries less than three years. This would indicate that a reasonable number (around 17%) of apprentices have chosen the PGD industries as part of a career change decision.

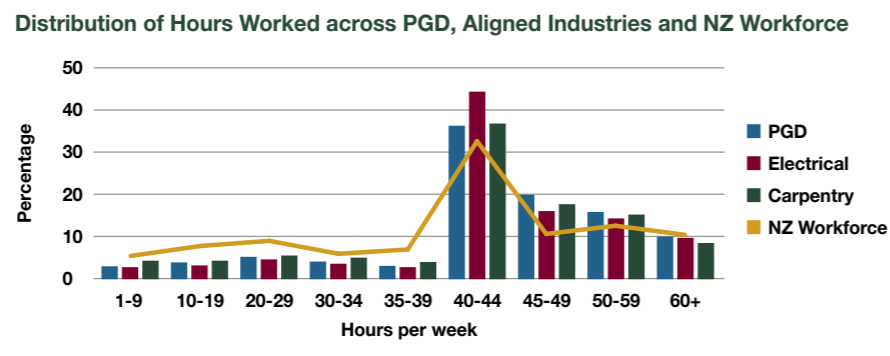
Just less than 15% of the apprentices have worked in their industries for more than five years. It could be assumed that these people have either worked as Limited Certificate (Non Apprentice) holders in the past and are now choosing to become qualified, or they are already registered in at least one of the plumbing, gasfitting or drainlaying industries and have chosen to gain a qualification in another.

Both scenarios are likely, given the fact that 17% of the apprentices surveyed hold Limited Certificates (Non Apprentices), and a relatively small number (8%) are either registered or craftsmen in at least one other of the plumbing, gasfitting and drainlaying industries.

Hours Worked Per Week

As at 2006, just less than half (45%) of PGD workers worked more than 45 hours per week. Those working around 40 hours per week totalled 38.8% and the remaining 16.2% worked less than 35 hours per week.

The following graph provides some context for these percentages – setting out the distribution of hours worked across the PGD industries, the electrical and carpentry industries, and the New Zealand workforce as a whole.



Average Income

In 2007⁵, the average income for workers in the PGD industries was \$43,130, which was \$990 lower than the national average earnings of \$44,120. This was an improvement from 2003, when the gap between the industries and national earnings was \$1,400 – the average PGD worker income being \$34,180 and the national average \$35,580.

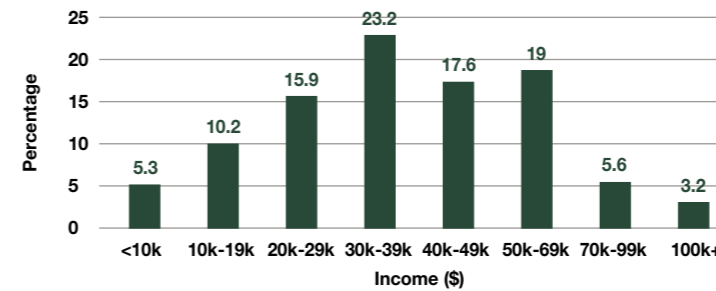
When looking at these statistics, it is important to note that:

- **Statistics New Zealand includes all workers in the calculation of average income - including apprentices;**
- **In 2007, new staff earned on average 15.3% less than existing staff, while in 2003 they earned on average 14.2% less than existing staff.**

The table opposite illustrates the distribution of income across the PGD industries in 2007.

⁵Sourced from the September 2007 Linked Employer-Employee Dataset

Income Distribution across PGD Industries

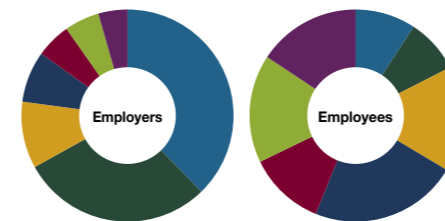


Qualifications

The PGDR ITO Survey found that 88.8% of employers hold at least one New Zealand qualification with the **Advanced Trade Certificate in Plumbing and Gasfitting** and the **Trade Certificate in Drainlaying** being the most common. For employees, the percentage is 72.6% with the **National Certificate in Plumbing** and the **Trade Certificate in Plumbing and Gasfitting** being the most common.

The table below sets out the percentage of employers and employees holding each New Zealand qualification. It also notes the percentage that do not hold a PGD industry related New Zealand qualification – that is, they hold a qualification related to another industry (eg National Certificate in Mechanical Engineering), an international qualification or no qualification:

	Employers	Employees
■ Advanced Trade Certificate in Plumbing & Gasfitting	64.6%	14.5%
■ Trade Certificate in Drainlaying	50.0%	13.0%
■ Trade Certificate in Plumbing and Gasfitting	17.4%	25.3%
■ National Certificate in Plumbing	13.4%	35.5%
■ National Certificate in Drainlaying	9.1%	18.4%
■ None or Other	9.1%	25.9%
■ National Certificate in Gasfitting	7.6%	24.7%



In addition to the Certificates listed above, 11.2% of employers and 1.2% of employees also hold **Craftsmen Plumber** and/or **Craftsmen Plumber/Gasfitter** qualifications. While these qualifications are not recognised on the National Qualifications Framework, they are recognised as legitimate qualifications by the plumbing and gasfitting industries.

Around 17% of apprentices have chosen the PGD industries as part of a career change decision

BUSINESS CHARACTERISTICS

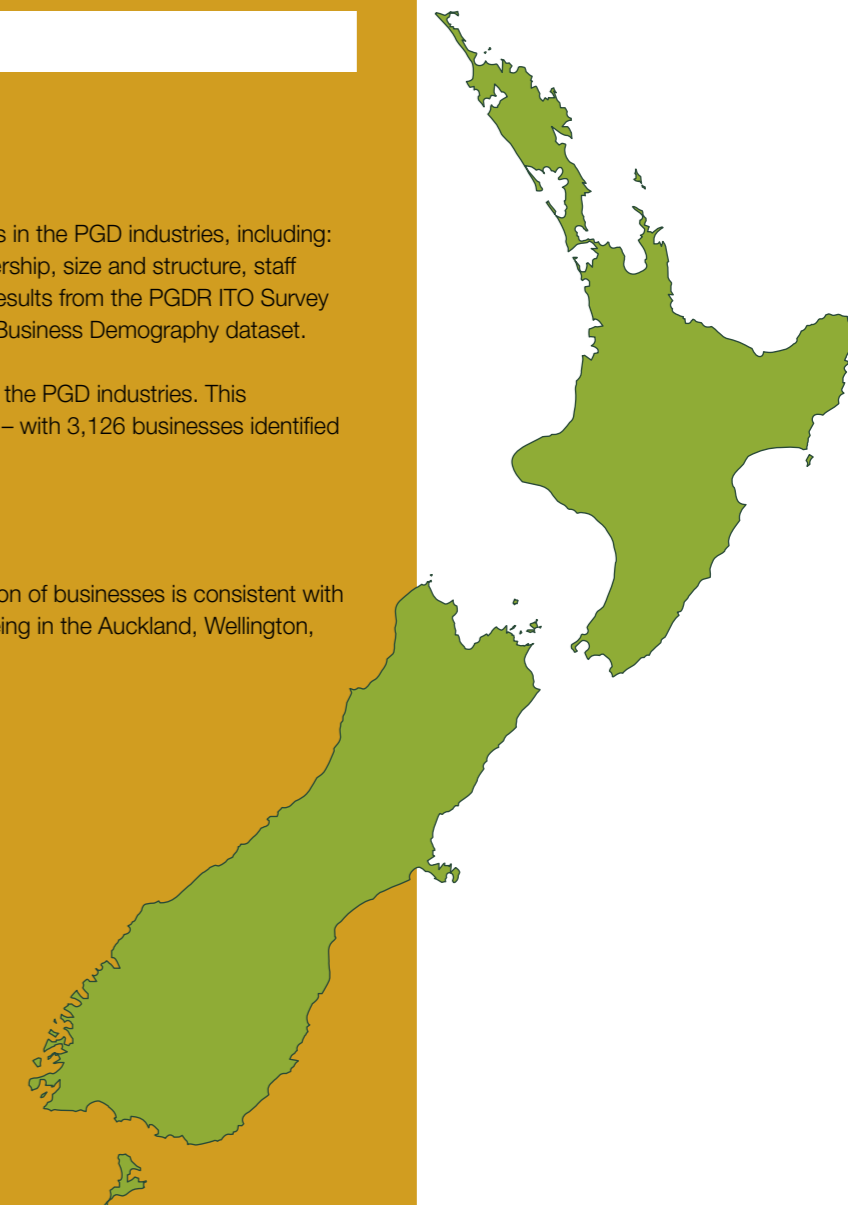
This section looks at the characteristics of businesses in the PGD industries, including: regional distribution, domestic/commercial mix, ownership, size and structure, staff turnover and retention, and recruitment. It includes results from the PGDR ITO Survey and data sourced from the Statistics New Zealand's Business Demography dataset.

As at February 2008, there were 3,507 businesses in the PGD industries. This represents an increase of 12.2% in the last five years – with 3,126 businesses identified in 2003.

Regional Distribution

According to the 2006 Census, the regional distribution of businesses is consistent with that of PGD workers with the highest percentages being in the Auckland, Wellington, Canterbury and Waikato regions.

Northland	4.3%
Auckland	33.0%
Bay of Plenty	6.7%
Waikato	9.4%
Taranaki	2.2%
Hawke's Bay - Gisb	4.3%
Manawatu - Wang	5.4%
Wellington	13.3%
Nelson / Marlborough	3.5%
West Coast	0.5%
Canterbury	10.4%
Otago	5.4%
Southland	1.6%

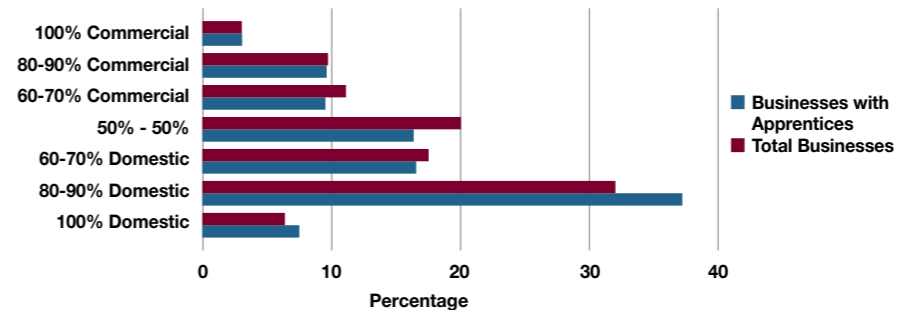


Domestic/Commercial Mix

Just more than 60% of the businesses represented by survey respondents were either 100% or mainly domestic, while 16% were an equal mix of domestic and commercial. The remaining 22% of businesses were either 100% or mainly commercial.

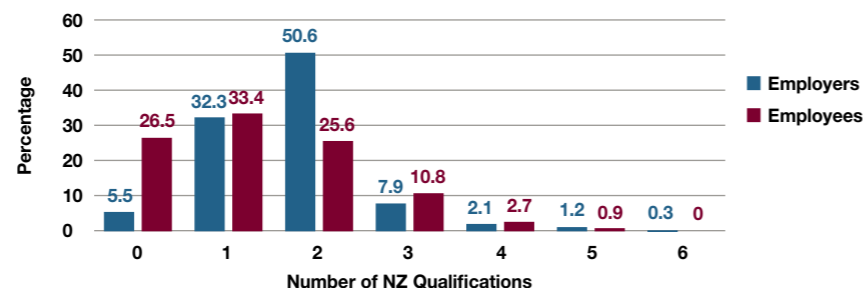
Just more than half of the businesses employing apprentices were either 100% or mainly domestic. Around one quarter were either 100% or mainly commercial and the remaining 20% were an equal mix of both.

Domestic and Commercial Mix of Businesses with Apprentices and Total Businesses



The following graph looks at the number of qualifications held by each employer and employee (including craftsmen), and highlights the differences between them.

Number of NZ Qualifications (incl. Craftsmen) Held by Individual Employers and Employees



Language

The 2006 Census reported that 1,497 (15.4%) workers in the PGD industries at that time had been born outside of New Zealand. More than 1,000 of these were born in countries where English is a first language, eg: Great Britain, Ireland, Australia, South Africa, North America.

However, around 180 workers were born in the Pacific region and the remainder were born in countries spanning the European, South American, African and Asian continents. It is likely therefore, that English may have been a second or third language for around 450 (4.6%) PGD workers on their arrival in New Zealand.

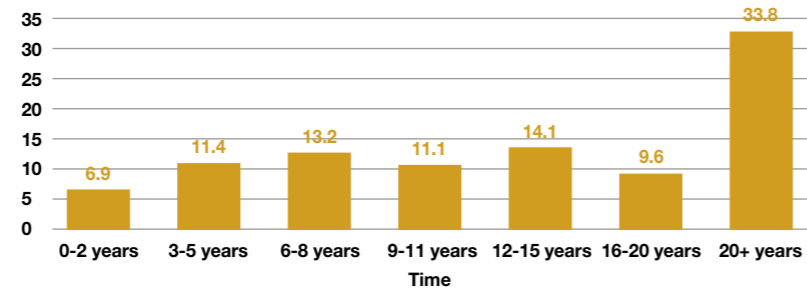
It is important to note that only 19.5% of those born outside of New Zealand at the time of the 2006 Census were recent arrivals (less than 2 years) – the vast majority (70%) had lived in New Zealand for more than 5 years, with more than 50% having lived here for more than 10 years.

1497 of the PGD workers in 2006, had been born outside of New Zealand

Business Ownership

Around 34% of the employers surveyed have owned their current business for more than 20 years. The period of ownership for the remaining 66% of employers is distributed relatively consistently across the remaining years.

Length of Time Current Business Owned



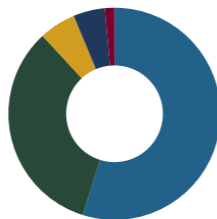
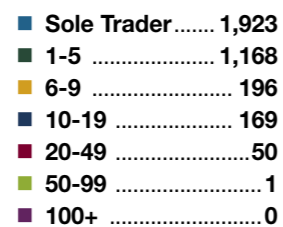
For those employers who have owned their business for more than 20 years, half are aged between 50 and 59 years and just less than a quarter are aged 60 years or older.

Business Size and Structure

The 2006 Census reported that, consistent with most New Zealand industries, the majority of the PGD industries' businesses were small with 88% either sole traders or employing from one to five employees. Of the remaining 12% of businesses, around half employed from six to nine workers and half employed from 10 to 49 workers.

Only one business reported employing more than 50 workers and there were no businesses employing more than 100 workers.

Business size by number of Employees



For the 1,584 businesses with employees, small-sized businesses (one to nine employees) accounted for 51.6% while medium-sized businesses employed 47.6% and large firms employed less than 1%.

The 2006 Census results on businesses are consistent with the PGDR ITO Survey results. In addition to the information opposite, the survey also found that 91% of businesses operated from one site, 7.7% operated between two and five branches and 0.6% of businesses operated more than 16 branches.

Looking at the type of staff employed in the businesses, 81.6% of the employers surveyed currently employ apprentices. On average the ratio of apprentices to staff is 1:3, that is – for every three staff, one is an apprentice.

Registered tradesmen and/or craftsmen are employed by 93.4% of the businesses at an average ratio of 1:2 and 43.1% employ general office/administration staff and/or managerial staff at an average ratio of 1:5.

If you were to apply these ratios to a fictional business which employs 15 staff, you would have approximately five apprentices, seven registered/craftsmen employees, three office/ administration staff.

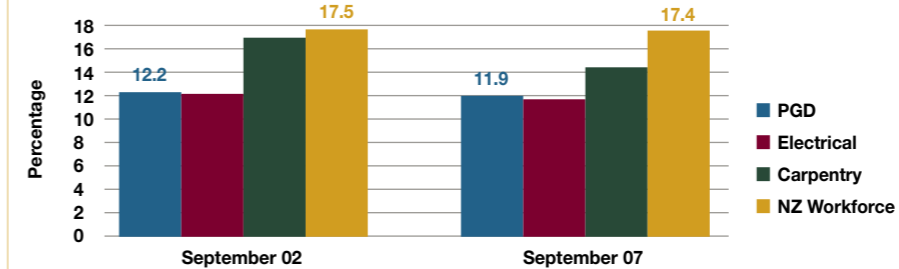


Staff Turnover and Retention

In the year to September 2007, an average of 863 PGD workers started new jobs in their industries each quarter, while 780 people left or finished their jobs each quarter. This movement equated to a quarterly turnover rate of 11.9%, which was marginally less than the rate at the same time in 2002 (12.2% per quarter).

To determine whether this rate was reasonable and consistent with other industries at that time, the following graph compares the PGD industries with the electrical and carpentry industries and the NZ workforce as a whole.

Comparison of Quarterly Turnover Rates for Workers

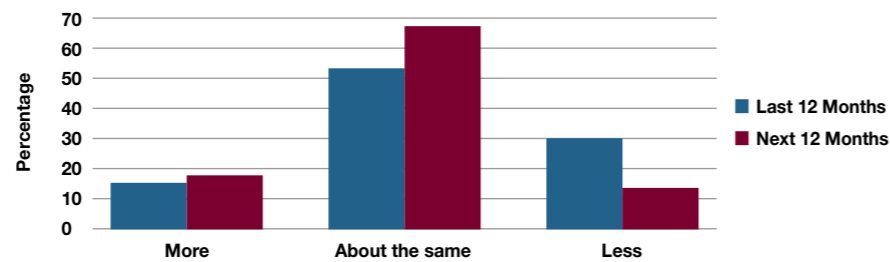


“Too busy and don't have time to take on trainees”

In terms of net increase or decrease in staffing levels across the PGD industries, results from the PGDR ITO Survey indicate much more than half (69.5%) of employers are employing either the same or more tradesmen now as they were 12 months ago. The remaining 30.5% were employing fewer.

Despite the current economic climate, 68% were expecting to be employing about the same number of tradesmen in 12 months time with 18% expecting to be employing more. The remainder (14%) expected to be employing fewer.

Past and Future Changes to Tradesmen Volumes per Business



There were a number of regional variances in relation to activity during the last 12 months. The most marked contrasts with the national trend were:

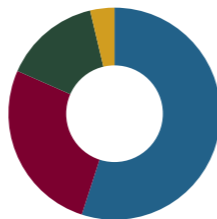
- **Auckland region** – employers reported a much lower increase in staff than the national trend;
- **Nelson/Marlborough region** – employers reported a much higher increase in staff than the national trend.

Regional variation of note in relation to the next 12 month predictions included:

- **Otago and Southland regions** – employers indicated there would be no reductions in staff with around 80% retaining current numbers and 20% planning growth;
- **Nelson/Marlborough regions** – employers plan to seriously limit growth and retain current numbers.

A total of 132 (37.7%) employers reported having lost tradesmen during the last 12 months. Of the 218 tradesmen that had left their employer:

- **55% were working for someone else in their industry and had remained in New Zealand;**
- **26.6% were working overseas, but still in their industry;**
- **14.7% had left their industry altogether;**
- **3.7% had retired.**

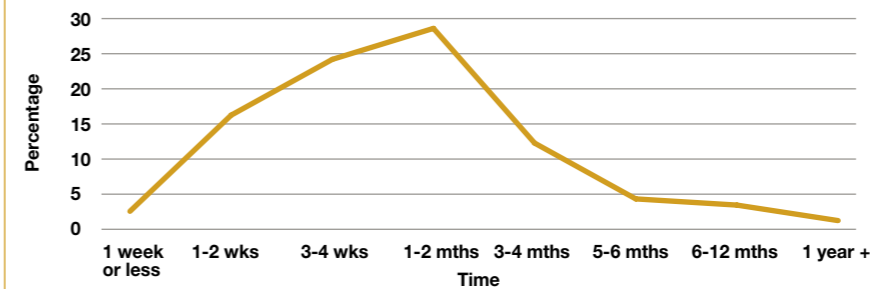


While the majority of affected businesses had lost one or two tradesmen to a combination of reasons, of note are the two employers who had lost four and five tradesmen respectively to the overseas labour market.

Recruitment

For the majority of employers surveyed, it takes between three and eight weeks to recruit a tradesman, from the time they first begin recruiting through to the new person accepting the job.

Average Time Taken to Recruit a Tradesman Position

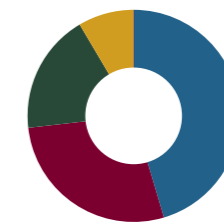


There are some regional variances of note within these statistics, for example:

- **Taranaki region**– The majority (89%) of recruitments take between less than one week and eight weeks. The remainder rarely take longer than four months;
- **Central North Island region**– The majority (73%) of recruitments take between one and eight weeks while 13.3% take more than one year;
- **Northland region** – The majority (87.5%) of recruitments take between two and 16 weeks. The remainder often take more than one year;
- **Southland region** – 57% of recruitments take between three and four weeks, with overall recruitments taking no more than 12 months.

In terms of the quality of new staff, employers indicated difficulty in finding the right people for tradesman positions. The majority (73.2%) find it either 'difficult' or 'extremely difficult'.

■ Extremely difficult	45.4%
■ Difficult	27.8%
■ Moderate	18.3%
■ Easy	8.5%
■ Extremely easy	0.0%

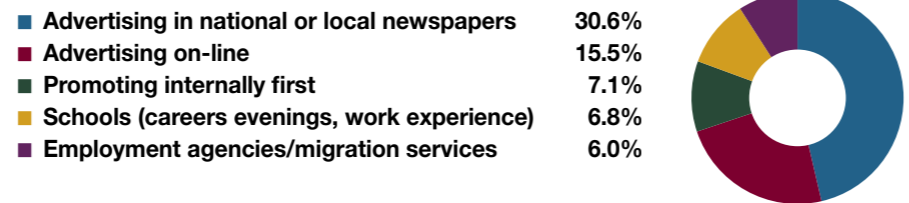


Some identified this as one of the main issues affecting their business, writing:

- “Lack of quality people”
- “Employment contracts act – employers get stuck with bad employees”
- “Untrustworthy employees in the past”

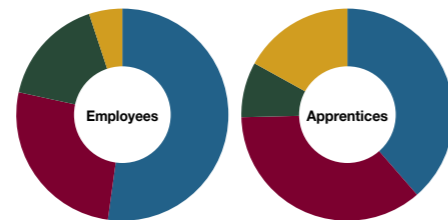
The majority of employers find it either difficult or extremely difficult to find the right people for tradesmen positions

The most common recruitment method used by employers was 'word of mouth' or 'asking around the industry, including their existing employees' (85.9%). However, they do not limit themselves to just this one method. Other methods used include:



When employees and apprentices were asked how they had first found out about the job they are currently in, the most common responses were:

	Employees	Apprentices
■ Through family or friends	44.2%	29.8%
■ From someone else working in the company	22.2%	27.8%
■ Through the newspaper or radio	14.0%	6.5%
■ Already working in the company	4.3%	13.1%



While there is a general match between the ways in which employees and apprentices hear about jobs and the recruiting methods used by employers, ie. 'word of mouth' or 'asking around the industry', it is interesting to note that while 15% of employers advertise online, only 1.4% of employees and no apprentices had learned about their job through the internet. Similarly, while around 30% of employers use newspapers and radio, only 14% of employees and 6.5% of apprentices learned about their jobs in these ways.

A small number of employers expressed their frustration with the success rate from advertising in newspapers and radio:

**"Bit of a waste of time to advertise as hard to get what you are looking for"
"If you advertise you get rubbish"**

A number of employers (7.4%) said that prospective employees came to them. One employer wrote: **"They walk in the door"**, another said **"People ring daily"**. This result was consistent with results from both employees and apprentices, with many explaining how they had proactively sought employment:

- "I just rang up and asked for a job"**
- "Knocked on the door"**
- "Saw business in town, went in and asked for a job"**
- "Went around with my CV"**
- "Contacted a whole heap of plumbers and got the job that way"**
- "I advertised in the newspaper and the boss responded"**

While 20 apprentices had heard about apprenticeships through a Modern Apprenticeship Co-ordinator, none had heard about their job through a Co-ordinator.

THE TRAINING ENVIRONMENT

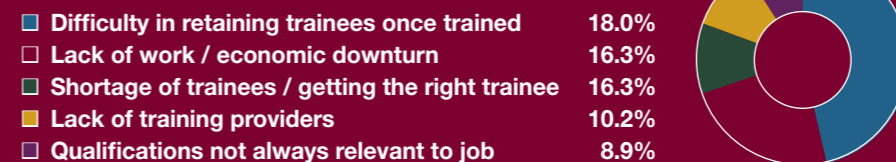
This section presents the findings from the PGDR ITO Survey in relation to the training environment within the PGD industries. It looks at: main training issues; satisfaction with the current training model; qualification relevancy; the industries' relationship with the PGDR ITO.

Main Training Issues

When employers were asked what the main training issues were affecting their business, the overwhelming response was 'costs associated with training'. That said, most comments related to the costs associated with having an employee away from work for an extended period of time, rather than the direct cost of purchasing training.

One employer commented: **"The amount of time spent at tech – it is hard to cover work and the costs"**, while another wrote **"Need subsidies and incentives for taking on apprentices. With smaller businesses, there is a large cost to being a worker down when your apprentice is away."**

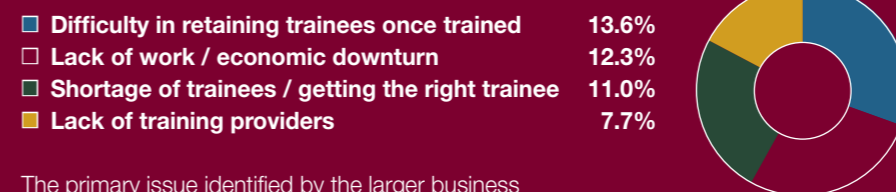
Of the remaining responses, the most common were:



In addition to these responses, 19 employers commented specifically about the difficulties they experience in trying to motivate their trainees and keep them motivated. One employer wrote: **"Frustration at not passing the exams and getting disheartened."**

17 employers identified specific elements of the current system as the main training issues for their business.

The size of a business did have some bearing on the types of issues identified by employers. Issues identified almost exclusively by owners operating from one branch (small-sized businesses) included:



The primary issue identified by the larger business owners was the costs associated with training.

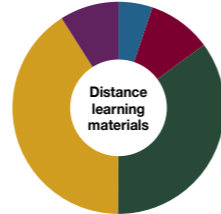
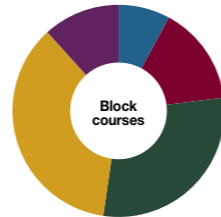
The overwhelming training issue affecting employers was the 'costs associated with training'

Satisfaction with Current Training Model

Around 80% of employers surveyed have apprentices currently attending block courses as part of their training, while 85% have apprentices using distance learning materials. The employers were asked how they would rate the block course learning experience for their apprentices and the distance learning materials.

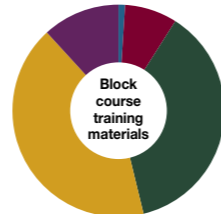
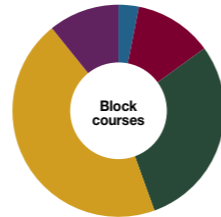
The results could be considered conservative with most scores sitting around the mid to upper levels of the scale.

	Block courses	Distance learning materials
■ 1 (Poor)	7.9%	5.2%
■ 2	15.1%	9.7%
■ 3	29.3%	35.2%
■ 4	36%	40.9%
■ 5 (Excellent)	11.7%	9.0%



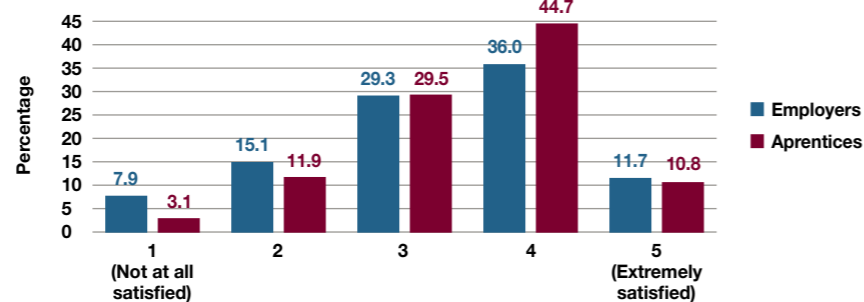
Apprentices who had attended a block course in the last 12 months were also asked to rate how satisfied they were with the course. In addition, they were asked to rate the usefulness of the block course training material.

	Block courses	Block course training materials
■ 1 (Not at all satisfied)	3.1%	1.0%
■ 2	11.9%	8.0%
■ 3	29.5%	37.2%
■ 4	44.7%	42.0%
■ 5 (Extremely satisfied)	10.8%	11.8%



From the chart below, it is clear that apprentices were more satisfied with their block course training experience than their employers.

Satisfaction Rating for Block Courses



Those that gave a rating of either 1 or 2 were asked to provide supporting comments. Excerpts from these comments have been collated and included below.

EMPLOYERS

“Dumb to send people all the way to Wellington. Also three weeks is too long.”

“They tell us it’s a waste of time and they learn very little. All came back complaining.”

“Over booked, not enough time to spend with individuals.”

“Poor tutoring and lack of proper working tools.”

“Curriculum needs updating it is too old fashioned. Need to concentrate on modern techniques.”

“More day release work – [block courses are] too time consuming and expensive.”

“Night classes are a better option.”

APPRENTICES

“Block course was too long. Sat around for one week doing nothing”

“Was a lot of useless stuff to learn.”

“Certain tutors did not teach well.”

“More hand tools would have made it easier”

“Did not learn enough about modern systems, did learn about ‘old techniques’.”

“Written work was pointless, I did not learn anything by writing it out.”

“Was not relevant to exam.”

Employers also provided the following comments related to the distance learning material and the relationship between the training and the registration examinations:

DISTANCE LEARNING MATERIAL

“Doing it for ages and nobody checks up on him. No communication.”

“Irrelevant material. Needs to be a little more up to date. Does challenge the apprentice, but is poorly backed by block courses.”

“Takes too long to get assignments back. Too long to get block course booked. Struggle to get next lot of assignments sent through.”

REGISTRATION EXAMINATIONS

“Training is at too lower standard, exam seems to be much harder than the training.”

“A lot of the things that were in the exam were not covered.”

“Exam has no bearing or relevance on training and industry.”

Some of the work was not relevant to my workplace

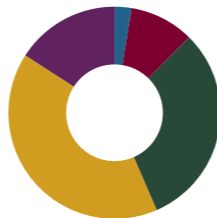
Learn more from working on the job

Relevancy of Qualifications

Employers were asked to rate how well they thought the content of each of the current qualifications met the needs of their business. While 56% indicated the qualifications were meeting their needs well by giving a rating of 4 or 5, 31% of employers gave an average score, and the remaining 12% felt the qualifications were not meeting the needs of their business by scoring either 1 or 2.

Employers

■ 1 (Not at all well)	2.6%
■ 2	9.8%
■ 3	31.1%
■ 4	40.6%
■ 5 (Extremely well)	15.9%



The reasons given by those providing ratings of 1 or 2 include:

“Irrelevant material – too old school.”

“Pre trade training is not relevant to most jobs.”

“Training comes from work and extra courses. More on site learning needed.”

“Not relevant to the scope of work that rural plumbers encounter.”

“Not relevant to some parts of trade.”

Relationship with the PGDR ITO

Employers were asked to rate how important they saw the PGDR ITO being to their business overall. The results show that more than 80% of employers rate the ITO as between moderately to extremely important to their business.

Employers

■ 1 (Not at all important)	9.4%
■ 2	7.8%
■ 3	28.2%
■ 4	30.2%
■ 5 (Extremely important)	24.4%



Employers were then asked to rate how well they believe the PGDR ITO carries out its role in terms of trainees. The results indicate employers are reasonably satisfied with 72.6% rating the ITO at 3 or 4. While 8.1% believe the ITO is carrying out its role in terms of trainees extremely well, around 5% believe the PGDR ITO is not carrying out its role at all well.

Employers

■ 1 (Not at all well)	5.6%
■ 2	13.7%
■ 3	35.4%
■ 4	37.2%
■ 5 (Extremely well)	8.1%



The Roles of the PGDR ITO and the Plumbers, Gasfitters and Drainlayers Board (the Registration Board)

The level of understanding across the industries in respect to the distinct roles performed by the PGDR ITO and the Registration Board is of concern.

Survey respondents were provided with a list of possible roles and asked to effectively ‘match’ the roles to the appropriate organisation. The results from all groups confirmed a clear confusion within the industries, with more than a quarter of the respondents stating they were unsure what the main roles of the PGDR ITO and the Registration Board were.

Two roles in particular clearly reflect a level of confusion:

	Responses for PGDR ITO	Responses for the Board	Who's role is it?
Writing and reviewing qualifications	159	179	PGDR ITO
Setting the registration examination	143	229	Board

In terms of the PGDR ITO, while 10% of employers stated they were unsure of the PGDR ITO's roles, the remaining 90% demonstrated a better understanding than their employees and apprentices – particularly in relation to the writing and reviewing of qualifications (22%), funding training (32%) and arranging technical workshops (35%).

While more than 70% of employers identified the delivering of off-job training courses as a main role for the PGDR ITO (it is in fact a main role of training providers), this may be the result of potentially confusing terminology used in the survey, rather than a lack of understanding by employers.

In terms of the roles of the Registration Board, again 10% of employers stated they were unsure of the Board's roles, while the remainder demonstrated a better understanding than their employees and apprentices – particularly in relation to the hearing of complaints about professional misconduct (43%), promoting the protection of public health and safety (34%) and licensing plumbers, gasfitters and drainlayers (49%).

That said, 34% of employers thought one of the roles of the Registration Board was writing and reviewing qualifications.

There is clearly confusion within the industries about the roles of the PGDR ITO and the Registration Board

INDUSTRY IMAGE

This section presents the findings from particular areas of the PGDR ITO Survey that provide a perspective on how the industries may be viewed by the general public and prospective workers. Employees and apprentices completing the survey were asked what had attracted them to their industries, and apprentices were asked how they had heard about their apprenticeships and whether they would recommend their industries to others.

Initial Attraction

When the employees and apprentices were asked what the main thing was that attracted them to their industries, they gave a number of responses. The most common were:

Good career prospects in New Zealand	336 respondents
Good career prospects overseas	208 respondents
Family members/friends recommended it or work in sector	233 respondents
I wasn't sure what else to do	159 respondents

Around 50% of apprentices indicated good career prospects in New Zealand as one of the main things that attracted them to the industries, and 38% indicated good prospects overseas. In comparison, only 37% of employees indicated prospects in New Zealand and less than 16% indicated prospects overseas as one of the main attractions.

An equal number of apprentices and employees (around 30%) indicated a family, friend or industry connection as one of the main attractions. Comments associated with these connections included **“My father is a plumber and gasfitter”** and **“My father owns the business and he offered me a job”**.

However, almost a quarter of the apprentices indicated their reason for going into the PGD industries was ‘I wasn't sure what else I wanted to do’. The percentage for employees was less at 17%, nonetheless should still be of concern to the industries. Comments were mainly from employees and included:

“I needed the money”
“My father told me to”
“Had no other work”
“My boss lived next door and it was a job cause school was dimb”
“Only job going at time”

Employers (and key industry groups) need to consider the potential relationship between this apparent lack of interest and problems experienced with staff turnover, trainee motivation and trainee retention. The costs to employers and the Government (both in terms of lost opportunity and financial cost), of employees and apprentices leaving the industry or their apprenticeship early through lack of interest or commitment could be significant.

Some of the general comments recorded by respondents are important to note here, as they reflect an overall sense of the image the PGD industries may present to the general public:

“Was sick of being stuck in a factory day after day”
“Wanted to change from my previous job and wanted a trade”
“Wanted to work for myself in a flexible trade”
“Variety of work, new job every day, every job different”
“I like machinery and working outdoors”
“Like moving around”
“Enjoy being outside with a good crew of guys”

Awareness of Apprenticeships

In order to determine the general public's awareness of apprenticeships in the PGD industries, apprentices were asked how they first found out about their apprenticeship. The vast majority, responded 'from someone else working in the industry' or 'through family and friends'. Just more than one quarter advised they were already working in the industry.

The school-related responses included:

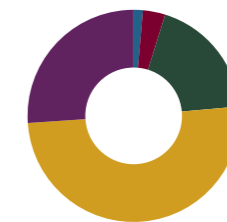
School counsellors and teachers	31 responses
Modern Apprenticeship Co-ordinators	20 responses
Gateway Programme	17 responses
Careers Expos	8 responses
Schools career evenings	5 responses

A total of 14 respondents had found out about PGD apprenticeships through an advertisement in a newspaper or magazine, or on the radio. Only three apprentices found out about apprenticeships via the internet.

Willingness to Recommend Industries to Others

When asked if they would recommend their industries to someone considering entering them, more than 75% of apprentices were very positive giving a score of 4 or 5. Around 20% scored 3 (likely to recommend), while 5% were quite negative scoring either 2 or 1 (Not at all likely to recommend).

Apprentices	
1 (Not at all likely)	1.4%
2	3.4%
3	18.8%
4	50.4%
5 (Extremely likely)	26.1%



“I was attracted to] the variety of work, new job every day, every job different”

KEY ISSUES

The following section presents the findings from the PGDR ITO Survey in relation to the following key issues:

- The main issues currently affecting businesses (identified by employers)
- Current shortfalls in tradesmen positions (identified by employers)
- Short and long term plans for employers, employees and apprentices

Main Issues Affecting Businesses

Employers were asked what they considered to be the main issues overall impacting on their business at present. The most common response by far (71%) was economic uncertainty. Other issues identified include:

Attracting and recruiting suitable tradesmen	19.3%
Retaining staff after training completed	10.1%
Reading and writing issues (apprentices)	6.3%
Poaching of staff	5.6%

A small number of employers also noted compliance costs, increasing regulatory requirements and bad debtors as important issues for their business.

Shortfalls in Tradesmen Positions

When employers were asked what tradesman positions (if any) they considered their business to be lacking at present, the most common positions identified were:

Craftsman Gasfitter	46.5%
Registered Plumber	42.7%
Craftsman Plumber	38.0%
Registered Gasfitter	36.6%
Registered Drainlayer	28.6%

Apprentice positions were named by a small percentage, with 5.2% identifying a lack of plumbing apprentices and 2.3% identifying a lack of gasfitter and drainlayer apprentices.

Future Plans for Employers

Employers were asked to indicate their plans for the next 12 months, five and 10 years. The following table sets out the most common responses and highlights any trends over time:

	Next 12 months	Next 5 years	Next 10 years
Make no changes to the way the company is operating	44%	25.2%	15.7%
Continue to grow / expand the company	23.4%	32.1%	23.1%
Increase the number of qualified staff	8.7%	8.5%	0.0%
Begin to work part-time – hand over to someone else	1.8%	5.7%	4.6%
Retire – and hand over to someone else	2.6%	7.2%	9.0%
Downsize the company	2.3%	0.0%	0.0%
Sell the company	0.8%	0.0%	0.0%
Close the company down	0.3%	0.0%	0.0%
No response	14.9%	17.7%	36.5%

It is clear that most employers have considered their options for the next 12 month period (short term) – sizeable numbers are looking at either making no changes to their operation or growing their business and/or the number of qualified staff, while small numbers are looking at downsizing, reducing hours or retiring. In some cases, employers are planning to close their businesses down altogether.

Looking at the longer term (five to 10 years) – a consistent number of employers plan to continue growing their businesses, while an increasing number are planning to either reduce their hours or retire. However, the numbers looking to personally downsize are relatively small and would indicate a desired degree of stability across the PGD business sector. In addition, none of the employers indicated either selling or closing down their businesses as being options over the longer term.

Of concern is the increase in those employers with no apparent plans after the next 12 months ('No response'), with more than a third of respondents appearing to have no plans after the next five years. Those respondents with no longer term plans include:

- 13% of those planning to make no changes to their operations in the short term;
- 35% of employers planning to increase the number of qualified staff in the short term;
- 15% of employers planning to grow or expand their business in the short term.

Future Plans for Employees and Apprentices

The table below sets out the most common responses from employees and apprentices when they were asked to indicate their plans for the next 12 months and five years:

	Employees next 12 mths	Apprentices next 12 mths	Employees next 5 yrs	Apprentices next 5 yrs
Completing a qualification / licence	45.5%	62.5%	24.7%	42.0% ⁶
To further my career in this industry overseas	9.9%	23.6%	10.1%	34.6%
To continue to gain work experience in New Zealand	38.8%	13.7%	26.8%	13.2%
To achieve a promotion within my current company	13.4%	10.1%	5.7%	7.3%
To become self-employed in this industry			23.5%	24.4%
To reach a managerial position			7.1%	4.8%
To travel overseas, but not work in this industry	3.8%	4.1%	3.9%	8.1%
To leave the industry	3.5%	0.8%	3.6%	1.4%
Unsure	8.5%	2.2%	14.3%	7.9%

⁶ The drop in percentages of apprentices and employees planning to complete a qualification and/or become licensed in the next five years is most likely indicative of the stage they are at currently in the respective processes, ie they may be about to complete their qualification or become licensed.

“ [Future plans?] May take a leave of absence and do my OE ”

The results indicate that relatively small numbers in both groups are looking at career options with around 12% planning to achieve a promotion within their company in the next 12 months and around 6% looking to reach a managerial position in the next five years. Comments include:

“Become a craftsman plumber and gas fitter”

“To progress my qualifications so that i hold all possible qualifications in this industry”

“I want to be self employed and carry on with my learning”

“To grow my business – employ or take an apprentice on”

Of note are the large percentages of both groups (23.5% and 24.4%) planning to become self employed in the next five years.

A much larger percentage of apprentices than employees are planning to travel overseas to further their careers, however those apprentices providing comments indicate a clear intention to return to New Zealand:

“Going to Western Australia to work in the mines. Planning to come back and work for myself”

“Finish qualification and go to Australia for two years”

Conversely, a larger percentage of employees plan to continue gaining work experience in New Zealand in the next 12 months and five years. A number of comments from employees indicate a level of satisfaction with their current position:

“Stay working at my job”

“Stay till retirement”

while others are clearly looking at winding down:

“Cut down to four days a week”

“Slowing down”

“Get in as much hunting and fishing as possible”

There are more employees than apprentices planning to leave the industries in the next 12 months, either staying in New Zealand or travelling overseas. However, this trend reverses in the five-year period with double the percentage of apprentices planning to leave the industries and travel overseas.

QUESTIONS FOR FURTHER EXPLORATION

Stage 3 of the Workforce Requirements Project involves looking more closely at some of the key issues identified during the analysis of the PGDR ITO Survey results and the putting together of this report.

These issues will be explored by up to 20 small focus groups comprising employers, employees and apprentices, to be held across the country during the months of April, May and June 2009. One-to-one interviews will also be arranged with industry representatives, including: training providers, Modern Apprenticeship Co-ordinators, industry organisation leaders.

The issues will be presented to the groups in the form of open questions to encourage focussed discussion. A sample of the questions that will be discussed follows:

- Are gender and ethnicity representation issues for the industries?
- Is the range of apprentice ages likely to increase – where are apprentices going to come from in the future?
- Why do people work the hours they do? Shortage of staff? Too much work?
- What drives people to get qualified?
- Is language an issue for workplaces and training?
- When and why do tradesmen travel overseas? How many have travelled overseas and come back? Why?
- Why do tradesmen move around the industries – is the level of turnover acceptable/a good thing/a bad thing?
- Should recruitment practices change? Why do employees/apprentices not look for jobs online?
- Why is it so difficult to find the right people for tradesmen positions? What are employers looking for?
- Is there a direct relationship between lack of initial commitment or passion for an industry and high staff turnover and/or trainee retention?
- What relationship should the industries have with schools?
- What is it about the industries that make apprentices want to recommend them to others?
- Is there a solution to the costs associated with training?
- Why do employers take on apprentices? Does the business size impact on the decision? What is an ideal ratio of registered/craftsmen to apprentices?
- How can the PGDR ITO and Registration Board best raise understanding of their roles within industries?
- Are the skill shortages short or long term and different by location or rural/metropolitan area? How can they be remedied?
- Do employers really have no plans past the next 12 months? If so, what are they – are there any trends? If not, why not – are there any historical reasons?
- How will the current economic situation impact on employers' business plans, including training, business size, retirement, etc
- Should employees and apprentices be more career focussed? Is there a career path within the industries for them to follow?

The findings from these discussions and additional statistical research will be presented in a Stage 3 report in the second half of 2009.

**“
[Main
issue?] Not
having the
confidence
to plan ahead
because of
the state of
the economy
”**

EXPLANATION OF DATA SOURCES

This final section explains the data used to inform this report in more detail. It explains the classifications used by Statistics New Zealand to collate data from the 2006 Census and other datasets and explains the methodology used by the PGDR ITO in conducting its survey.

Statistics New Zealand Data

Statistics New Zealand use the Australian and **New Zealand Standard Industrial Classification (ANZSIC) 2006** to gather and analyse industry statistics. Each individual business operating in New Zealand is assigned to an industry based on its primary activity.

The classification that most aligns with the PGDR ITO's plumbing, gasfitting and drainlaying industries coverage (and has therefore been used for the purposes of this report) is 'Plumbing Services', which includes the following primary activities:

Plumbing (except marine)
Repair of installed plumbing
Gas plumbing
Drain construction or repairing
Guttering, roof installation or repair
Hot water system installation
Solar hot water system installation
Septic tank installation (including repair)

The information in the business characteristics section of the report was sourced from Statistics New Zealand's Business Demography dataset. The data relates to February 2008 and is therefore more current than the 2006 Census – however it does rely on accurate reporting by businesses rather than individual census data, so some discrepancies can occur.

The 2008 PGDR ITO Survey

The PGDR ITO conducted a survey of employers, employees⁷ and apprentices in the PGD industries to better quantify the characteristics of the sector and to explore:

- **What attracts people into the sector**
- **Recruitment and retention trends**
- **Current skill shortages**
- **The future plans of individuals in the sector**
- **The place training has within the sector**
- **Awareness of the respective roles of the PGDR ITO and the Registration Board**

The surveys were initially trialled with a number of employers, employees and apprentices in the Wellington region. Feedback from these individuals enabled the surveys to be expanded and refined.

The surveys were distributed using a variety of vehicles to ensure maximum reach and optimum return rates:

- **29 breakfasts at local suppliers' sites**
- **Visits to local businesses by the PGDR ITO's Regional Training Advisers**
- **Attendance at approximately 12 Master Plumbers Association meetings and events**
- **Phone interviews**

A total of 1,111 people completed a survey. This number is made up of:

Employers: 350
Employees: 361
Apprentices: 400

There are approximately 8,275 employers, employees and apprentices in the PGD sector in New Zealand (9,738 less the approximately 15% of workers in the administration, office management, retail sales and services segments of each industry). On a sample size of N = 1,111, the standard margin of error at the 95% confidence level is +/-2.9%.

Demographic Results for Apprentices

While all of the apprentices currently registered with the PGDR ITO (1,632) were contacted directly regarding completion of the survey, there are an unknown quantity of apprentices undertaking an alternative apprenticeship arrangement with a training provider in Auckland. The PGDR ITO do not have direct access to these apprentices, however, they did provide the training provider with copies of the survey to pass on to them.

As there were only a limited number of surveys returned by these apprentices, it is very possible that the survey results in relation to the number of apprentices undertaking PGD apprenticeships in the Auckland region is understated.

For the purposes of this report, we have estimated that a total of 2,250 people may be currently undertaking PGD apprenticeships in New Zealand. As the survey respondents represent 17.7% of that number, it is reasonable to assume that their responses are reflective of the views and attitudes, etc of all apprentices. However, any under-representation in the Auckland region has the downstream effect on the demographic survey results by artificially raising the percentage of apprentices in other regions.

⁷ For the purposes of this report 'employees' means employees who work as tradesmen or Limited Licence (Non Apprentices) and who are not apprentices.



“
[Future
plans?] To get
in as much
hunting and
fishing as
possible

”

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