MINISTRY OF EDUCATION
Te Tāhuhu o te Mātauranga

Limited Credit Programmes in Industry Training

New Zealand Government
New Zealand Government

Learners in tertiary education

This report forms part of a series called Learners in tertiary education.
Other topics covered by the series are access, pathways, support, participation, retention and qualification completions.

Author
Paul Mahoney, Senior Research Analyst
Email: paul.mahoney@minedu.govt.nz
Telephone: 04–463 2891
Fax: 04–463 8713

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CONTENTS

TABLES

FIGURES

1 INTRODUCTION

Key findings:

- This study examines the use of Limited Credit Programmes (LCPs) in industry training. LCPs are non-qualification programmes that consist of collections of unit standards. They do not lead to nationally recognised qualifications.
- Participation in LCPs has grown steadily since 2005, with a jump in participation occurring in 2009.
- LCPs accounted for 9 percent of government funding for industry training in 2009 and 19 percent of trainee participation, up from 8 percent and 15 percent in 2008 respectively.
- LCPs are being used by more industry training organisations (ITOs) – 29 in 2009, up from 23 in 2001. But the reasons for use of LCPs differ between industries and ITOs. Some ITOs (such as those focused on trades) are relatively low users of LCPs, while others are high users.
- During 2009, the economic downturn and increasing unemployment led to fewer new industry trainees. Some industry training organisations continued to sign up trainees, but these new starters were more likely to be older than new entrants in previous years. Many of these trainees ended up in LCPs. The trend to place older trainees into LCPs reflects the need of ITOs to fill funded places when many young people had lost jobs in the downturn and hence, were ineligible for industry training.
- All industry training programmes are intended to lead to national certificates. But this analysis shows that only a minority of trainees involved in LCPs progress to programmes leading to qualifications, and still fewer attain them.
- There is some evidence that LCPs are increasingly used as stand-alone training programmes, as fewer trainees progress from them to national certificate programmes than in previous years. The analysis shows that older trainees are the least likely to progress to a national certificate programme. So the progression rate from LCPs is diminishing as the average age of participants increases. Only one of the ITOs analysed in this paper shows a probability of progression of over 50 percent.
- Some LCPs have functioned as workplace health and safety compliance training. Between 2006 and 2008 around 20 percent of LCPs had an identifiable health and safety focus, which increased to 39 percent in 2009. The LCPs with a health and safety component have very low progression – the probability of progression is almost 10 percentage points lower than for LCPs that don't cover health and safety.
- One factor in the growth of participation in LCPs is that they have fewer generic components and hence, a greater focus on firms' immediate skills needs.
- Average credit loads for LCPs have declined in recent years, as has the average NZQF level of LCPs. This suggests that there is a lower return for government expenditure.
- The Tertiary Education Commission (TEC) has changed funding policies so that at least 50 percent of trainees previously enrolled in an LCP must have progressed to and completed a full national qualification within five years of enrolment in the LCP for that LCP to be funded. Funding for programmes focussed solely on health and safety has not been made available in 2012.

This analysis builds on previous Ministry of Education studies on industry training and Modern Apprenticeships[1] to examine the role of Limited Credit Programmes (LCPs).[2] LCPs are short programmes linked to national qualification programmes, created by ITOs to meet industry need. They do not in themselves lead to attainment of national qualifications. Rather, they consist of collections of unit standards drawn from those available for national certificates. LCPs are intended to provide small segments of training that is 'just in time'. They are also intended to introduce trainees and employers to formalised workplace-based training programmes. As industry training programmes are intended to lead to national qualifications attainment, Government expects LCP participation to lead into National Certificate programmes.

This study finds that the majority of trainees who enrol in, or complete an LCP, do not go on to enrol in (and therefore complete) programmes that lead to a national certificate. It suggests that one reason for the growth of participation in LCPs is that they enable learners to bypass generic aspects of qualifications that enterprises see as less relevant to skill requirements of their workplaces. They have been also been used to replace participation in national certificates that resulted from the reduction in formal industry training commencements in 2009 due to the economic downturn.

1.1 Industry training

Industry training is administered by the Tertiary Education Commission (TEC), and is intended to lead to attainment of national qualifications. Industry Training Organisations (ITOs) administer training funds on behalf of TEC, disbursing payments for on-job and off-job training and assessment. They set standards and arrange training and assessment as well as playing a general administration role, but do not themselves deliver training.

Training occurs on-job, in the workplace, usually delivered by other employees of each enterprise. Training may also include an off-job component, where trainees spend time at an external training provider, such as a private training establishment or an institute of technology or polytechnic.

1.2 Funding for industry training

The cost of training is shared between government through the industry training fund, and by industry in a theoretical 70 percent / 30 percent split, based on expectations of the share of the benefits from training. Society as a whole benefits from having a skilled labour force which is able to work productively and efficiently, and industry also benefits from increasing the pool of skilled labour, which in turn helps lower the direct cost to employers of employing skilled labour.

The government contribution is disbursed through the industry training fund. The TEC reimburses ITOs for training and assessment activity occurring in the workplace using a flat rate based on the volume and expected duration of the programme each trainee is engaged in.[3] The TEC pays for trainees who are active at the end date of each quarter, based on the flat funding rate multiplied by the volume of learning. ITOs pass funding on to contracted providers, including training providers for arranging off-job training, workplace-based trainers and workplace-based and roving assessors.

The volume of training is measured as the total number of credits in each programme. Duration is the expected duration of the programme for the average participant. A Standard Training

[1] See: Mahoney 2009a, 2009b,2010a, 2010b,2010c
[2] LCPs are not available in Modern Apprenticeships training, and this analysis therefore excludes training activity undertaken by Modern Apprentices.
[3] On the basis of the proportion of the volume of training per year in each programme to 120 credits per year (considered a full-time load for a year).

Measure (STM) is equivalent to a training rate of 120 credits per year. TEC reimburses ITOs retrospectively based on the volume of learning of each programme and the number of trainees active in them at the end of the quarter.

For example:

A 180 credit programme is delivered over four years. This will result in 180/4 = 45 credits per year. The derived STM rate of this programme is 45/120 = 0.4

If 300 trainees enrol in this programme, total government funding for the year is 300 x 0.375 x $2,844.44 = $319,999.50 (where $2,844 is the 2009 STM reimbursement rate, excluding GST).

An STM (referred to in the sections below) refers to the unit of payment for 120 credits of training volume delivered, while the STM rate (above) refers to the rate at which that training occurs over the course of a year.

1.3 industry training programmes

ITOs create the industry training programmes and associated qualifications. Industry training programmes are flexible in length, with some programmes consisting of only 40 credits per trainee. They can be taken over varying time periods, depending on the requirements of each participant and their employer. Participants must be in employment before starting training.

A number of programme type options are now available in industry training. National Certificate programmes (NCs) are formal programmes leading directly to national qualifications such as National Certificates and National Diplomas. Supplementary Credit Programmes (SCPs) supplement training where a trainee has already completed an NC programme and consequently has attained an national qualification. As noted above, some trainees undertake LCPs, which are short programmes consisting of a minimum of 20 credits on the New Zealand Qualifications Framework (NZQF).

Trade Certificate type programmes are a remnant of the old apprentices training system and are gradually being phased out. Modern Apprenticeships programmes are intended for use in targeted apprenticeships training.

Table 1 shows the distribution of STMs, government funding and trainees in each year by programme type. The majority of STMs consumed and funded for training activity are for those participating in NC programmes, but this has declined from 93 percent of STMs in 2005 to 90 percent in 2009. LCPs have increased from 7 percent of STMs consumed and 13 percent of trainees to 9 percent of STMs and 19 percent of trainees.

Approximately $16.5 million of government funding was spent on LCPs in 2009, up from just over $8 million in 2005.

Table 1 – Industry training STMs, funding and trainees by programme type by year

Year	Programme type	STMs	% STMs year	Total funding ($000s)	Number of trainees	% of Number of trainees
2005	LCP	3,508	6.9	8,292	22,110	12.6
	National Certificate	46,943	92.9	110,973	153,027	87.2
	SCP	23	0.0	54	274	0.2
	Trade Certificate	4	0.0	8	19	0.0
	Modern Apprenticeships	31	0.1	72	153	0.1
2006	LCP	4,273	7.7	11,094	25,217	13.1
	National Certificate	50,930	92.0	132,213	165,464	86.1
	SCP	114	0.2	297	1,433	0.7
	Trade Certificate	3	0.0	7	13	0.0
	Modern Apprenticeships	43	0.1	111	121	0.1
2007	LCP	4,978	8.3	13,748	30,976	15.5
	National Certificate	55,013	91.2	151,945	166,601	83.5
	SCP	180	0.3	496	1,383	0.7
	Trade Certificate	3	0.0	7	13	0.0
	Modern Apprenticeships	145	0.2	400	439	0.2
2008	LCP	4,675	7.5	12,791	33,133	15.3
	National Certificate	57,843	92.2	158,258	182,009	100.0
	SCP	55	0.1	149	275	0.2
	Trade Certificate	3	0.0	8	13	0.0
	Modern Apprenticeships	154	0.2	421	458	0.3
2009	LCP	5,792	9.3	16,512	43,675	18.8
	National Certificate	56,182	90.3	160,175	187,454	80.8
	SCP	97	0.2	276	425	0.2
	Trade Certificate	2	0.0	7	15	0.0
	Modern Apprenticeships	145	0.2	414	420	0.2

Source: Tertiary Education Commission
Notes:
1. funds are GST inclusive
2. funding is for industry training
3. number of trainees are funded trainees, that is those active at the end of each quarter in each year.

2 GOVERNMENT FUNDING FOR LIMITED CREDIT PROGRAMMES

Figure 1 shows the proportion of STMs consumed by ITOs each year by trainees in LCPs. The increase in the proportion of STMs consumed in LCPs has not been uniform across all ITOs. The creative trades, electricity supply, electrotechnology, joinery, master plumbers gasfitters and drainlayers (MPGD), hairdressing, extractive, equine, retail meat and pharmacy ITOs have claimed very little or no funding for trainees in LCP programmes.

ITOs who have claimed higher than average proportions (20 percent or more) of their STMs for LCPs compared to their total include: the building service contractors, community support services, fire and rescue, hospitality, flooring, NZITO, sports turf, opportunity, real estate (REINZ), SFRITO and seafood ITOs.

Figure 1 - Proportion of STMs claimed by ITOs for trainees in LCPs 2005-2009

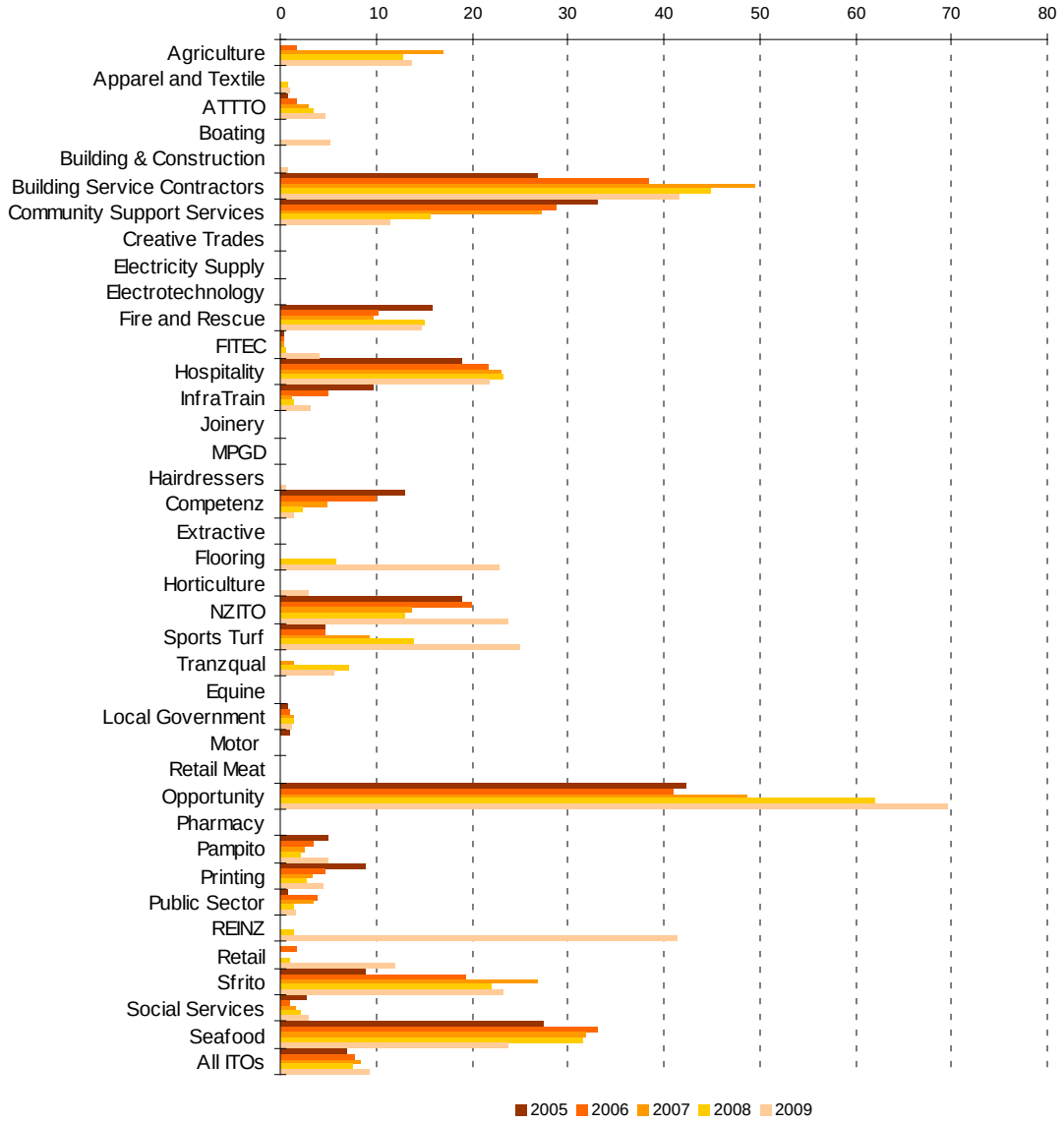


Figure 2 shows the proportion of total STMs consumed each year by trainees in LCPs by each ITO, and compares it to the total number of STMs consumed in each year. This enables us to determine which ITOs are consuming STMs in LCPs at relatively high or low rates compared to their other provision. This is calculated by dividing the sum of STMs consumed in LCPs in each ITO in each year by the total consumed in each year, and comparing to the proportion of all STMs consumed.

For example, the agriculture ITO consumes approximately 7 percent of all STMs claimed for in each year (right) but between 10 and 15 percent of the total of LCP STMs claimed (between 2007 and 2009). We would therefore describe the agriculture ITO as consuming LCP STMs at comparatively high rates.

ITOs consuming LCP STMs at comparatively high rates include: agriculture, community support services, hospitality, NZITO, SFRITO and Seafood.

Figure 2 - Proportion of total LCP STMs in year (left) and all STMs consumed in year (right) by ITO

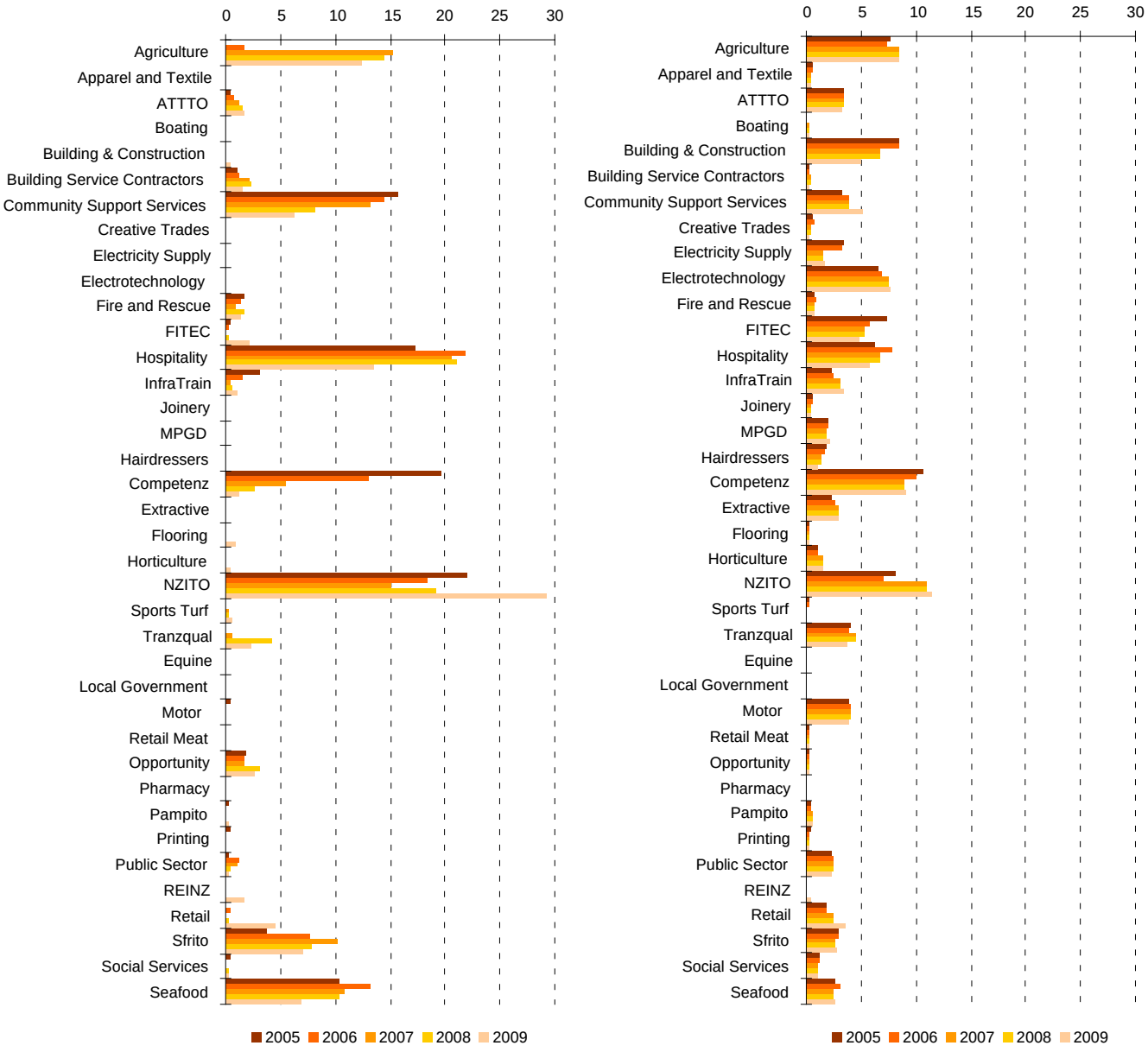
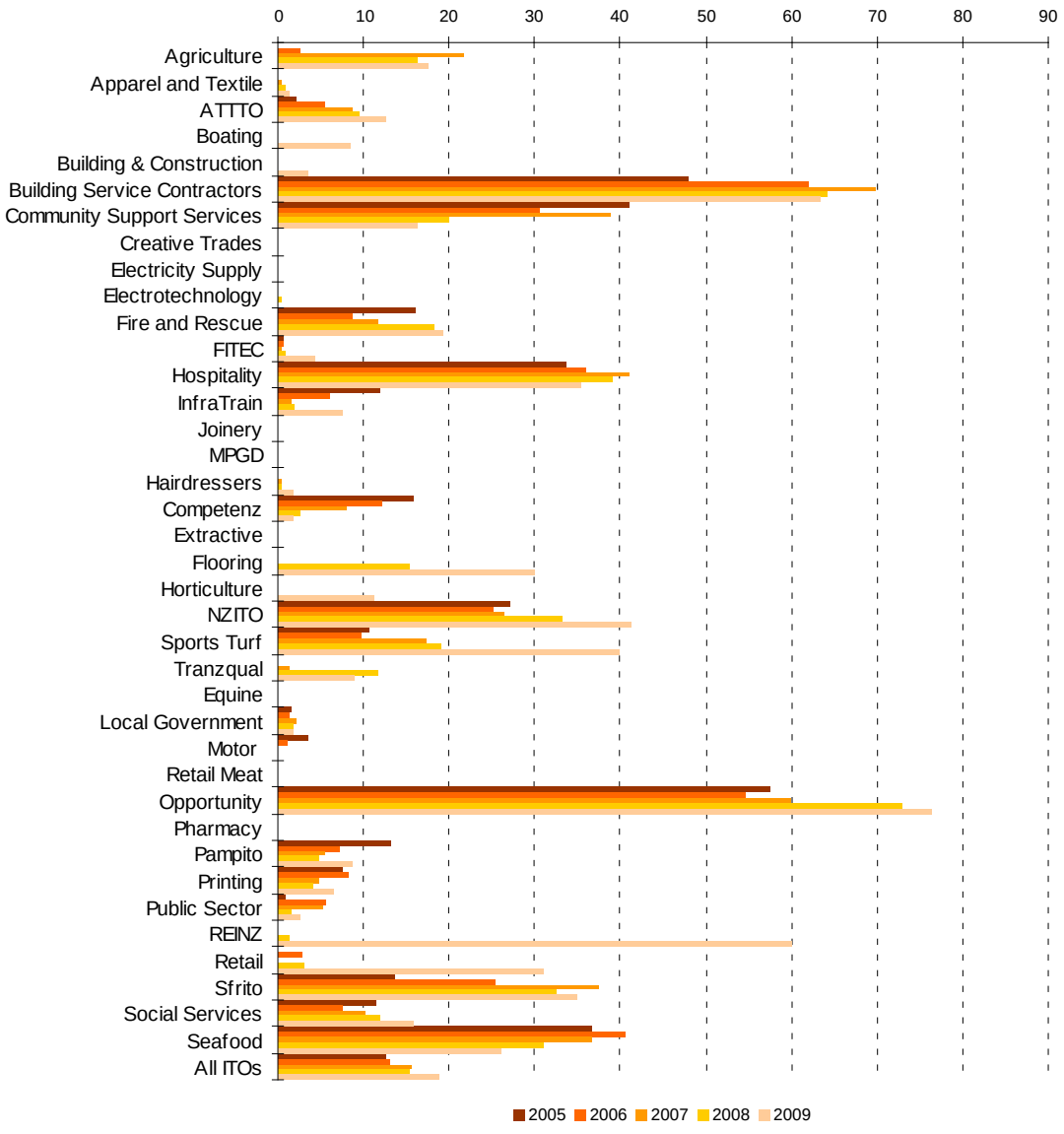


Figure 3 shows the proportion of trainees funded for involvement in LCPs. As expected, the proportion of STM consumption in LCPs (figure 1) mostly mirrors the proportion of trainees in LCPs for most ITOs.

Hospitality LCP trainees account for roughly 35 percent of total hospitality trainees in each year, but LCPs account for only 22 percent of hospitality STMs consumed. Similarly, building service contractors' LCP trainees account for over 60 percent of trainees in that ITO in each year, but less than 50 percent of STMs.

This illustrates that LCPs consist of fewer credits and nominal durations (and therefore lower STM rates) than other programmes for these ITOs. There is a trade-off between trainee numbers and funding rates for LCP provision over other types: ITOs that attract large portions of funding for LCPs do so through the involvement of larger numbers of participants than they would for other programme types, because of the lower STM rate.

Figure 3 - Proportion of funded trainees in LCPs by ITOs in year



3 CHARACTERISTICS OF LIMITED CREDIT PROGRAMMES

3.1 Number of LCPs

There has been an increase in the number of LCP programmes between 2005 and 2009, but this has been in line with the growth in the number of other types of programmes. The number of active national certificate (NC) programmes increased by 58 percent between 2005 and 2009, while the number of LCPs increased by 59 percent.

Table 2 – Count of distinct programmes by programme type and year

Year	National Certificates	Limited Credit Programmes	Modern Apprenticeship programmes used in industry training	Supplementary Credit Programmes	Trade Certificates
2001	732	150			11
2002	916	140	2		5
2003	1,046	137	2		4
2004	1,135	156	5	2	2
2005	1,229	150	15	4	2
2006	1,326	157	18	10	2
2007	1,439	177	20	11	1
2008	1,705	201	20	7	1
2009	1,948	238	22	24	1

3.2 ITOs using LCPs

There has been an increase in the number of ITOs operating LCPs, from 23 in 2005 to 29 in 2009.

Table 3 – Count of distinct ITOs by programme type and year

Year	National Certificates	Limited Credit Programmes	Modern Apprenticeship programmes used in industry training	Supplementary Credit Programmes	Trade Certificates
2001	42	23			7
2002	41	23	2		4
2003	40	23	2		3
2004	38	23	5	2	2
2005	38	23	6	3	2
2006	38	24	10	4	2
2007	37	25	8	5	1
2008	38	27	9	6	1
2009	38	29	11	12	1

3.3 Credit load

A programme's credit loading refers to the credit value of the programme: that is, the number of credits trainees are required to attain to complete the programme. LCPs have lower credit values than other industry training programmes. In 2005 the average credit loading of an LCP was 25 credits, but this has fallen to 23 credits in 2009.

Average National Certificate programme credit values dropped from 111 to 91 between 2005 and 2009. SCP credit loadings have increased during this time while Modern Apprenticeships programmes used in industry training have fluctuated in size, increasing in 2006 and remaining broadly stable since then.

Table 4 – Average programme credit values by programme type and year

Year	National Certificates	Limited Credit Programmes	Modern Apprenticeship programmes used in industry training	Supplementary Credit Programmes	Trade Certificates
2001	130	35			280
2002	127	29	121		287
2003	120	26	139		257
2004	113	26	123	26	227
2005	111	25	127	23	147
2006	106	25	177	20	140
2007	103	26	173	23	120
2008	98	24	175	36	120
2009	91	23	175	33	120

3.4 Nominal programme duration

A programme's nominal duration refers to the average length of time trainees are thought to need to complete each programme, and as discussed, is used as the basis to calculate the amount of funding paid to ITOs. LCPs have lower programme durations than other industry training programmes, at around 10 months expected duration on average.

Average National Certificate programme nominal durations dropped from 25 to 20 months between 2005 and 2009.

Table 5 – Average programme nominal durations by programme type 2001-2009

Year	National Certificates	Limited Credit Programmes	Modern Apprenticeship programmes used in industry training	Supplementary Credit Programmes	Trade Certificates
2001	29	11			50
2002	29	11	22		52
2003	27	11	23		51
2004	25	11	26	5	48
2005	25	11	27	8	49
2006	24	11	35	12	49

Year	National Certificates	Limited Credit Programmes	Modern Apprenticeship programmes used in industry training	Supplementary Credit Programmes	Trade Certificates
2007	22	10	40	11	48
2008	21	10	39	9	48
2009	20	10	38	7	48

3.5 Programme NZQF Level

Each programme is set at a New Zealand Qualifications Framework (NZQF) level. LCPs are more likely to be at low NZQF levels than NCs: half of NC programmes are at NZQF levels 3 or below, while 70 percent of LCPs are.

Figures 4 and 5 show that NC programmes have remained at similar levels between 2005 and 2009, while LCPs have shifted a little upwards, from level 1 to level 3.

Figure 4 – NC (left) and LCP (right) programmes by NZQF level 2005 to 2009

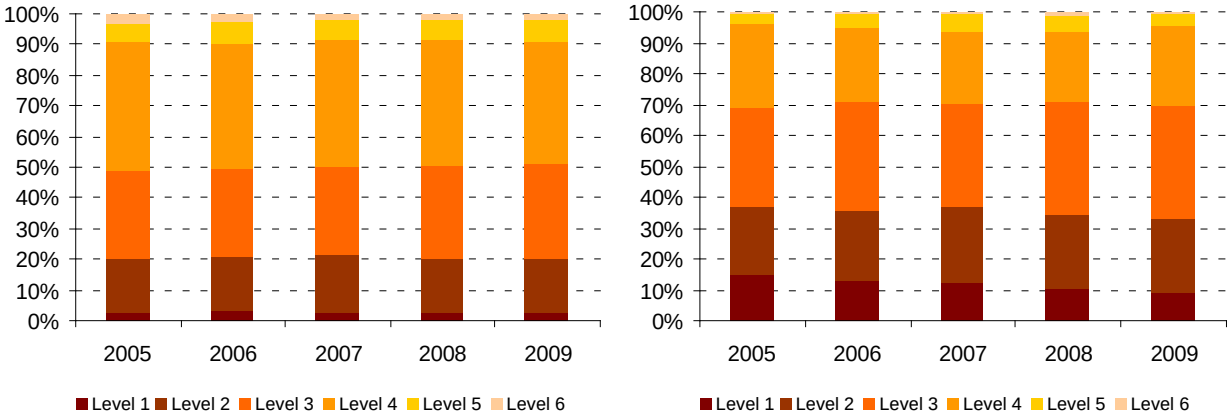
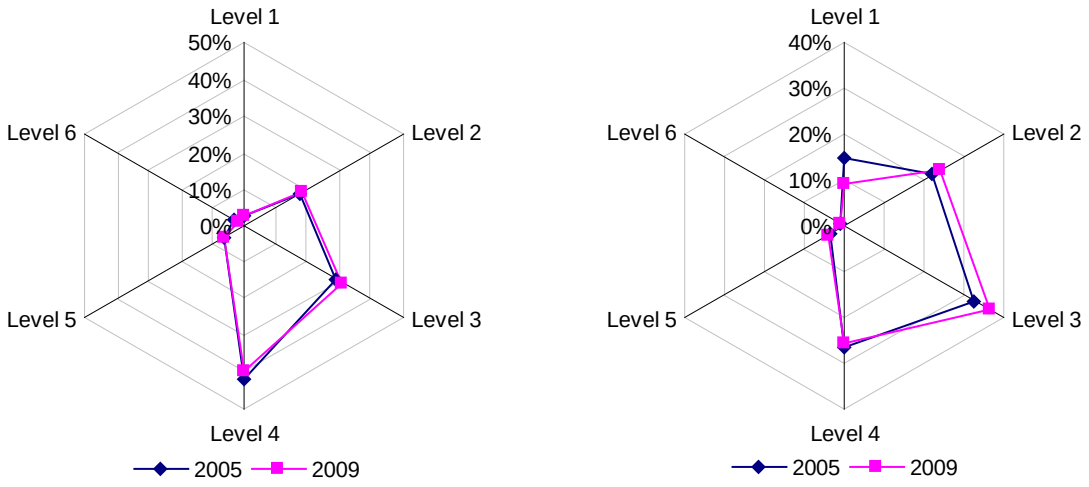


Figure 5 – NC (left) and LCP (right) programmes by NZQF level 2005 and 2009



Taking the participation of trainees into account, figures 6 and 7 show that NC participation has shifted away from level 4 towards level 2 between 2005 and 2009, while LCP participation at level 3 has shifted down towards level 1. This is especially evident in 2009.

Figure 6 – NC (left) and LCP (right) programme participation by NZQF level 2005 to 2009

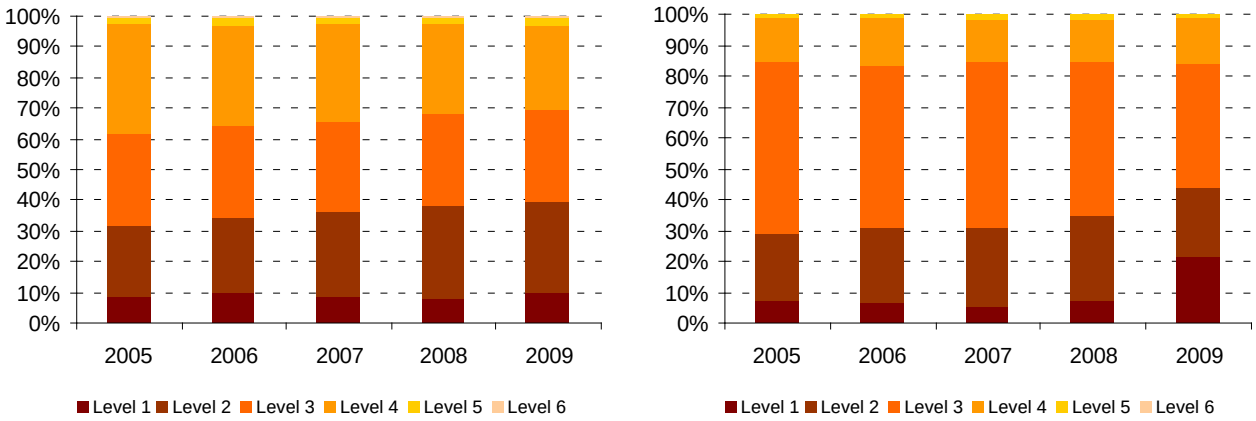


Figure 7 – NC (left) and LCP (right) programmes by NZQF level 2005 and 2009

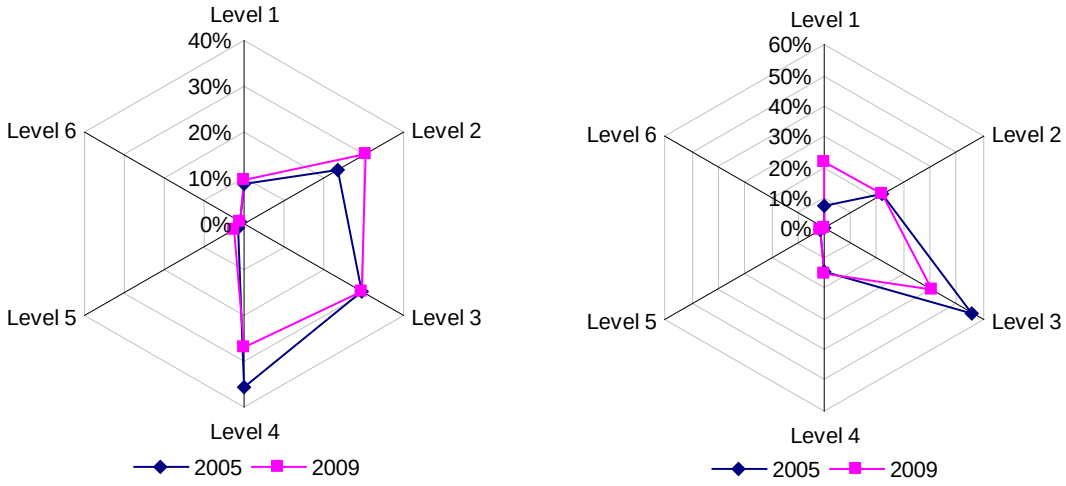


Table 5 shows a large decrease in the participation of 15 to 19 year olds in level 1 LCPs in 2009 compared to previous years, and a large increase in the proportion who were older (40 years or older).

There was a shortage of young, new employees available to sign up for industry training in 2009 because of the downturn in the labour market which affected younger people more than older people. [4] ITOs may have responded to these changing dynamics by recruiting older, perhaps existing workers into industry training.

The increase in the proportion of trainees in LCPs in 2009 (from 15 percent of participants in 2007 and 2008 to 19 percent in 2009 - see table 1 above) may also have been driven by the economic environment. LCPs are more palatable to employers in a time of economic uncertainty. They are shorter and can be more easily tailored to meet enterprise-related skills than other programme types, and require a smaller cash and time commitment from employers.

Table 5 – Level 1 LCP participants by age at start 2005-2009

Year	15 to 19 years	20 to 29 years	30 to 39 years	40 to 49 years	50 years or older
2005	5%	24%	29%	25%	17%
2006	12%	29%	25%	21%	13%
2007	17%	31%	23%	19%	10%
2008	20%	29%	19%	21%	12%
2009	8%	22%	20%	24%	26%

[4] See Mahoney, 2010b.

4 PARTICIPATION

4.1 Trainee participation in LCPs

Comparisons of participants in NCs and LCPs between 2005 and 2009 are complicated by the relatively static number of ITOs offering NCs during this period. All ITOs offered NCs but the number of ITOs with active trainees fluctuated. An increasing number of ITOs are offering LCPs.

The demographic mix of LCP participants may not match that of industry training as a whole. The following sections compare the participation distribution in LCPs with NC programmes within those ITOs that offered both forms of programme in each year (rather than for all ITOs).

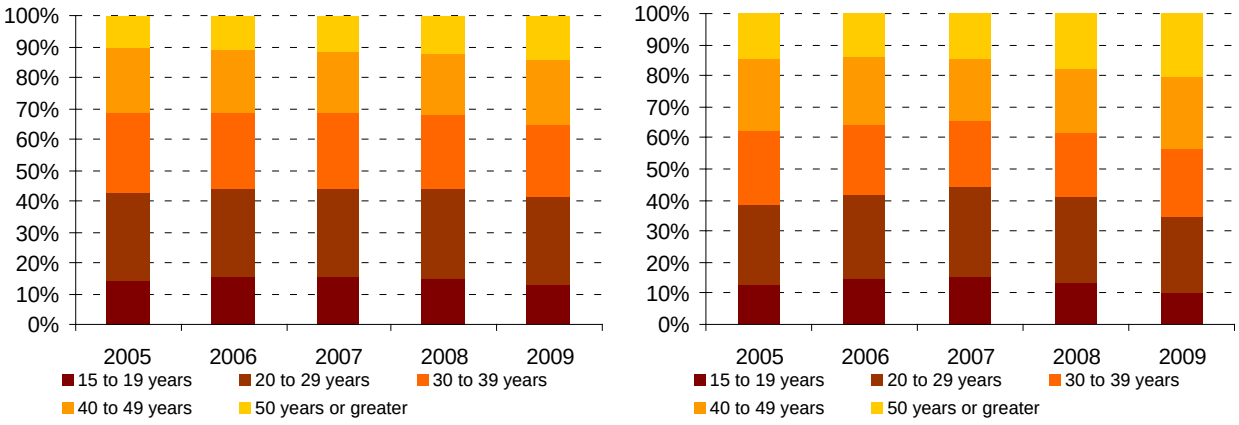
4.2 Participation by age

Figure 8 shows the age distribution of participants in NC programmes and LCPs between 2005 and 2009. Limiting the analysis to just ITOs offering both LCPs and NCs in each year, the age profiles of both types of programme look broadly similar.

However, the proportion of trainees aged 30 to 39 years was slightly higher for NC programmes, while the proportion of trainees aged 50 years or older was consistently larger for LCPs.

The age distribution of LCP participants was stable from 2005 to 2008, with approximately 60 percent of LCP participants aged 30 years or older, but 2009 saw an increase in the proportion who were older, an increase not matched by the ageing of NC participants.

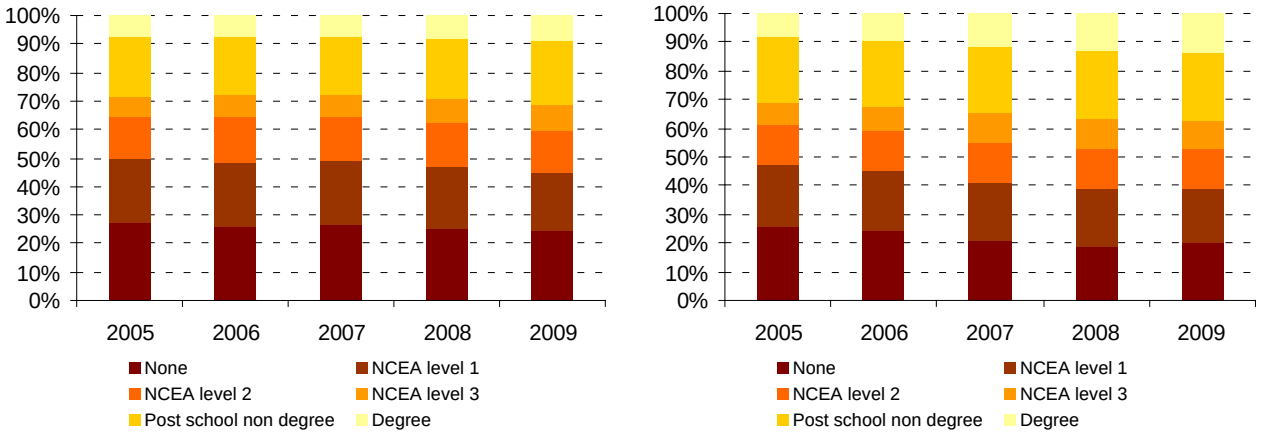
Figure 8 – NC (left) and LCP (right) programme participation by age at start 2005 to 2009



4.3 Participation by previous highest qualification

LCP participants are likely to have previous qualifications at higher levels than equivalent NC trainees. The proportion of LCP trainees with higher level qualifications before entering industry training for the first time has increased between 2005 and 2009, so that by 2009, over 60 percent of LCP participants had NCEA level 3 or higher before entering industry training, while around 55 percent of NC participants had.

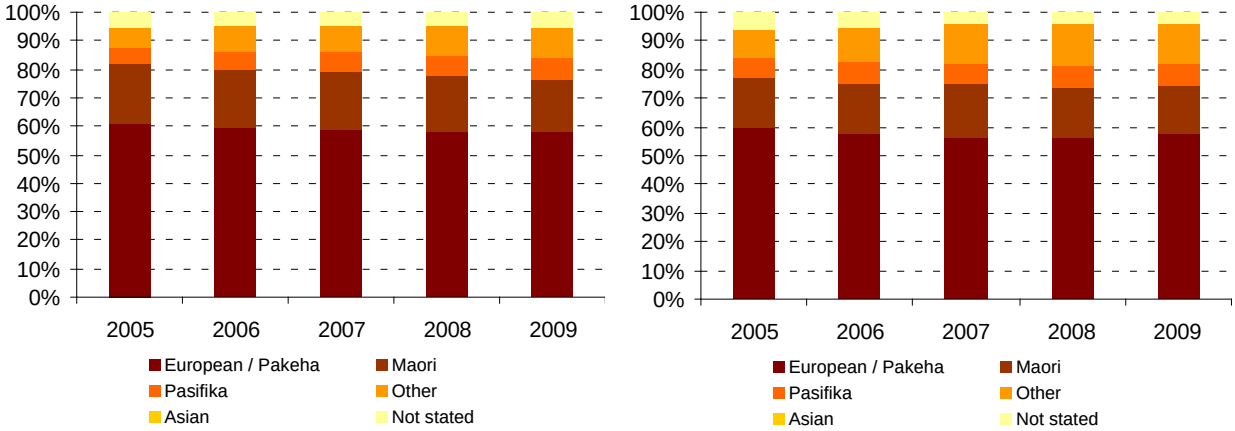
Figure 9 – NC (left) and LCP (right) programme participation by highest previous qualification at start 2005-2009



4.4 Participation by ethnic group

Since LCP participation is limited to a subset of ITOs, the distribution of LCP participants by ethnic group may not match all industry training. LCP participants are just as likely to be European as NC trainees, but they are consistently less likely to be Māori: 19 percent of NC participants identified as Māori in 2009, (21 percent in 2005) compared to 16 percent of LCP trainees (17 percent in 2005). Trainees identifying as 'Other' were a greater proportion of LCP trainees than NC trainees.

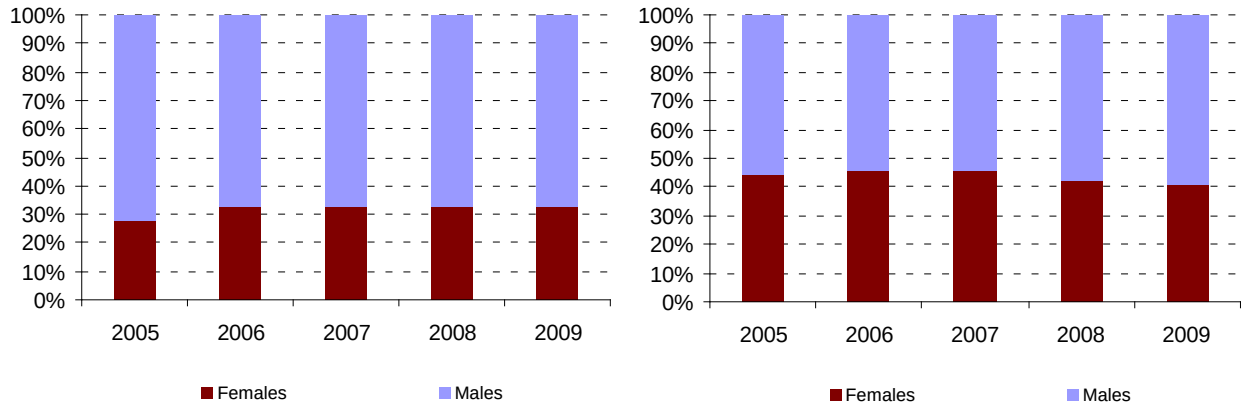
Figure 10 - NC (left) and LCP (right) programme participation by ethnic group 2005-2009



4.5 Participation by gender

LCP participants are more likely to be female than NC participants training with the same ITOs. Forty one percent of LCP participants were female in 2009, compared to 33 percent of NC trainees.

Figure 11 - NC (left) and LCP (right) programme participation by gender 2005-2009

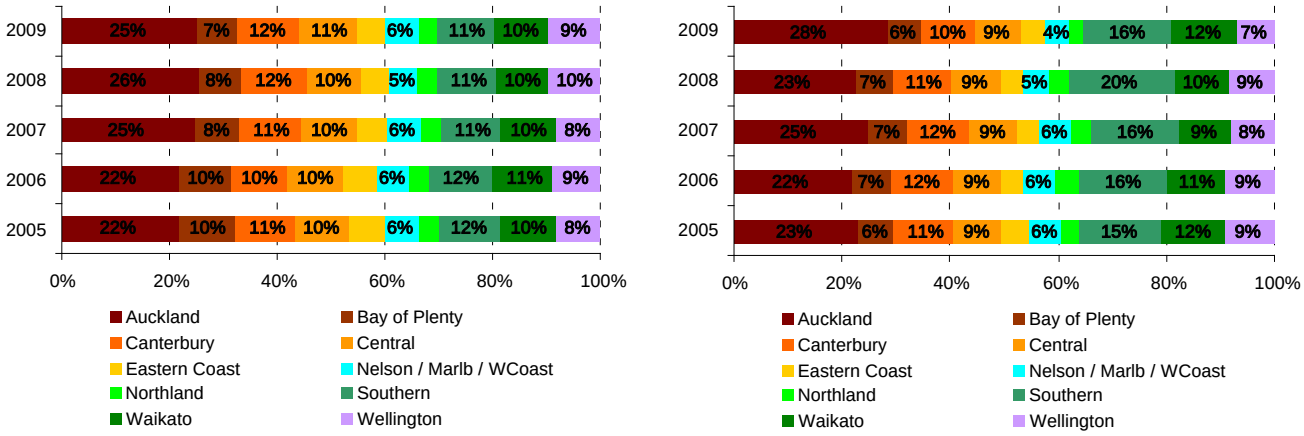


4.6 Participation by region

The geographic distribution of LCP participants compared to NC participants is quite similar but trainees in LCPs are consistently more likely to be located in the Southern region than NC participants.

These proportions are fairly stable across years, except for 2009, when the share of trainees participating in LCPs in the Auckland region leapt by 5 percentage points.

Figure 12 - NC (left) and LCP (right) programme participation by region 2005 to 2009



4.7 Participation – Health and Safety compliance programmes

A number of industry training programmes seem to primarily provide health and safety in the workplace training.[5] These programmes were identified by a text search of the programme name, and as such, may understate the health and safety, or workplace safety components of industry training programmes.

The proportion of NC programme participants in health and safety compliance programmes reached a peak at 8 percent in 2009, after three years of stability. Of particular note is that LCP participants are generally more than three times as likely as NC participants to be in a health and safety compliance programme. The proportion increased rapidly to 39 percent of LCP participants in 2009.

Table 6 – Health and Safety status industry training participants by programme type 2005-2009

Year	NC programmes	LCP programmes
2005	5%	27%
2006	6%	22%
2007	6%	18%
2008	6%	20%
2009	8%	39%

LCP programme participants in health and safety compliance programmes are limited to three ITOs: NZITO, competenz and infratrain. Other ITOs cannot be identified as using LCPs for health and safety compliance under this method.

Of these three, NZITO (covering the dairy manufacturing, meat processing and leather industries) saw the most growth in 2009: the number of LCP participants in health and safety compliance LCPs increased to almost 17,000 trainees.

Eighty-eight percent of infratrain's LCP trainees were participating in health and safety compliance programmes in 2009, as were 85 percent of NZITO's. Competenz's share declined in 2009, from 71 percent to 55 percent.

Table 7 – LCP Health and Safety participants count and percentage of total 2005-2009

Year	2005		2006		2007		2008		2009	
Infratrain	0	0%	1	0%	0	0%	41	34%	386	88%
Competenz	1,359	58%	1,121	56%	813	63%	197	71%	165	55%
NZITO	5,162	67%	4,898	66%	4,693	69%	6,350	74%	16,928	85%

NC programme participants in health and safety compliance programmes were limited to ten ITOs in 2009, up from 6 in 2005. The three largest (proportion of NC trainees in health and safety compliance programmes) were Competenz (26 percent), NZITO (24 percent) and

[5] From 2012, Health and Safety compliance programmes will no longer be funded by government. See TEC, 2010.

extractive ITO (15 percent). Infratrain is the only ITO of the three who offer health and safety LCPs who do not also offer health and safety NCs identifiable under this method.

Table 8 – NC Health and Safety participants count and percent of total

Year	2005		2006		2007		2008		2009	
Agriculture	14	<1%	14	<1%	9	<1%			17	<1%
Apparel & textile					81	5%	85	4%	64	4%
FITEC	280	1%	288	2%	348	2%	412	2%	14	<1%
Fire and rescue									423	2%
Competenz	2,145	16%	2,920	19%	2,693	16%	4,266	24	4,865	26%
Extractive	475	8%	783	13%	767	13%			1,004	15%
NZITO	1,257	7%	1,213	6%	1,307	7%	1,500	7%	6,068	24%
PAMPITO									51	3%
Tranzqual	85	1%			71	1%	27	<1%	5	<1%
Public sector							5	<1%	57	1%

5 MODELLING LCP PARTICIPATION AT COMMENCEMENT

5.1 Factors associated with LCP participation at commencement

LCPs are not qualifications, nor are they 'designated' programmes. It is sometimes thought that trainees might participate in LCPs on their first contact with industry training, and then go on to participate in NC programmes a bit later on. However, the reasons for LCP participation as they operate in practice are not clear and so our research question at this stage is: *who participates in LCPs as their first industry training programme?* From this, we may be able to extrapolate the reasons why they do so.

To determine the factors associated with participating in an LCP (rather than an NC programme) at first commencement, a cohort of trainees entering industry training for the first time was selected from the administrative dataset and analysed using statistical modelling techniques. The cohort was limited to people who entered industry training for the first time between 2005 to 2009. New entrants were selected from 17 out of the 24 possible ITOs who offered both NC and LCP type programmes in each year.[6] The cohort consisted of 160,982 trainees in total.

Logistic regression enables us to determine the programme-related and trainee-related factors associated with the use of LCPs. By controlling for the effects of combinations of variables, it enables us to calculate the probability of participating in an LCP at first start for a reference group of values of each single variable.

Logistic regression produces estimates of the probability of a response variable value being true, given the value of an independent variable. For this model, a binary response variable indicating that first participation was in an LCP (coded a 1) or not (coded as 0) was used. The regression creates estimates of the probability of a 1 occurring for each value of independent variable category, while taking the effects of all the other categories into account. It also produces a statistic indicating the statistical significance of the estimate of the difference between the value of each category and the reference category.

A 'standard' model was created and various permutations were tested until a model with good fit and explanatory power was obtained. The standard model consisted of the following variables, with reference categories based on typicality of participation in industry training:

- TEC Region. Reference category = Auckland
- ITO. Reference category = NZITO
- Prioritised ethnic group. Reference group = 'European / Pākehā'
- Gender. Reference group = Male
- Age at start. Reference group = 20 to 29 years
- Previous qualification. Reference group = No previous qualification
- Start year. Reference group = 2005

[6] Seven ITOs were excluded from the cohort selection due to small numbers of new entrants in LCPs during the selection time window.

5.2 Model 1 results

The best fitting model required three main interaction effects:

- ITO * start year
- ITO * age at start
- Region * age at start

The model was able to explain 30 percent of the observed variance (max rescaled pseudo R Square statistic = 0.429), indicating a strong model.

Table 9 – Model 1 results by variable

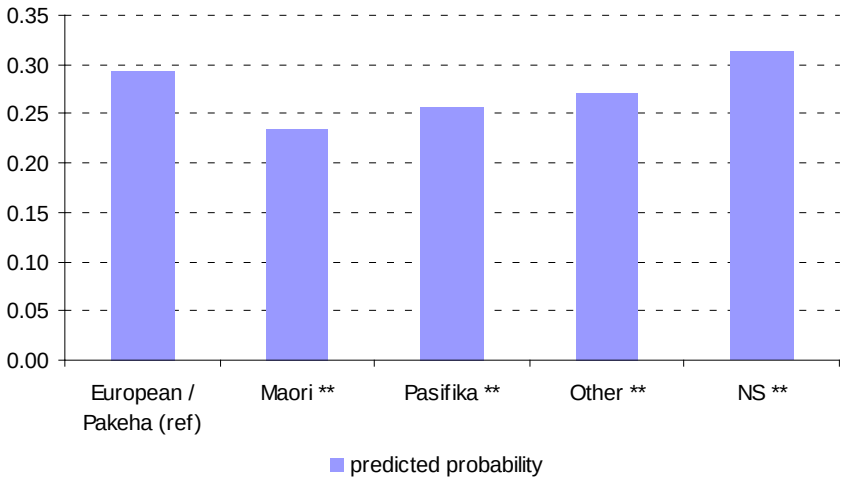
Response profile	**LCP first**	**Frequency**	Rate
LCP <> first	0	117,006	73%
LCP = first	1	43,976	27%
Variable	Degrees of Freedom	Chi-Square	Pr > ChiSq
Start year	4	3,249	<.0001
ITO	16	2,655	<.0001
Region	9	504	<.0001
Previous qualification	6	339	<.0001
Ethnic group	4	261	<.0001
Age at start	4	195	<.0001
Gender	1	27	<.0001
ITO * Start year	64	8,003	<.0001
ITO * Age at start	64	3,954	<.0001
Region * Age at start	36	555	<.0001
R-Square	0.296	**Max-rescaled R-2**	0.429
Hosmer and Lemeshow Goodness-of-Fit Test	Chi-Square	DF	Pr > ChiSq
	7.442	8	0.489

5.3 Ethnic group

Figure 13 shows the difference in predicted probability of a trainee enrolling in an LCP at first commencement in industry training by the ethnic group of the trainee.

European trainees are more likely to participate in LCPs at commencement than any other ethnic group. Twenty nine percent of European commencing trainees were in LCPs compared to 24 percent of Māori trainees; 26 percent of Pasifika and 27 percent of other participants. Trainees who did not specify their ethnic group (NS) were the most likely to be in an LCP at commencement.

Figure 13 – Predicted probability of LCP first by ethnic group



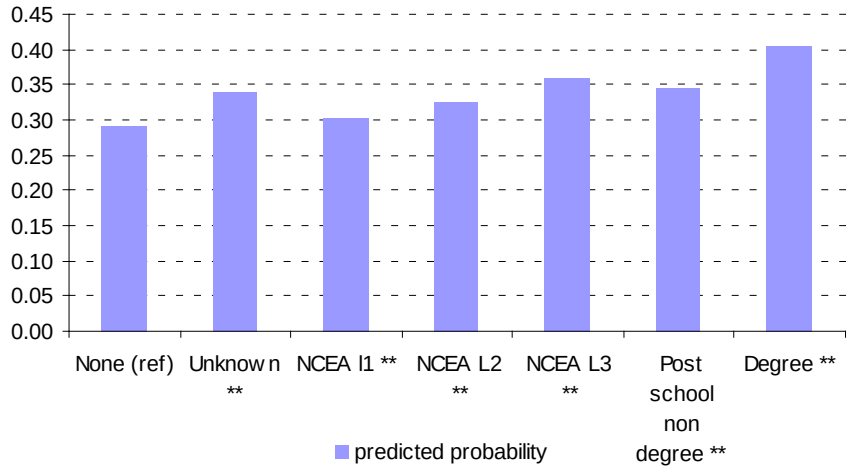
Note: ** shows statistical significance at the 5 % level and * shows significance at the 10 % level

5.4 Previous qualification

Figure 14 shows the difference in predicted probability of a trainee enrolling in an LCP at first commencement in industry training by the previous highest qualification of the trainee.

There is a progression of increasing probability of participation in an LCP at commencement as the previous qualification increases in NZQF level. Trainees with NCEA level 3 are more likely to do an LCP than those with levels 1 or 2, or no qualifications prior to entry, while trainees with degree-level qualifications are the most likely to.

Figure 14 – Predicted probability of LCP first by previous highest qualification

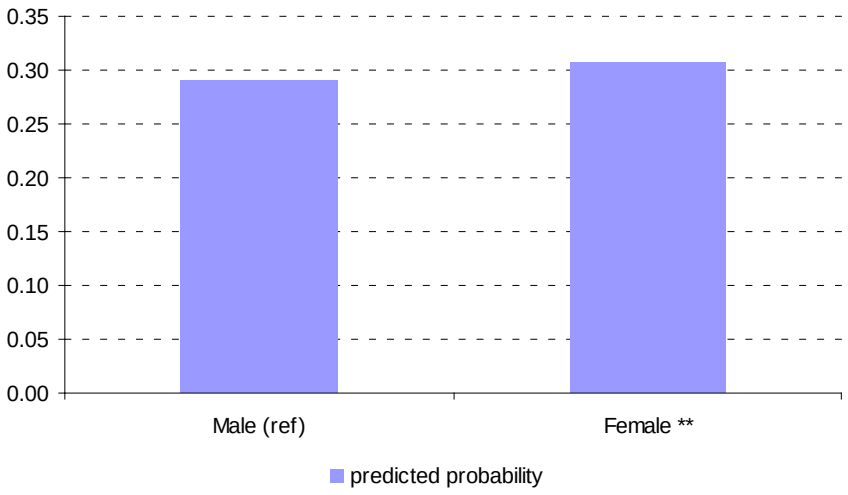


Note: ** shows statistical significance at the 5 % level and * shows significance at the 10 % level

5.5 Gender

Figure 15 shows the difference in predicted probability of a trainee enrolling in an LCP at first commencement in industry training by gender. Controlling for all other variables in the model, females are slightly more likely to participate in an LCP at commencement of training than males.

Figure 15 – Predicted probability of LCP first by gender



Note: ** shows statistical significance at the 5 % level and * shows significance at the 10 % level

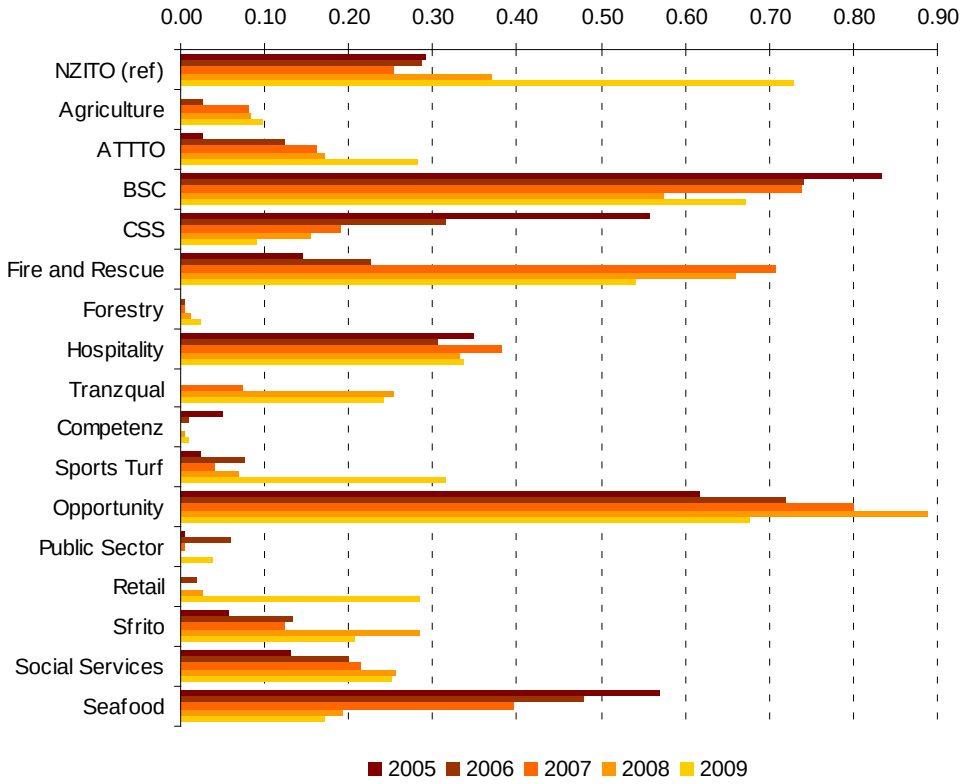
5.6 ITO * Start Year

Figure 15 shows the difference in predicted probability of a trainee enrolling in an LCP at first commencement in industry training by combinations of the ITO the trainee is involved in training with, and the year they first commence any form of industry training. The likelihood of LCP first differs substantially by ITO and year.

For example, building service contractor (BSC) trainees were most likely (over 80 percent) to enrol in an LCP at commencement in 2005, gradually declining to just under 60 percent in 2008. Over 50 percent of community support service (CSS) trainees starting in 2005 did an LCP, but this had dropped down to under 10 percent by 2009.

2009 entrants show large increases in probability of LCP participation in industries covered by the NZITO (dairy manufacturing, meat processing, the leather industry and others) compared to entrants in previous years, as do trainees with ATTTO, sports turf and retail.

Figure 16 – Predicted probability of LCP first by ITO and start year



5.7 ITO * Age at commencement

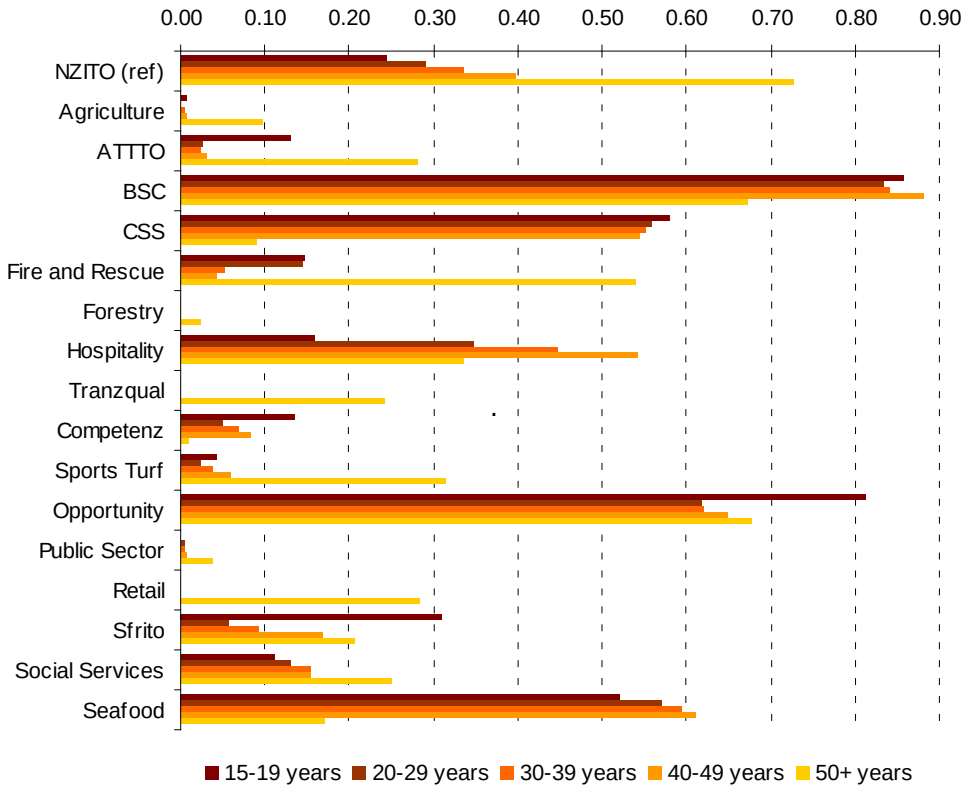
Figure 17 shows the difference in predicted probability of a trainee enrolling in an LCP at first commencement in industry training by combinations of the ITO the trainee is involved in training with, and their age when they first commenced training. The likelihood of LCP first differs substantially by ITO and the age of the learner at commencement.

The predicted probability of LCP first is over 50 percent for some age groups with NZITO, building service contractors (BSC) community support services (CSS), fire and rescue, opportunity and seafood.

Trainees aged 50 years or older are most likely to be in an LCP at commencement compared to younger trainees in industries covered by NZITO, agriculture, fire and rescue services, forestry, tranzqual, sports turf, public sector, retail, SFRITO and social services.

There is less difference between age groups for trainees in the building service contractors (BSC) and community support services (CSS) ITOs while younger trainees with the opportunity ITO are more likely to participate in an LCP than older trainees.

Figure 17 – Predicted probability of LCP first by ITO and age at commencement



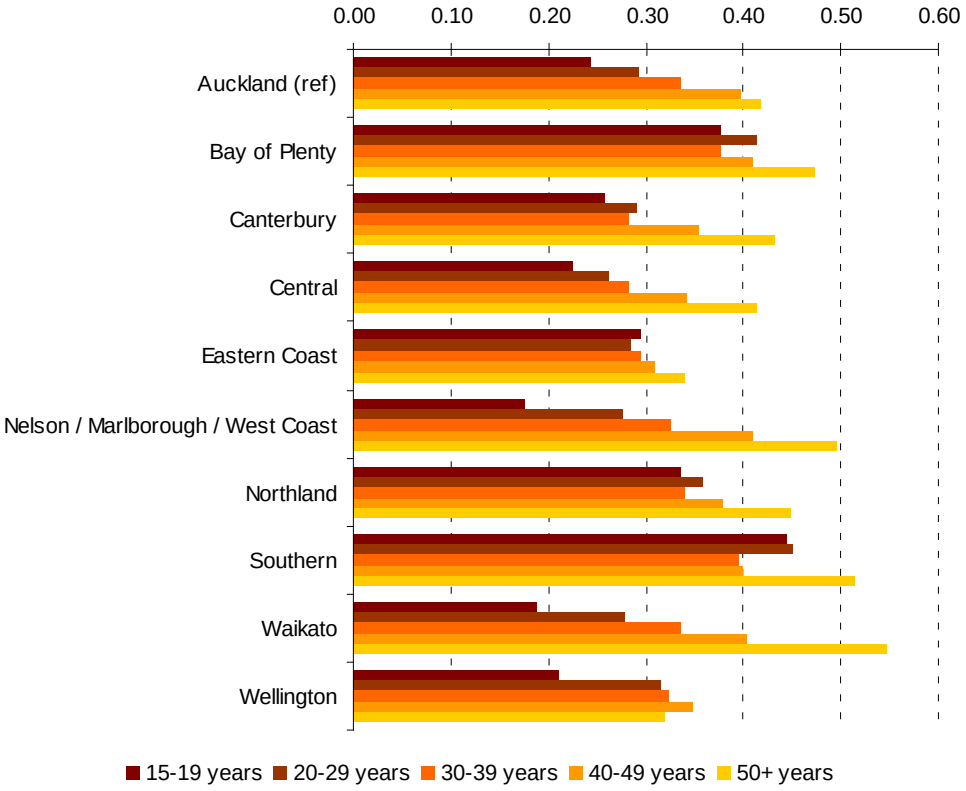
5.8 Region * Age at commencement

Figure 18 shows the difference in predicted probability of a trainee enrolling in an LCP at first commencement location of the trainee, and their age when they first commence training. The likelihood of LCP first differs substantially region and the age of the learner at commencement.

The predicted probability of LCP first increases with the age of the trainee at commencement in Auckland, Canterbury, Nelson / Marlborough / West Coast, Northland and Southern regions. In other regions, i.e. Bay of Plenty, Eastern Coast, and Northland, there is less difference in the probability of under 50 year olds to participate in LCPs.

Trainees aged 50 years or older are most likely to be in an LCP at commencement than younger trainees, in all territorial regional authority areas of the country except in Wellington. Trainees aged 50 years or older commencing in the Waikato and Southern regions are more likely to do an LCP than any other type of programme at commencement (their predicted probability of LCP first is over 50 percent).

Figure 18 – Predicted probability of LCP first by Region and age at commencement



6 MODELLING PROGRESSION FROM LCPS TO NCS

6.1 Progression from LCPs to NCs

All industry training programmes, including LCPs, are intended to lead to national qualifications, such as national certificates. The existence of LCPs is justified as a stepping stone programme into NC type programmes.

To test the factors associated with progression from LCPs to NC programmes, a cohort of learners who commenced training in 2005, 2006 and 2007 for the first time, and in an LCP, were selected from the administrative dataset.[7] The number of distinct trainees in the cohort totalled 21,073, distributed as follows:

- First year 2005: 6,953
- First year 2006: 6,524
- First year 2007: 7,956

The total activity window for the cohort is a possible five years: 2005 to 2009. The proportion of cohort LCP starters who progressed to a National Certificate programme within that window is shown in Table 10 below.

Of trainees with the widest activity window (2005 starters) just under a third of LCP participants went on to enrol in an NC-type programme, and only a small proportion of those (12 percent of the total learners) went on to attain a national qualification.

It will not be clear exactly how many did progress to NCs (especially for the latter year starters) until more years of data are available, but the evidence suggests that the proportion of trainees progressing to NCs is dropping compared to previous years. It may be thought that the time lag between commencing an LCP and enrolling in an NC may be causing the reduction in the proportion who progress in 2006 and 2007. The average length of time between a trainee leaving an LCP and commencing an NC (where there is a transition) was 20 months for 2005 starters. If 2006 and 2007 starters took 11 months on an LCP and then progressed within 20 months to an NC, then this would have been visible in the data. From this observation we conclude either:

- There has been a reduction in the progression rate, or
- The lag between progression from LCP to NC has grown.

Table 10 – LCP progression to NC programmes and attainment of national qualifications by start year

Start Year	% who started in an LCP who progressed to an NC	Mean time lag between LCP exit and NC start (months) where applicable	% attained a national qualification
2005	31	20	12
2006	21	17	8
2007	16	12	5

[7] Trainees from the following ITOs were excluded from selection, due to small numbers participating in LCPs: NZ Local Government Association Incorporated, New Zealand Association of Hairdressers Incorporated, New Zealand Furniture Industry Training Organisation Incorporated, NZ Motor Industry Training Organisation Incorporated, Printing and Allied Industries Training Council Incorporated, InfraTrain New Zealand Limited, Plastics and Materials Processing Industry Training Organisation.

6.2 Factors associated with progression from LCPs to NCs

To determine the factors associated with progressing from an LCP to an NC programme after first commencement, a binary response variable indicating that the trainee participated in an NC after their initial LCP (coded a 1) or not (coded as 0) was used. The regression creates estimates of the probability of a 1 occurring for each value of predictor category, while taking the effects of all the other categories into account. It also produces a statistic indicating the statistical significance of the estimate of the difference between the value of each category and the reference category.

A 'standard' model was created and various permutations were tested until a model with good fit and explanatory power was discovered. The standard model consisted of the following variables, with reference categories based on typicality:

- TEC Region. Reference category = Auckland
- Industry training organisation LCP. Reference category = NZITO
- Prioritised ethnic group. Reference group = 'European / Pākehā'
- Gender. Reference group = Male
- Age at start. Reference group = 20 to 29 years
- Previous qualification. Reference group = No previous qualification
- Start year. Reference group = 2005
- Completed LCP? Reference category = No (0)
- Nominal programme credits (LCP). Reference category = >25 credits
- LCP programme NZQF level. Reference category = Level 3
- LCP Health and Safety indicator. Reference category = No (0)
- STM rate of programme. Reference category = >0.5 STM

6.3 Model 2 results

The best fitting model included main effects with no interaction effects.

The model was able to explain 10 percent of the observed variance (max rescaled pseudo R Square statistic = 0.157), indicating a reasonable explanatory power.

Table 11 – Model 2 results by variable

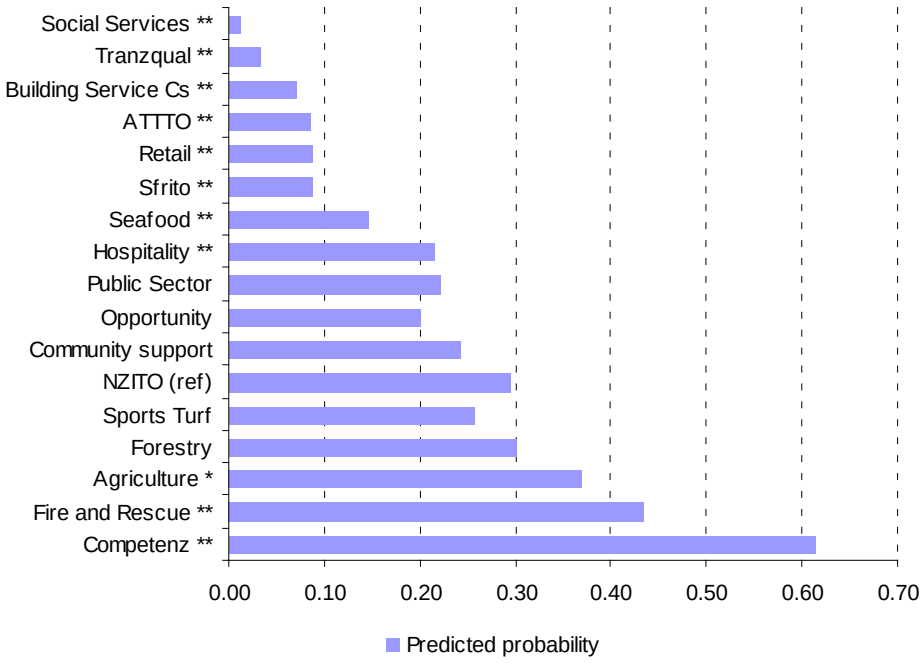
Response profile	**Progression to NC**	**Frequency**	Rate
No NC progression	0	16,387	78%
NC progression	1	4,688	22%
Variable	Degrees of Freedom	Chi-Square	Pr > ChiSq
Industry training organisation	16	677	<.0001
Completed LCP?	1	339	<.0001
Start year	2	243	<.0001
Region	9	131	<.0001
Previous qualification	6	74	<.0001
Age at start	4	65	<.0001
Ethnic group	4	40	<.0001

LCP STM rate	2	32	<.0001
LCP programme level	2	31	<.0001
LCP Health and safety indicator	1	19	<.0001
LCP credits	2	7	0.0364
Gender	1	3	0.1117
R-Square	0.103	**Max-rescaled R-2**	0.157
Hosmer and Lemeshow Goodness-of-Fit Test	Chi-Square	DF	Pr > ChiSq
	8.4559	8	0.3902

6.4 Industry training organisation

Figure 19 shows the difference in predicted probability of a trainee progressing from an LCP at first commencement to an NC by industry training organisation.[8] Controlling for other factors in the model, the majority of LCP participants (over 50 percent) progress to an NC in only one ITO: Competenz. ITOs where trainees progress at very low rates (10 percent or less) include social services, tranzqual, building service contractors, aviation tourism and travel training (ATTTO), retail and SFRITO.

Figure 19 – Predicted probability of progression from LCP first to NC by ITO



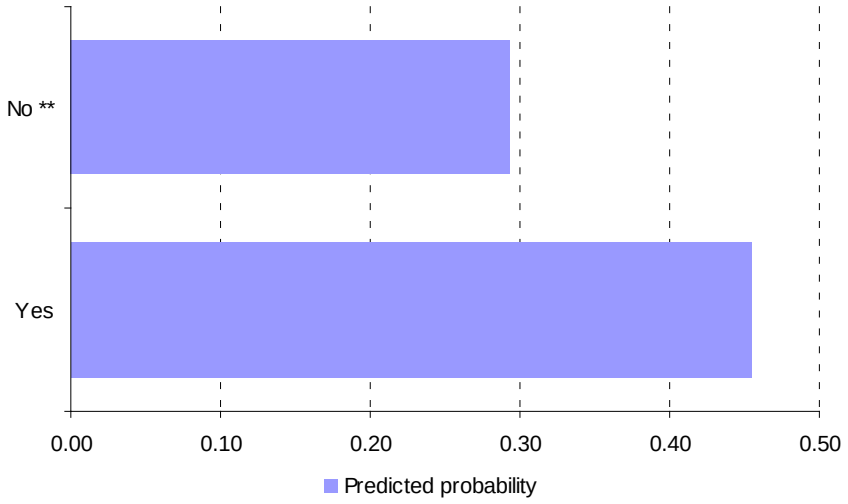
Note: ** shows statistical significance at the 5 % level and * shows significance at the 10 % level

[8] The ITO refers to the ITO the trainee participated in the LCP under.

6.5 LCP completion

Figure 20 shows the difference in predicted probability of a trainee progressing from an LCP at first commencement to an NC by whether or not the trainee completed their LCP. Where a trainee in the reference category does complete their NC, the predicted probability of progression is around 45 percent. There is a predicted probability difference of 15 percent age points between trainees who did and did not complete their LCP in respect to progression to an NC.

Figure 20 – Predicted probability of progression from LCP first to NC by completion status of LCP

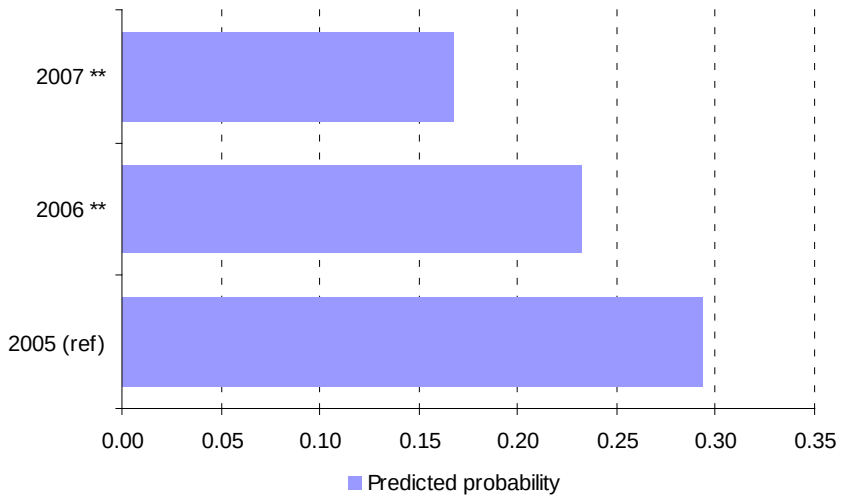


Note: ** shows statistical significance at the 5 % level and * shows significance at the 10 % level

6.6 Start year

Figure 21 shows the difference in predicted probability of a trainee progressing from an LCP at first commencement to an NC by the first year of involvement in industry training. As noted in section 6.1, there is a decline in probability of progression in 2006 and 2007, some of which may be explained by the combination of the limited data window and the lag between exit from LCP to enrolment in NC. If not, then this shows some evidence of a decrease in progression between 2005 and 2007 starters.

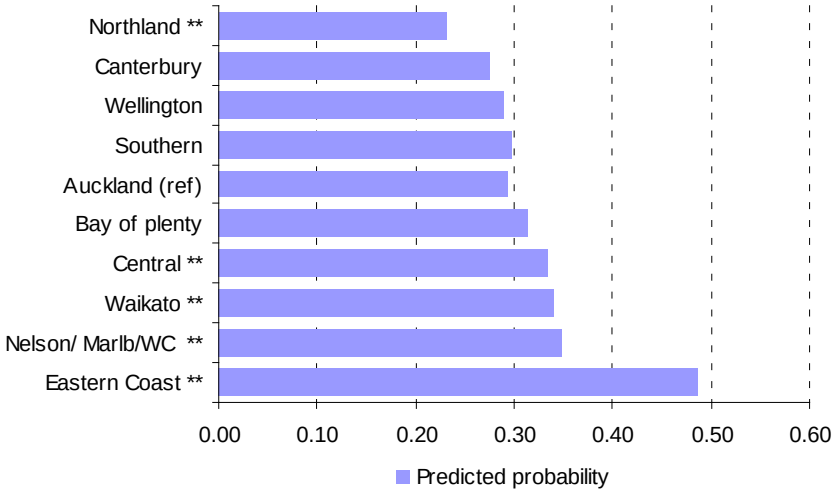
Figure 21 – Predicted probability of progression from LCP first to NC by first start year of trainee



6.7 Region

Figure 22 shows the difference in predicted probability of a trainee progressing from an LCP at first commencement to an NC by the broad territorial location of the trainee at first commencement. Trainees in the Northland region are less likely to progress to an NC from an LCP than those in Auckland, while those working and learning in the Central, Waikato, Nelson / Marlborough / West Coast and Eastern Coast regions are more likely to progress.

Figure 22 – Predicted probability of progression from LCP first to NC by Region

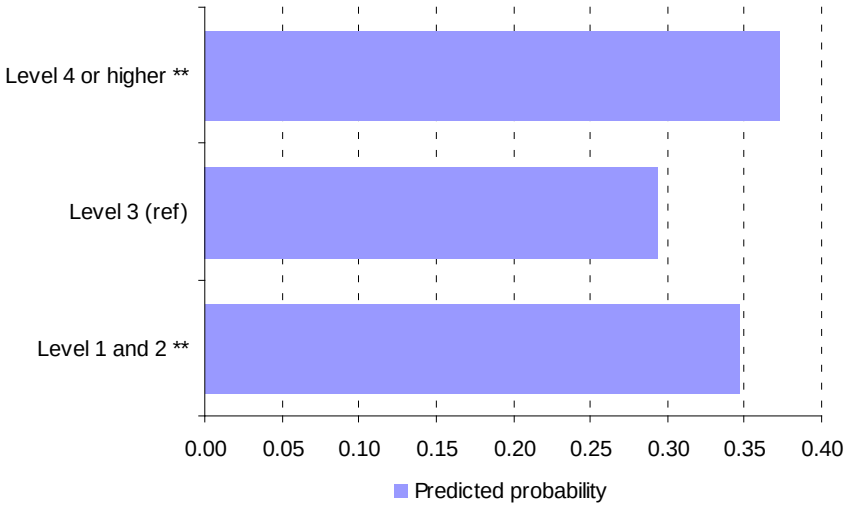


Note: ** shows statistical significance at the 5 % level and * shows significance at the 10 % level

6.8 Programme NZQF level

Figure 23 shows the difference in predicted probability of a trainee progressing from an LCP at first commencement to an NC by the NZQF level of the LCP. Trainees are less likely to progress to an NC if their LCP was at level 3 compared to other levels.

Figure 23 – Predicted probability of progression from LCP first to NC by NZQF level

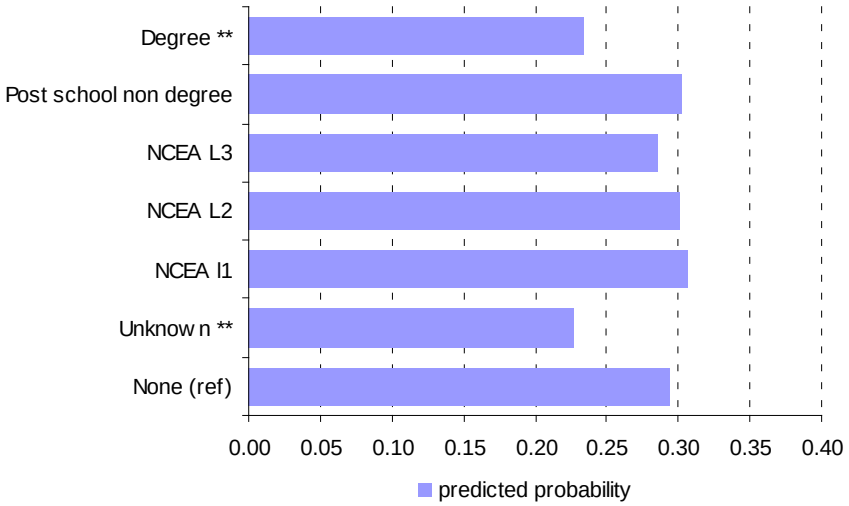


Note: ** shows statistical significance at the 5 % level and * shows significance at the 10 % level

6.9 Previous qualification

Figure 24 shows the difference in predicted probability of a trainee progressing from an LCP at first commencement to an NC by the previous highest qualification held by the trainee. Trainees are less likely to progress to an NC if they had degree-level qualifications[9] prior to their industry training activity, or if they did not disclose a previous qualification. There is little variation for those with other qualifications from those who have none.

Figure 24 – Predicted probability of progression from LCP first to NC by previous qualification



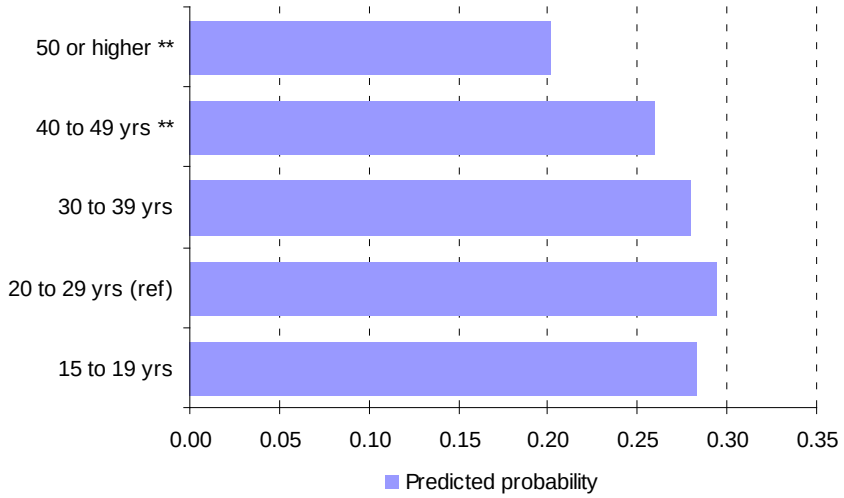
Note: ** shows statistical significance at the 5 % level and * shows significance at the 10 % level

[9] It should be noted that trainees with degree-level qualifications make up a small proportion of the cohort, and industry training participants as a whole. Those who do undertake industry training with previous qualifications at degree level are atypical.

6.10 Age of trainee at first commencement

Figure 25 shows the difference in predicted probability of a trainee progressing from an LCP at first commencement to an NC by their age at first commencement. Older trainees (40 years or older) are less likely to progress than younger trainees.

Figure 25 – Predicted probability of progression from LCP first to NC by age at first start

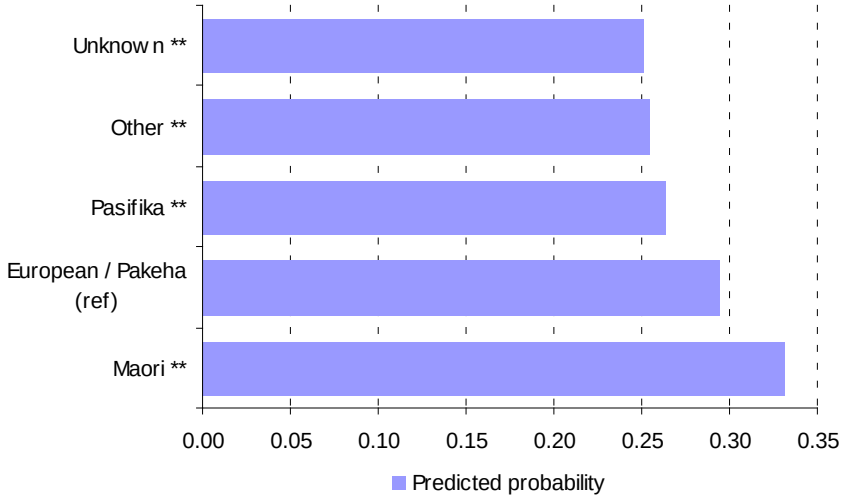


Note: ** shows statistical significance at the 5 % level and * shows significance at the 10 % level

6.11 Ethnicity of trainee

Figure 26 shows the difference in predicted probability of a trainee progressing from an LCP at first commencement to an NC by their ethnic identification. All ethnic groups differ significantly to European trainees. Māori trainees are more likely to progress than any other ethnic group, while Pasifika, other, and unknown category trainees are less likely than European (and Māori) trainees to progress.

Figure 26 – Predicted probability of progression from LCP first to NC by ethnic group

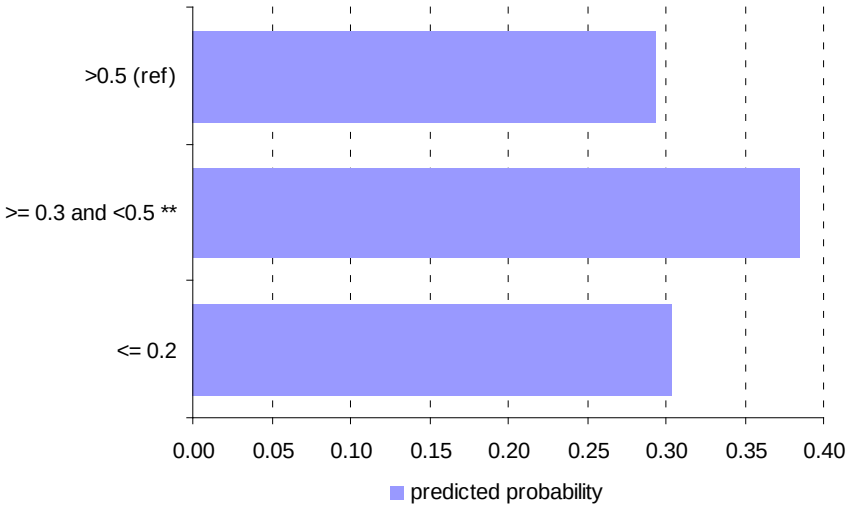


Note: ** shows statistical significance at the 5 % level and * shows significance at the 10 % level

6.12 STM rate of LCP

Figure 27 shows the difference in predicted probability of a trainee progressing from an LCP at first commencement to an NC by volume of learning, as measured by the STM rate of the LCP. Trainees in high (greater than 0.5 STM rate) and low (less than or equal to 0.2 STM rate) LCPs are less likely to progress than those whose LCP was set at between 36 and 60 credits per year (of between 0.3 and 0.5 STM rate).

Figure 27 – Predicted probability of progression from LCP first to NC by the STM rate of the LCP



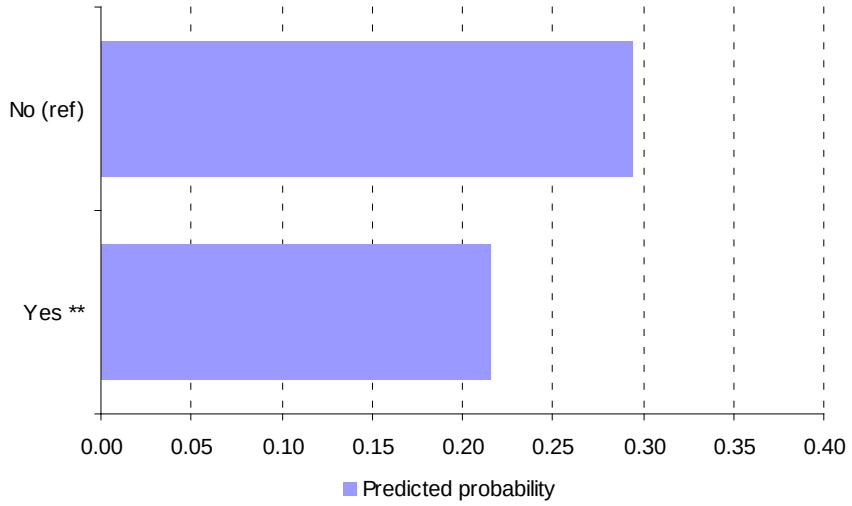
Note: ** shows statistical significance at the 5 % level and * shows significance at the 10 % level

6.13 Health and Safety LCP?

Figure 28 shows the difference in predicted probability of a trainee progressing from an LCP at first commencement to an NC by whether the LCP functioned as health and safety compliance.

Trainees in non-health and safety indicated LCP programmes are significantly more likely to progress to an NC than those whose LCP was in health and safety.

Figure 28 – Predicted probability of progression from LCP first to NC by Health and Safety indicator



Note: ** shows statistical significance at the 5 % level and * shows significance at the 10 % level

7 MODELLING LCP PARTICIPATION AFTER COMMENCEMENT

7.1 LCP participation after first enrolment

Not all LCP participation is at initial commencement of industry training. Some trainees are active in LCPs after they have been enrolled in an initial LCP, or NC programme.

To test the factors associated with enrolment in an LCP that is subsequent to involvement in another programme, a third cohort was selected from the administrative dataset. This dataset contains all trainees who commenced industry training for the first time between the years 2005 and 2006.

Table 12 shows the distribution of trainees in the cohort. The cohort consists of 65,317 trainees in total, in 17 ITOs. Around 10 percent of trainees enrolled for the first time in 2005 and 2006 went on to participate in an LCP after their first programme.

Table 12 – Subsequent LCP participation by first start year

Start Year	No LCP participation after first programme	Some LCP participation after first programme	Total
2005	29,477	3,717	33,194
2006	28,998	3,125	32,123
Total	58,475	6,842	65,317
Percent of total			
2005	89%	11%	100%
2006	90%	10%	100%
Total	90%	10%	100%

Of those, around 30 percent participated in an LCP with an identifiable health and safety compliance component.

Table 13 – Subsequent LCP participation by first start year

Start Year	No Health and Safety component	Some Health and Safety component	Total
2005	2,463	1,254	3,717
2006	2,358	767	3,125
Total	4,821	2,021	6,842
Percent of total			
2005	66%	34%	100%
2006	75%	25%	100%
Total	70%	30%	100%

7.2 Factors associated with subsequent LCP activity

A binary response variable indicating that the trainee participated in an LCP in a subsequent programme to the first (coded as 1) or not (coded as 0) was used. The regression creates estimates of the probability of a 1 occurring for each value of predictor category, while taking the effects of all the other categories into account. It also produces a statistic indicating the statistical significance of the estimate of the difference between the value of each category and the reference category.

The standard model consisted of the following variables, with reference categories:

- TEC Region. Reference category = Auckland
- Industry training organisation. Reference category = NZITO
- Prioritised ethnic group. Reference group = 'European / Pākehā'
- Gender. Reference group = Male
- Age at start. Reference group = 20 to 29 years
- Previous qualification. Reference group = No previous qualification
- Start year. Reference group = 2005
- First programme NZQF level. Reference category = Levels 1 or 2

7.3 Model 3 results

The model required an interaction effect to enable good fit to the data:

- First programme NZQF level * ITO

The model was able to explain 8 percent of the observed variance (max rescaled pseudo R Square statistic = 0.158), indicating reasonable predictive power.

Table 14 – Model 3 results by variable

Response profile	Subsequent LCP	Frequency	Rate
No subsequent participation	0	58,366	90%
Subsequent participation	1	6,815	10%
Variable	Degrees of Freedom	Chi-Square	Pr > ChiSq
Industry Training Organisation	16	938	<.0001
First programme NZQF Level	1	299	<.0001
First programme NZQF Level * ITO	13	195	<.0001
Previous qualification	6	167	<.0001
Region	9	78	<.0001
Ethnic group	4	19	0.0009
Age at first start	4	15	0.0054
First start year	1	14	0.0002
Gender	1	10	0.0018

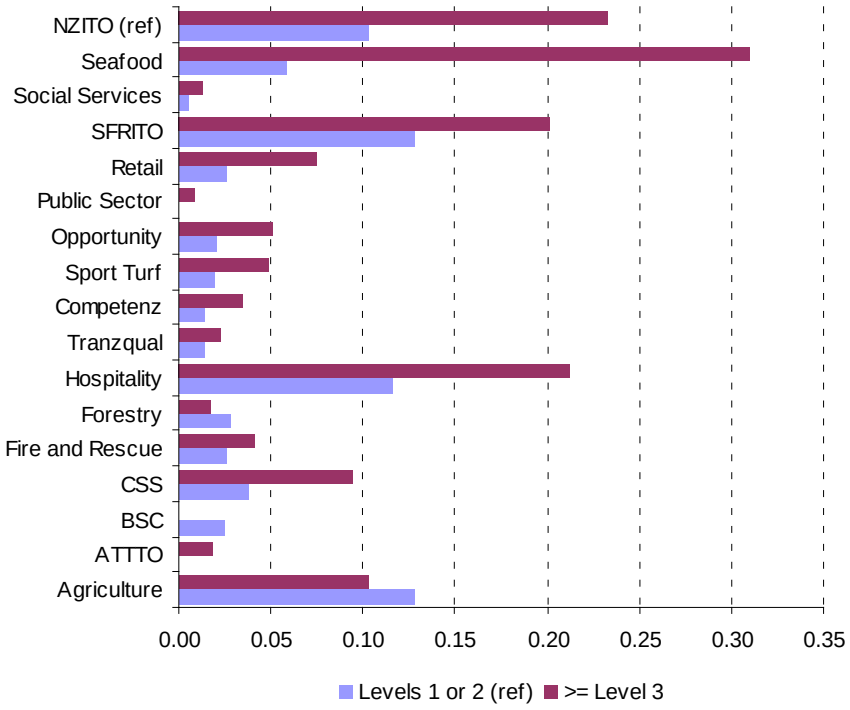
Continued over

Continued from previous page			
R-Square		Max-rescaled R-2	
0.771		0.158	
Hosmer and Lemeshow Goodness-of-Fit Test	Chi-Square	DF	Pr > ChiSq
	10.378	8	0.2395

7.4 First programme NZQF level * Industry training organisation

Figure 29 shows the difference in predicted probability of a trainee participating in an LCP after their first programme by ITO and NZQF level of the first programme. For 14 of the 17 ITOs, the predicted probability of subsequent LCP participation is greater the higher the NZQF level of the first programme.

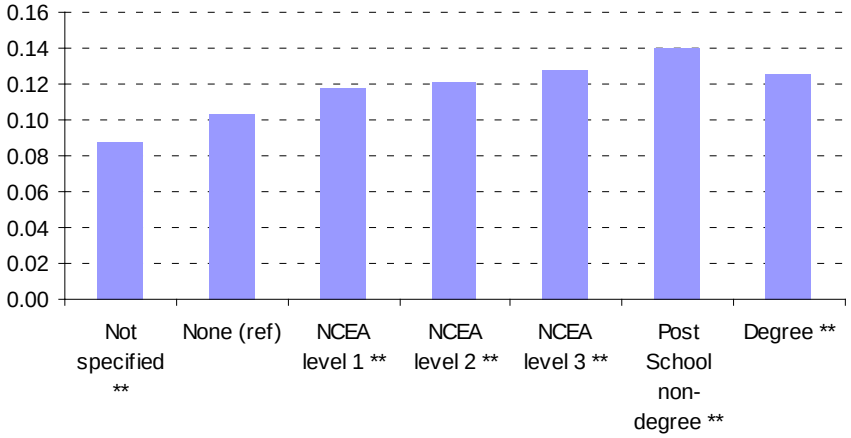
Figure 29 – Predicted probability of subsequent participation in LCP by ITO and NZQF level first programme



7.5 Previous qualification

Figure 30 shows the difference in predicted probability of a trainee participating in an LCP after their first programme by previous qualification of the learner on commencement in industry training. The predicted probability of a trainee participating in a subsequent LCP increases with the level of previous qualification, with trainees holding post-school non-degree level qualifications most likely to.

Figure 30 – Predicted probability of subsequent participation in LCP by previous qualification



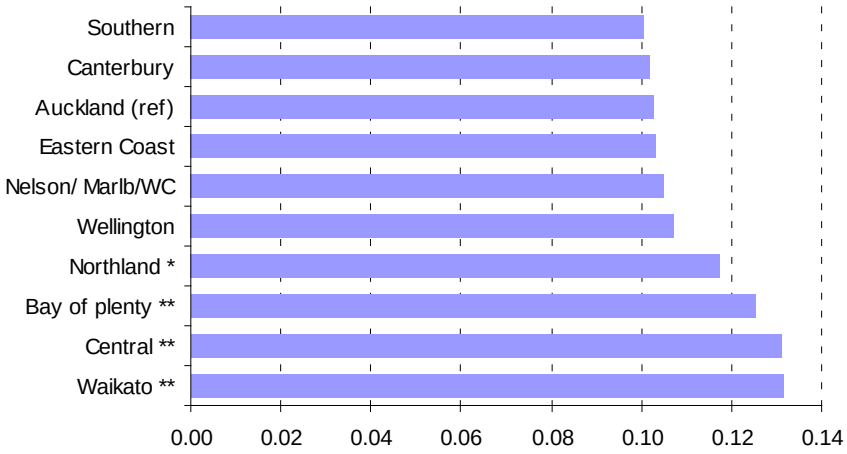
Note: ** shows statistical significance at the 5 % level and * shows significance at the 10 % level

7.6 Region

Figure 31 shows the difference in predicted probability of a trainee participating in an LCP after their first programme by the broad regional location of the learner on commencement in industry training.

The predicted probability of a trainee participating in a subsequent LCP is greater in the Waikato, Central and Bay of Plenty than for trainees working and learning in Auckland.

Figure 31 – Predicted probability of subsequent participation in LCP by Region



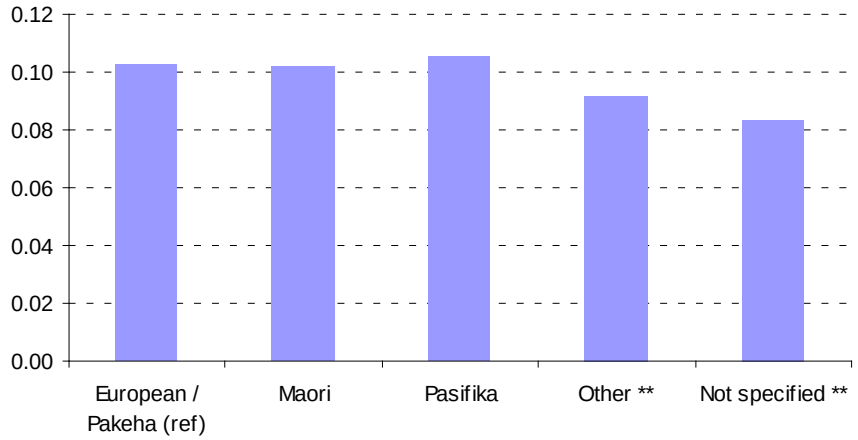
Note: ** shows statistical significance at the 5 % level and * shows significance at the 10 % level

7.7 Ethnic group

Figure 32 shows the difference in predicted probability of a trainee participating in an LCP after their first programme by their ethnic group.

The predicted probability of a trainee participating in a subsequent LCP is lower for 'other' ethnic group trainees than for European trainees.

Figure 32 – Predicted probability of subsequent participation in LCP by ethnic group



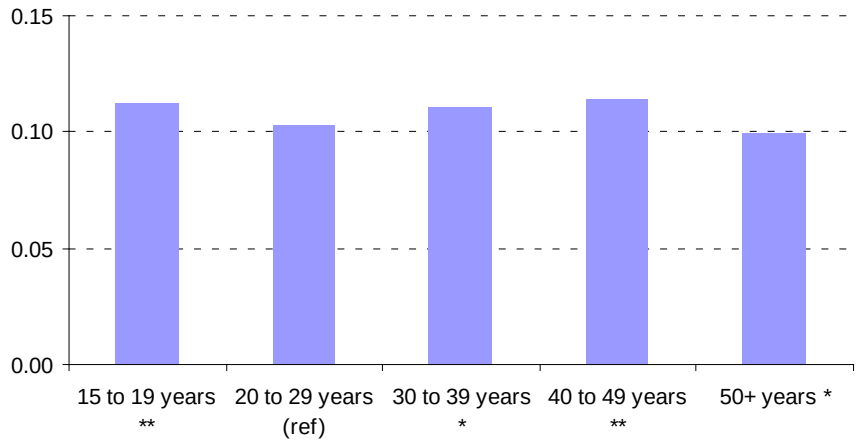
Note: ** shows statistical significance at the 5 % level and * shows significance at the 10 % level

7.8 Age of trainee

Figure 33 shows the difference in predicted probability of a trainee participating in an LCP after their first programme by their age at first commencement in industry training.

The predicted probability of a trainee participating in a subsequent LCP fluctuates randomly between the different age groups and there is little overall difference between them (although there is a statistically significant difference between them).

Figure 33 – Predicted probability of subsequent participation in LCP by age at first commencement



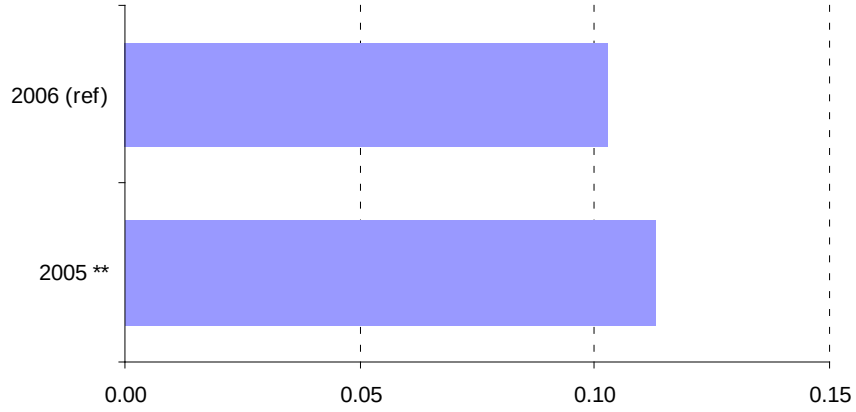
Note: ** shows statistical significance at the 5 % level and * shows significance at the 10 % level

7.9 First commencement year

Figure 34 shows the difference in predicted probability of a trainee participating in an LCP after their first programme by the year they first commenced in industry training.

The predicted probability of a trainee participating in a subsequent LCP lessened in 2006 over 2005 starters, presumably because of the shorter time window available for 2006 starters.

Figure 34 – Predicted probability of subsequent participation in LCP by first commencement year



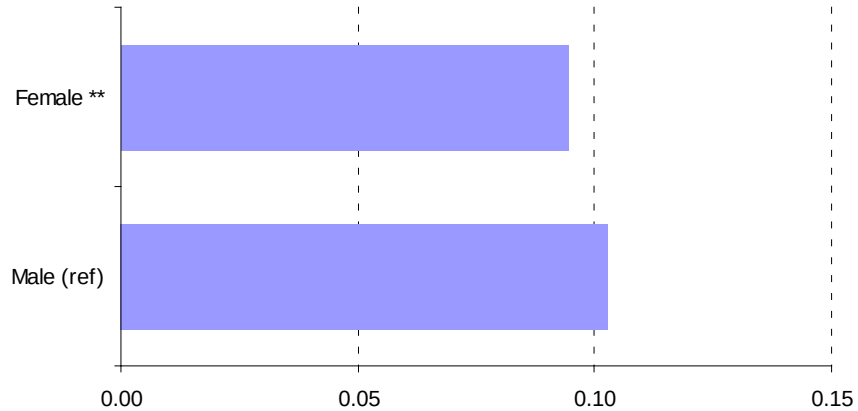
Note: ** shows statistical significance at the 5 % level and * shows significance at the 10 % level

7.10 Gender

Figure 35 shows the difference in predicted probability of a trainee participating in an LCP after their first programme by gender.

Controlling for all of the other variables in the model, males are slightly more likely than females to participate in a subsequent LCP.

Figure 35 – Predicted probability of subsequent participation in LCP by gender



Note: ** shows statistical significance at the 5 % level and * shows significance at the 10 % level

8 DISCUSSION

Limited credit programmes have grown steadily since 2005, with a jump in participation occurring in 2009. LCPs are non-qualification programmes that consist of collections of unit standards. They do not lead to nationally recognised qualifications, but have been included in industry training in the expectation that they will be used as stepping stones to programmes that do. This analysis shows that only a minority of trainees involved in LCPs progress to participation in programmes leading to qualifications, and still fewer attain them.

There is a constant tension between employers' needs for enterprise-specific skills and government's concern to ensure a supply of industry-ready skilled workers. International evidence shows that the benefit of short-run workplace learning accrues mostly to the employer rather than to the individual trainee. Because short-run workplace training does not lead to a qualification, it does not help employees to move to other jobs - that is, it doesn't contribute to the portability of skills so its public benefit is less. Government funds industry for around 70 percent of industry training because it intends that wider society will gain much of the benefit of the training. Employers cover the remaining 30 percent, reflecting their perceived direct benefit from training.

Evidence from overseas and New Zealand[10] shows that employers' preferences for skills purchase are mostly enterprise rather than industry-centred. This is due to a number of barriers faced by employers, some of which are particularly acute for small to medium sized enterprises (SMEs): [11]

- a preoccupation with short-term survival issues takes priority over training which is long-term in planning requirements and benefit realisation
- skill deficiencies tend to be solved by employing previously trained staff
- training is oriented to large enterprises and their needs
- the unit cost of training is disproportionately higher for SMEs than large enterprises
- perceived lack of relevance of off-job training components of qualifications
- opportunity costs preclude release of staff for training
- customisation of training packages, which would make training more convenient and relevant for SMEs, is expensive.

Further, the received wisdom is that employers won't invest in generic skills, because it makes their staff more attractive to competitors and therefore lifts their market value, making them more expensive to keep and opening up a risk of poaching.

New Zealand research found this consideration is only partly relevant.[12] Employers will buy generic skills training provided those skills are relevant to their enterprise. Rather than contrasting between generic and specific skills, employers think in terms of skills that are relevant to them and those which aren't. They purchase training in relevant skills for their staff regardless of whether they are generic or specific because they see that extra skills improve the human capital of their staff.

Related to this, employers often want to purchase parts of qualifications, not whole qualifications. If providers have incentives to maximise qualification completion rates, this creates a tension with employers' preferences.

[10] See Field S., Hoeckel, K., Kis, V. and Kuczera, M. 2009. and Dalziel, 2010a.
[11] list sourced from Vaughan, 2002
[12] Dalziel, 2010b.

LCPs therefore offer an attractive alternative to NC programmes for employers, as they implicitly have a more enterprise than industry focus due to the lack of generic components. For example, employers have used LCPs to purchase health and safety training for their workplaces, often required by legislation or regulations affecting their industry to ensure a minimum operating safety standard in their workplace. Between 2006 and 2008 an estimated 20 percent of LCP participants undertook some form of workplace health and safety training as the main focus of their programme. However, by 2009, this proportion had doubled to 39 percent.

There can be no doubt that the economic downturn is partly responsible for the increase in LCP health and safety participation, as well as the increase in LCP participation overall in 2009. Some ITOs sought to protect their income streams / meet their STM targets by replacing lost training opportunities with LCPs.

We see evidence of replacement effects within industry training during 2009, where the downturn led to a diminished number of traditional sources of new industry trainees in employment: some ITOs continued to sign up new learners, but these new starters were more likely to be older and perhaps more established workers than new entrants in previous years.[13] Where this occurred on a large-scale, LCPs may have provided an alternative way to meet those targets because they provide the skills employees feel they really need, with minimum fuss and at a low cost.

The majority of LCPs do not lead to progression towards national certificate programmes, and there is some evidence that fewer trainees are progressing than in previous years. LCP participants are increasingly older trainees. However, the modelling in this analysis shows that the older trainees are the least likely to progress to an NC. Only one of the ITOs subject to the statistical modelling contained in this paper, Competenz, shows a predicted probability of progression of over 50 percent.

Progression does seem to increase with completion of the LCP, which shows some intent by employers in some industries to use the funding provided as intended, but it seems those with a health and safety component are intended to stand-alone – the probability of progression from one is almost 10 percentage points lower than for one which does not cover health and safety.

Controlling for other factors, lower credit programmes are more likely to lead to progression than higher credit programmes. Māori trainees are the most likely to progress but are the least likely of any ethnic group to participate in an LCP.

Similarly, participation in LCPs seems to increase with the level of prior qualification of the trainee at first entry into industry training, with trainees with degrees the most likely to participate. However, there is little difference in probability of progression except for those whose previous qualification is unknown, and of trainees with degree-level qualifications, who are less likely to progress to an NC than trainees with no prior qualifications on entry.

Participation in LCPs at first entry (the majority of LCP participation) is the most difficult of the three modelled scenarios to predict, requiring three interaction effects to explain the data. This suggests the reasons for LCP use are complex, and cannot be explained easily. LCP use depends on combinations of the ITO and the year, the ITO and the age of the trainee, the region and the age of the trainee, as well as the values of other main variables such as ethnic group and gender. This suggests that different ITOs / industries have different aims for their use of LCPs.

[13] See Mahoney, 2010b.

The TEC has set new funding rules for LCPs as part of their operational funding review. From 2011 the TEC requires that at least 50 percent of trainees previously enrolled in an LCP must have progressed to and completed a full national qualification within five years of enrolment in the LCP for that LCP to be funded. [14]

The TEC has stopped funding all programmes designed to primarily ensure that participants comply with a specific health and safety or regulatory requirements, or learning that displaces the responsibility of employers to provide training necessary to mitigate health and safety and legal risks.

[14] Ibid, pg 5, point 30.

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